Proposal Reviews

#170: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

The Nature Conservancy

Initial Selection Panel Review	
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Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Initial Selection Panel Review

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

Please provide an overall evaluation rating.

Explanation of Recommendation Categories: Fund

- **As Is** (a proposal recommended for funding as proposed)
- **In Part** (a proposal for which partial funding is recommended for selected project phases or components)
- **With Conditions** (a proposal for which funds are recommended if the applicant contractually agrees to meet the specified conditions)

Consider as Directed Action in Annual Workplan (a proposal addressing a high priority action that requires some revision followed by additional review prior to being recommended for funding)
Not Recommended (a proposal not currently recommended for funding-after revision may be considered in the future)

Note on "Amount":

For proposals recommended as Fund As Is, Fund In Part or Fund With Conditions, the dollar amount is the amount recommended by the Selection Panel.

For proposals recommended as Consider as Directed Action in Annual Workplan, the dollar amount is the amount requested by the applicant(s).

Fund	
As Is	**-**
In Part	**-**
With Conditions	**-**
Consider as Directed Action	**X**
Not Recommended	**-**

Amount: **$2,882,945.00**

Conditions, if any, of approval (if there are no conditions, please put "None"):

None

Provide a brief explanation of your rating:

This proposal, along with 171, have the potential for high ecosystem benefits and would help fulfill ROD commitment to protect Sacramento River meanderbelt as well as tributary floodplain habitats. However, 170 and 171 do not have a well-developed adaptive management approach with hypothesis testing and experimental design. The Selection Panel would like the applicant to stengthen the scientific approach in order to better judge future acquisitions and to increase the information value of restoration projects. This effort to improve the scientific approach would also be informed by completion of the currently on-going sub-reach planning studies which are underway under previous grant funding. The Nature Conservancy is recognized has having many efforts in progress for Sacramento River corridor restoration planning and implementation and CALFED requests the applicants to work with the CALFED science program and ERP Independent Science Board prior to resubmitting a revised proposal or proposals for the Chico Landing sub-reach activities. These proposals will be considered for directed action.

Research and Restoration Technical Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Research and Restoration Technical Panel Review Form

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;
Above Average: Quality proposal, medium or high regional value, and no significant administrative concerns;
Adequate: No serious deficiencies, no significant regional impediments, and no significant administrative concerns;
Not Recommended: Serious deficiencies, significant regional impediments or significant administrative concerns.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
XSuperior	**All reviewers ranked the proposal as either excellent of good. The panel was extremely supportive of the recognition of the role of tributary junctions in floodplain systems. The hypotheses are exciting and the restoration actions have extremely high potential to contribute significantly to ecological conditions in the Sacramento River and its floodplain. We strongly endorse this attention to one of the more dynamic components of river systems and floodplains---tributary junctions. This was one of the few proposals even to recognize the importance of tributary junction environments in river networks. We encourage the applicants to capitalize on this excellent opportunity for measuring the responses to the restoration practices and the dynamics of tributary junctions. Future proposals or cooperation with other agencies and scientists in the region could develop important measures of the physical and biological responses in this project.**
-Above average	
-Adequate	
-Not recommended	

1. **Goals and Justification.** Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

   The Nature Conservancy proposes to acquire fee-title interest and to plan the restoration riparian and floodplain habitat in tributary junctions of the Sacramento River and Big Chico and Mud Creeks. The three specific objectives (fee title interest, assessment, and outreach) are clear. The hypotheses are exciting, but unfortunately they will not be tested under this phase of the project. The lack of an explicit plan to capture the research potential of this project is frustrating. The proposal presents a compelling justification of the project.

There is an explicit conceptual framework, though it is not closely linked to the anticipated restoration actions at this point.

2. **Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).** Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

   The proposed acquisition and restoration efforts are likely to be successful, especially in light of the Nature Conservancys experience with easement negotiations. Major land owners appear to be willing to participate. One reviewer raised questions about a parcel of row crop agriculture that was not included in the acquisition. Working with this land owner might add to the benefits of this project. The role of tributary junctions is an important area of river dynamics and restoration efforts that is rarely addressed in restoration proposals. The measures of performance are largely based on acquisition and planning.

3. **Outcomes and Products.** Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

   The project will contribute to the restoration of floodplains and aquatic ecosystems. The project will contribute to the understanding of the Bay Delta Watershed only if experimentally sound monitoring or research projects are developed. The role of tributary junctions is an important ecological question and management challenge for municipalities, which tend to be located at river confluences. The proposal has excellent promise but it would be greatly strengthened by addition of a monitoring or research phase.

4. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   The budget is substantial (<$3 million). Most of the funds are requested for acquiring fee-title interest and would provide significant habitat protection and restoration. If successful, the value of the project in guiding other restoration in tributary junctions could justify the expense. Matching funds from the Packard Foundation also make the proposal attractive.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

   Regional panel ranked the proposal as High.

6. **Administrative Review.** Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

   Reviewers generally praised the applicants, but one instance of renegotiation was raised by a reviewer of prior performance. In terms of environmental compliance, the reviewer noted that the information in the proposal was not adequate to determine permits that would be needed. Additional permits might be necessary.

Miscellaneous comments:

None

Land Acquisition:

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Is the site's ecological importance documented in the proposal?

   XYes **-**No

   If yes, please import relevant text and citations here:

   These properties collectively present a unique habitat opportunity because they are located at the confluence of the Sacramento River, Big Chico Creek and Mud Creek. The protection and restoration of these properties will increase the quality and quantity of essential spawning and rearing habitats and migratory pathways for chinook salmon, steelhead, Sacramento splittail, and other declining species. Longer-term ecological benefits include the protection and enhancement of the meander belt and associated floodplain of the Sacramento River. Important ecological processes that create and maintain natural channel and bank conditions will be restored, including sediment transport, channel erosion and deposition, and ecological succession. The three properties that are the subject of this proposal are located across the Sacramento River from an area that has been identified as having high avian species richness (Point Reyes Bird Observatory, unpublished data). The lands border remnant riparian areas currently owned by the State of California, and managed by the Department of Parks and Recreation (DPR) as a portion of the Bidwell-Sacramento River State Park. Following acquisition and restoration, the properties are expected to be placed under long-term ownership with the DPR for addition to the Bidwell-Sacramento River State Park. When purchased, the project lands will combine with lands in existing conservation ownership to create approximately 400 acres of nearly contiguous riverine habitat. Additional conservation ownership in the area, on both sides of the river, both upstream and downstream from the project area, is significant, further increasing the ecological value of the proposed project area. The protection and restoration of the three properties contained in proposal will add 311 acres to 2,887 acres of existing protection and restoration from river mile 199 to river mile 193.

   Singh: This approximately forty-acre floodprone property is located along the east bank of the Sacramento River, immediately east of River Road and approximately one-half mile north of Big Chico Creek. The property has historic channel topography and existing shaded riverine aquatic habitat along Mud Creek. The property is bordered by River Road on the west, Mud Creek on the east, Bidwell-Sacramento River State Park on the south, and private fallow farmland to the north. Approximately thirty-four acres of the property are planted to walnuts, ranging in age from one-year replants to ten-year old trees.

   Nock: This approximately 125-acre floodprone property is located to the east of the Sacramento River, at the confluence of Mud Creek and Big Chico Creek. The property has existing shaded riverine aquatic habitat along Mud Creek and Big Chico Creek. The triangular shaped property is bordered by Mud Creek on the west, Big Chico Creek on the east, and a private orchard to the north. Approximately 103 acres of the property are

planted to walnuts, with twenty-five acres planted in 1974 and the remaining seventy-eight acres planted in 1984. In addition, some seedlings were planted in 1997 to fill in holes in the orchard created by the growth pattern.

Nicholas: This approximately 146-acre floodprone property is located along the east bank of the Sacramento River, immediately east of River Road and approximately two miles north of Big Chico Creek. The property has historic channel topography and existing shaded riverine aquatic habitat along Mud Creek. The property is bordered by River Road on the west, Mud Creek on the east, private row crop farmland on the south, and a private orchard to the north. Approximately 104 acres of the property are planted to walnuts, ranging in age from six-year old trees to eleven-year old trees. The property also contains a thirty-two acre almond orchard, planted approximately ten years ago.

Tributary confluences such as those that flow through the project area are important junctures for many aquatic and terrestrial species during migration and dispersal (P. Maslin et al.1999, Riparian Habitat Joint Venture 2000). Of particular importance to this project is the potential to contribute to the recovery of at-risk native anadromous and resident fish species. Juvenile chinook salmon of four races (spring, fall, late fall, and winter run) and steelhead trout; as well as non-game fish species including Sacramento sucker, Sacramento pike-minnow, hardhead, hitch, tule perch, and Sacramento splittail; have been documented rearing in the tributaries flowing through or near the project area (P. Maslin, personal communication). Mud Creek is perhaps the most important non-natal rearing habitat for juvenile salmonids (particularly winter-run) along the middle Sacramento River (Maslin et al. 1999). Additionally, tributaries bordered by low elevation floodplain habitat, such as Mud Creek and Big Chico Creek, may be especially important for native fishes. Sommer et al. (2001)showed that juvenile chinook salmon rearing on inundated floodplains show increased growth rates, and apparently greater survival, compared to a similar group of fish in the mainstem of the river. These researchers found that invertebrates were more abundant in these habitats, and attributed the higher growth rates to increased prey consumption.

Maslin et al. (1999) suggest that the preservation and restoration of intermittent stream habitat should be a priority in the Sacramento Valley especially given the amount of such habitat already lost. The high ecological value of the proposed project location is, in part, a function of the complex and dynamic hydrogeomorphic processes that characterize the area (see Figure 2).

Upstream of the project area is the confluence with Pine Creek. This confluence area is the northern most extension of distributary channels, which route flow from the Sacramento River east to Butte Basin. During times of high river discharge this floodwater, along with that from the tributaries, fills the Bosqueo Basin creating vast seasonal wetlands, before draining south through the project area to rejoin the river at the Big Chico Creek confluence. Immediately downstream of the project area, floodwaters begin to leave the river along the east bank and flow into the Butte Basin. The alluvial fan of Big Chico Creek bounds the project area to the east, and to the west lies the meanderbelt of the Sacramento River. Lying at the intersection of these landforms, the project area historically hosted a rich assortment of habitat types including backwaters, tule swamps, seasonal wetlands, oak woodlands, and mixed riparian forest--all within close proximity (Ginney 2001). Given that some of the natural processes that gave rise to these habitats are still maintained, and that the topographic and stratigraphic diversity of the site is still relatively intact, this area has great potential for ecological revitalization. It is our expectation that this area has the potential to support a rich variety of important vegetation communities and animals including native birds, mammals, reptiles, amphibians, and fish.

2. Is the owner's willingness to sell the site documented in the proposal?

   XYes **-**No

   If no, please explain:

3. Is evidence of local government support for the purchase included in the proposal?

   -Yes **X**No

   If yes, please explain:

4. Is the use proposed for the site after its purchase clearly consistent with the site's general plan designation and zoning?

   -Yes **X**No

   If no, please explain:

   The site is designated for orchard + field crops in the Butte County general plan. Other county general policies encourage conservation of natural areas and the protection of identified rare species. It is unclear how the county would resolve its conflicting plan policies at this location.

   Information about zoning at the site is not included in the proposal, because it seeks funds only to purchase the site + plan for its restoration, + not for activites that would phycially change land here.

5. Is the land mapped as prime farmland, farmland of statewide significance, unique farmland, or farmland of local importance?

   -Yes **X**No

   If yes, please explain the classification:

   According to the applicant, the project area has not been mapped under the DoC's farmland mapping program. One wonders, however, if basic county soils maps would enable TNC to identify prime farm soils here.

   Is the site under a Williamson Act contract?

   -Yes **X**No

   Will use of the site change from agriculture after its purchase?

   XYes **-**No **-**Not Currently in Agriculture

6. Is this a time-sensitive acquisition opportunity, according to the proposal?

   XYes **-**No

   If yes, please import relevant text here:

   The applicant states that these three properties are currently for sale. The majority of the proposed project area has a flood recurrence interval of 2.5 years or less, and the entire area lies within an area projected to flood every four years (California Department of Water Resources 2001) despite the presence of an extensive system of private and federal levees. If acquisition funds are not approved, the landowners risk further erosion and flood damage.

   On the other, one wonders else but TNC would buy these floodprone, eroding orchards.

Other Comments:

While I answered "No" to the question about Williamson Act contracts, the application actually provides no information about contract status, other than stating that contract cancellation will not be required.

Sacramento Regional Review:

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

Overall Ranking: **-**Low **-**Medium **X**High

Provide a brief summary explanation of the committee's ranking:

The panel rated this hihg. The budget appears somewhat high although it includes restoration planning to be completed. May improve Splittail habitat in the SRCA Inner River Zone.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   TNC proposes to acquire 311 acres in fee for $2.9 million and complete restoration planning for the property. Has had early coordination and outreach.

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

   XYes **-**No

   How?

   Sacramento Region PSP Restoration Priorities 1, 3, 4 and 7, the project proposes to protect and restore riparian habital at the confluence of Big Chico Creek, Mud Creek at the Sacramento River.

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

   XYes **-**No

   How?

   The proposed project is within the Sacramento River Conservation Area (SRCA) Inner River Zone. The additional 311 acres will compliment the 2,887 areas currently under conservation protection from River Mile 199 to River Mile 193.

4. Does the project adequately involve local people and institutions?

   XYes **-**No

How?

TNC has involved the SRCA, Butte County and local landowners in the project.

Other Comments:

The project may eventually remove 273 (plus/minus) acres from active agricultural production.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

<u>Excellent:</u> outstanding in all respects;
<u>Good:</u> quality but some deficiencies;
<u>Poor:</u> serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**My assessment of this proposal is "good." The biggest drawback is cost, at more than $2.8 million for just the acquisition of 311 acres and formulation of a baseline assessment and restoration plan. This site is adjacent to other public land and much of the reach between river miles 190-199 is protected. The location of the site at the confluence of two tributaries and the Sacramento River make it strategic and important ecologically, hydrologically, and geomorphologically. This location of this site relative to floodwater flow paths in the Sacramento River basin make it additionally significant. Should restoration be funded in the future, this site will add to the range of conditions over which TNC has performed and studied floodplain restoration, and thus will add new information. TNC's track record on restoration is strong, and restoration of this site would add to the portfolio of sites being restored, managed, and studied by TNC on the Sacramento. However, many of these benefits will only be realized if the other phases of this project (implementation of restoration, and research and monitoring) are funded in the future. My only concern about the long-term feasibility of restoration on the site is the whether the proximity of a privately owned parcel will put constraints on restoration of flooding and channel migration.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   The restoration of floodplain structure and function is a timely and important concept. The added value of this particular proposed restoration is the hydrologically and ecologically strategic location of the project area at the confluence of 2 tributary streams and the Sacramento River. The goals, hypotheses, and objectives are clearly stated, but only some apply directly to this proposal. TNC is envisioning a four phase project, including floodplain management planning (phase 1); land acquisition, baseline assessment and restoration planning (phase 2); restoration implementation (phase 3); and research and monitoring (phase 4). This proposal is for phase 2. One of the main hypotheses to be tested under future phases of this project is whether restoration of confluence areas brings a particularly high return (relative to other restoration locales) in terms of ecological benefits and downstream flood abatement. The goals and hypotheses of this particular project fit within the larger context of floodplain structure and process rehabilitation and ecological research and monitoring along Red Bluff to Colusa reach of the Sacramento River. Long-term goals include ecological rehabilitation of the site, increased understanding of how to restore floodplain sites, utilization of floodplains for natural flood storage to reduce damage to human infrastructure, and improvements in water quality. Only through complete implementation of all phases of the project, however, will the goals be realized and the hypotheses tested. The immediate objectives for this phase of the project are to acquire 3 land parcels (totaling 311 acres) at the confluence of Mud Creek, Big Chico Creek, and the Sacramento River; do pre-restoration, baseline assessment on those parcels in order to develop restoration and management plans; and to solicit stakeholder input.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   The proposed property acquisition and eventual restoration seems warranted in light of the inherent ecological and hydrological value of tributary-mainstem confluence areas. Such areas may be key for conservation of anadromous fish, for restoring natural fluvial geomorphic processes, and for protecting diverse and dynamic vegetation communities. The conceptual model that drives the long-term goal of the project is the rehabilitation of floodplain ecosystem health through the restoration of native vegetation and natural channel-floodplain processes, which will eventually include planting of native vegetation species and reconnection of the floodplain and channel through altering or removing berms/levees, etc. A larger conceptual model appears to be restoration of a large portion of the riparian corridor along the Sacramento River between Red Bluff and Colusa (28 river miles), of which this project would be a small, but strategic piece, through the above mentioned methods. Through this and a number of past and ongoing restoration projects, TNC plans to conduct monitoring and research that evaluates the effect of site conditions and landscape context to the success of ecosystem restoration on each site. Knowledge gained from the suite of sites being restored will help to guide future restorations. So, completion of this and further phases of this project would help to increase the number and diversity of sites restored (and studied) and would provide information on restoration success from an area with unique and strategic landscape context (confluence location).

Full-scale implementation does seem warranted, given the inherent ecological, hydrologic, and geomorphic importance of this confluence area and with it, the high potential payoff in restoration benefits (should restoration be conducted in the future).

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   This project objectives can be divided into two levels: (1) the long-term goal of site restoration, which includes a four-phase process (of which only phase 2 is being proposed here), and (2) the immediate objectives of this particular phase of the larger project. The long-term approach to site restoration seems appropriate and well-designed. The particular approach to this specific project (phase 2 of the larger project) also seems appropriate. The two key tasks for this project are acquisition of the land, for which prior TNC activities have laid the groundwork, and formulation of the restoration plan. The components of the baseline assessment that TNC has proposed seem appropriate and adequate.

   The acquisition of these properties and completion of a baseline assessment will add to the base of knowledge necessary for scientifically-guided restoration of this specific site. Completion of this phase of the project alone, however, will add little to the overall base of knowledge for riparian restoration in general. Completion of future phases (under future grants) of TNCs larger project on this site and on other sites along the Sacramento will add a great deal of useful information on riparian restoration that will be of value both to decision makers and scientists. When combined with results from other sites, the strategic location of this site (at the confluence of two tributaries and the mainstem Sacramento River) would add significantly to the evaluation of the effects of landscape context and local site conditions on restoration success.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   The feasibility of the immediate project, acquisition of the three properties and formulation of a restoration plan, seems high. The landowners are apparently interested in selling, TNC has completed some initial assessment and planning, and TNC has demonstrated experience and expertise in real estate transactions and restoration planning. The goals of the larger project, of site restoration and research/monitoring, also seem feasible, should these be funded under future grants from CALFED or other agencies. The track record of TNC in acquiring and restoring several other sites along the Sacramento and the expertise of their staff suggests a high likelihood of success. The scale of the immediate project seems appropriate, as one phase of the larger restoration project.

   In examining the maps provided in the proposal, I do have one minor concern. The properties slated for acquisition, in combination with a state park, cover most of the confluence area of Mud Creek, Big Chico Creek and the Sacramento River. However, there is a parcel of land (apparently being used for row crops), immediately adjacent to the river, that is not being acquired and is only briefly mentioned in the proposal. Will the presence of this unprotected property put limitations on the degree to which natural processes (river meandering, flooding, natural vegetation regeneration) can be reinstituted on this site? Feasibility of implementation of the larger project (restoration) may depend on the cooperation of neighboring landowners. Stakeholder outreach, which is a task identified in the approach, thus may be a critical phase of the project.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   Because the immediate objectives of this project are straightforward - to acquire the 3 parcels of land, conduct baseline assessment and initial restoration/management planning, and solicit stakeholder input - the project specific performance measures are also simple. For the most part these are simply a breakdown of the specific tasks and subtasks necessary for meeting the project's stated objectives, with the performance goal that these be completed within the 3 years of the project. These tasks and subtasks are described clearly in the proposal and will form the basis for assessing project completion. These performance measures are directly related to the stated objectives of the project. Determination of success or failure will be straightforward. Although no monitoring will be done in this specific project, the environmental characteristics to be studied during the baseline assessment are appropriate and adequate.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The products of this project will be acquisition of the land and completion of restoration and management plans, including stakeholder input. If all phases of the larger project are implemented in the future, the product will be a floodplain ecosystem with restored structure and function at the confluence of two tributaries and the Sacramento River. Completion of this restoration and other restorations in the system will furnish knowledge that will be useful in future restoration endeavors.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   TNC staff are highly qualified to conduct the proposed land acquisition, assessment and planning, and outreach activities outlined in this proposal. In addition, TNC staff are also highly qualified to implement restoration on this site, should future phases of the project be funded. TNC has several past and ongoing restoration projects, some of them funded by CALFED, on the Sacramento and other rivers in the region and has demonstrated success in ecological restoration. Personnel on the project team are experienced and include those with expertise in ecology, real estate transactions, planning, restoration, and project management.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   This project is rather expensive, with a cost of $2.85 million (about $9,000 per acre acquired). Of this, nearly 90% of the budget ($2.5 million) is dedicated to acquiring the 3 properties (311 acres), with the remainder of the budget dedicated to baseline assessment, planning, and permitting. The project will contribute to the long-term goal of restoration of the riparian corridor of the Sacramento River between Red Bluff and Colusa and will conserve an ecologically and hydrologically strategic location at the confluence of the Sacramento River and two tributaries. Conservation and restoration of such confluence areas should be a high priority and may provide particularly high benefits for ecosystem conservation and flood water storage. However, none of the restoration work will be funded under this grant. Acquisition of the land and completion of a baseline assessment and draft restoration plan are necessary first steps.

Given that most of the budget is for land acquisition, it is unlikely that a significant amount of the budget could be reduced without seriously compromising the success of the project. Some funds could be cut from baseline assessment and stakeholder outreach, but these seem to be critical components of the project. In addition, they make up only about 10% of the project costs.

<u>Miscellaneous comments:</u>

As I mentioned before, the property located between some of the project parcels and the river is not being acquired. This parcel is currently in row crops. Will this parcel limit restoration options (particularly of restoring flooding and channel migration) on the parcels to be purchased? This is one reason that landowner relations will be crucial.

It would have been nice to have more details about what phase 1 of the project has found, namely, more specific information on the results of baseline biological and environmental surveys of one of the properties.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
XExcellent	**This proposal recognizes an aspect of large rivers that is often overlooked---the role of tributary junctions in floodplain systems. The hypotheses are exciting and are an important area of floodplain research. This is an excellent proposal. The only major omission is the plans for capturing the information on how these systems respond. Careful design of the measurements and possible additional research funding would capture this important opportunity.**
-Good	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   The proposal states the goal of restoring riparian and floodplain habitat in tributary junctions of the Sacramento River and Big Chico and Mud Creeks. The three specific objectives (fee title interest, assessment, and outreach) are clear. The hypotheses are exciting, but unfortunately they will not be tested under this phase of the project.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project

justified?

The proposal presents a compelling justification of the project. There is an explicit conceptual framework, though it is not closely linked to the proposed restoration actions at this point.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   It is reasonably likely that the proposed restoration efforts will be successful. Negotiations for easements and land acquisition are complicated, but it appears that the major land owners are agreeable. The approach is sound and supported by research in the Willamette River in Oregon.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   no comment

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   The measures of performance are adequate for measuring the success of the project.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The project will advance the understanding of the Bay Delta Watershed if subsequent phases after acquisition and implementation are funded. The project will contribute to the restoration of floodplains and aquatic ecosystems. The outcome of this proposal has great significance to decision makers because most cities occur at river confluences.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   no comment

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   The budget is substantial (<$3 million). If successful, the value of the project in guiding other restoration could justify the expense.

Miscellaneous comments:

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**I had actually ranked this 'Very Good' but that option is not available on this template. This is well written and convincing. The importance of these pieces of land seem very clear. There is an interesting opportunity here to not only protect ecologically valuable land but to conduct some interesting research in later phases. The latter could be somewhat unique given the flow and geomorphic properties of the land, as well as, its position relative in the network.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   This is an extremely well written proposal with the goals and objectives very clearly stated. The main goal is to acquire 3 pieces of property, complete baseline assessments with future plans to develop a restoration design. This is Phase II of a four-phase project. Hypotheses are stated but PIs admit, appropriately that they are only testable in a much broader context (with additional phases of this overall project and other sites included).

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   The proposed work is justified based on the importance and uniqueness of this site. Very interested hydrogeomorphic conditions exist here and this area is flooded rather frequently (R=ca. 2.5 yrs). This is despite the presence of levees. So the land is not particularly attractive for farming yet it is ideal habitat for a variety of species.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   The approach is reasonable. This is largely NOT a research project. Much of the total cost is land acquisiton. The scientific aspects they do promise within this phase include building a data base on soil stratrigraphy; GIS layers on field boundaries, land use, ground cover; compiling wildlife records, etc. (page 7). Item 4) that they list (use GIS layers to evaluate topography, flood frequency, and bank erosion projectiles) really should have included more explanation. What would be the basis to determine flood frequency and bank erosion (discharge records available? Or based on topography and soils??)

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   The project does appear technically feasible. The approach is fairly clearly outlined and within the grasp of the authors. The exception relates to the items mentioned in 3) above. The team is very well qualified and the likelihood of successful land acquisition is quite high.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   Measures are specified and largely very straightforward, i.e., purchase agreements completed, etc. The measures for success of the assessment are simply getting the data/information.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The product will be adding the land the list of protected parcels. These are important pieces of property and their protection (and eventual restoration) will contribute substantially to the management of the larger SR system

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

From what is provided the team is certainly well qualified and has done past restoration work as well as some research.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   seems reasonable, especially given the promised 10% matching on land purchases from Packard funds

Miscellaneous comments:

External Scientific: #4

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

None

Review:

Please provide an overall evaluation summary rating:

<u>Excellent:</u> outstanding in all respects;
<u>Good:</u> quality but some deficiencies;
<u>Poor:</u> serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**With the exception of a slightly more defined assessment and plan development approach, this proposed project has the potential to benefit the confluence systems in the project area by providing a more natural flow and enhanced biotic environment (both aquatic and terrestrial), and to provide valuable information for similar future projects. It has obvious regional benefits and is consistent with regional planning efforts.**
XGood	
-Poor	

1. **<u>Goals.</u>** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   The objectives clearly stated the efforts and products of this proposal.

   However, the goals and hypotheses relate to the on-going project and regional scale efforts of The Nature Conservancy, and as such it is not clear which, if any, have relevance to this proposal (i.e., Phase II). This is particularly evident in relation to developing meaningful performance criteria.

While discussion of the long-term, ongoing project is beneficial to show this proposal in context, the proposal's goals and hypotheses should focus more on the immediate effort and products defined in the objectives.

The concept is timely and important, has been included in several large-scale watershed plans, and has been shown to be beneficial as stated and referenced in the proposal.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   The long-term, four phase project is justified, and in this context the acquisition, assessment, and involvement of key stakeholders to guide development of design and planning would also be justified.

   The conceptual model is clearly stated in the proposal, and while the concept relates to the long-term project, it does explain the basis for the proposed work.

   As part of an on-going, phased project, this work is justified.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   Under Task 2, there should be a more logical and defined progression showing the development of the design and management tools mentioned (i.e., the GIS data products and modelling suggested in the description, that will assist restoration planning and management of the biological and hydro-geomorphological characteristics of the confluences). Also, there should be assurances for how the survey data will relate to developing these implied products. [There is mention of this at the end of the third paragraph of A3, Approach (page 6), in the context of TNC's future, coordinated Sacramento River activities.]

   The results are likely to add to the base of existing knowledge for this area, particularly for hydraulic characteristics mentioned and biotic inventories.

   The project could generate novel information, methodology or approaches, given the inclusion of stakeholder input and adaptive management in the proposal.

   Because of the proposed project's consistency with and integration into regional planning efforts, the inclusion of stakeholder input and adaptive management, and documenting the project under CEQA and NEPA, the proposal should be intrinsically useful to decision-makers.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   The approach for this work is fully documented (with exception to previous comment, above) and technically feasible.

   The likelyhood of success will be determined by: Acquisition of fee-title interest in the three properties; performing the assessments and developing planning tools (e.g., biological baseline surveys, geo-referenced data sets/GIS, hydraulic/flood modelling, erosion projection, etc.); designs and plans; and acquisition of stakeholder participation. The likelyhood of succeeding in

these areas is good.

The scale of the project appears to be consistent with the objectives.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   The performance measures are suitable for the tasks identified in A3, Approach. However, refer to comments regarding focusing the goals, hypotheses, and assessment tasks. The general approach to measuring the overall effort is appropriate.

   There is enough detail for quantifying these performance measures. However, the addition of stakeholder comments is suggested to provide both a qualitative and quantitative illustration of performance measures. For example, there should be allowances for not only participation, but for positive and negative feedback, and a way of determining whether a stakeholder's participation is beneficial or not to the development of meaningful plans and restoration activities. This is especially true for adaptive management that incorporates the needs of the public along with the lessons of scientific research.

   Since monitoring plans will be developed under the tasks described in this proposal, performance measures for these guidelines will not be possible until they are implemented during the next phase. The detail of these plans should be adequate to assess performance at that time, and therefore assurances to that effect should be and are included in this proposal's approach.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The proposal identifies valuable products from work to be accomplished; these products will undoubtedly provide use for similar projects regionally.

   TNC's ongoing work with local and regional experts to develop monitoring strategies for these types of projects should also provide valuable information when applied to the proposed project. The information that would be collected as described by TNC under measuring long-term performance (page 9, A.5., Performance Measures) would be particularly beneficial for increasing the knowledge regarding the spectrum of biotic and abiotic characteristics and processes described in this proposal for confluence systems.

   Foreseeable interpretive outcomes from the proposed project are likely and related to assessing the robustness of the existing natural resources of the confluence systems and to developing strategies and plans for future restoration work in light of existing conditions and past projects.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   TNC has a long history of conservation project implementation and continues an ongoing regional project directed at riparian conservation (TNC's Sacramento River Project).

The project team is well qualified to implement the project efficiently and effectively, and appears to be moreso because they integrate and work with local and regional experts in their ongoing, related efforts.

TNC appears to have available infrastructure and support to accomplish this proposed project.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   None.

Miscellaneous comments:

The intent and approach to the proposed work is valuable and is expected to benefit the biotic environment and riparian processes in the immediate project location as well as the surrounding area. It appears that potential benefits to natural and water resources from enhancing and conserving vegetation and natural floodplain characteristics will likely be realized from implementing this phase of the overall project.

External Scientific: #5

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**While the general nature of the proposal sets forth valid principles at that level, there is insufficient detail to determine likely outcomes and their relationship to cost and time.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   a. Are the goals, objectives and hypotheses clearly stated and internally consistent?

   Goals, in a general sense, are stated and internally consistent. However, some effort is required for the fresh reader to clearly and quickly determine the exact boundaries of the scope of work of this particular proposal and clearly distinguish it from preceding and future projects or phases. While the authors and others familiar with the project no doubt understand the material very well, and as the writer of many proposals this reviewer is in sympathy with the difficulties of communicating in the readers terms, that remains precisely the purpose of a proposal. For example, the proposal needs to state clearly just what goals are to be achieved by this particular project, which are to be achieved by future phases, and

which goals are merely philosophical in nature. While this may seem redundant and obvious to those who have labored long and hard to assemble a complex proposal, the writers must bear in mind that the fresh reader lacks the advantage of living each day with the minutiae of the project.

b. Is the concept timely and important?

The general concept is certainly timely and important, but the proposal could be improved with the addition of specific information about its uniqueness and/or superiority with respect to common practice. Since the applicant has a track record of similar projects, it would be enlightening to hear how practice has thus far benefited and changed as a result of the adaptive management and other critical review procedures suggested.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   a. Is the study justified relative to existing knowledge?

   In general, yes. But the proposal does not discuss or outline the status of existing knowledge, the gaps in it, and specifically what measures will be taken to fill them.

   b. Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work?

   See 1a, above. Yes, it does explain the underlying basis for the proposed work.

   c. Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   As nearly as this reviewer can determine from the very general nature of the text, the proposal suggests that research will be the primary product apart from land acquisition. It is not clear with respect to existing knowledge about the site and how it forms a basis for establishing the need, quantitatively and qualitatively for the research needed and how it will be used to achieve project goals. Certainly, however, the broad kinds of research mentioned make intuitive sense, and if CalFed, in its close working relationship with the applicant in the past, can translate the degree of specificity in sufficiently concrete terms to justify the expenditure, that may be sufficient grounds upon which to base justification. This reviewer, however, can find no firm basis for relating either the nature or the amount of the work so generally described to specific products. The use of sophisticated technology is undoubtedly a wise choice to ensure both a high degree of efficiency, accuracy, and performance, but a description of such tools alone does not provide a means to justify or decline to justify a project, particularly one in the realm of six figures.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   a. Is the approach well designed and appropriate for meeting the objectives of the project?

Yes, in a general sense. However, the proposal could be improved by the addition of an outline of specific elements of the approach that set it above the baseline level of common practice with explanations of specifically how such superior elements will better meet which specific objectives.

b. Are results likely to add to the base of knowledge?

In a general sense, one would suppose so. However, given the applicants track-record, the proposal could be greatly improved by an explanation of specific examples of how the base of knowledge has benefited from past work. In addition, the proposal should provide some specific key areas where the base of knowledge is lacking and the applicants approach to realizing new knowledge through the processes is outlined.

c. Is the project likely to generate novel information, methodology or approaches?

While one would reasonably expect, as in any project carried out by talented people capable of critical thinking, that novel information, methodology or approaches would be an expected result, this reviewer failed to note any specific indications in that regard in the proposal. However, the additions suggested in the preceding item could incorporate such references.

d. Will the information ultimately be useful to decision-makers?

Undoubtedly information will be generated that would be of value to decision-makers, particularly with regard to the specific project and its management, but this review failed to note any specific references to just how the expected information might be used, particularly apart from existing information, especially on a broader scale. While this reviewer is favorably impressed in once sense by the rather minimalist approach, sufficient detail, preferably in a brief, well-organized, even graphic form would be welcome in this respect and throughout the proposal.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

a. Is the approach fully documented and technically feasible?

The general approach appears valid and technically feasible, but the proposal could benefit greatly from a somewhat higher level of detail, especially with respect to technical feasibility. Again, given the applicants track-record, specific references to the technical aspects of the approach and their demonstrated efficacy on other projects would facilitate a full and fair assessment of the approach. While the proposal does suggest that part of the goal is to learn from experience on this project, it would be useful to refer to the supposed basis for technical feasibility as well as areas where the present state of the art is likely to benefit from such learning. Again, some indication of how the applicant has used the learning feedback experience to advantage in the past would be welcome.

b. What is the likelihood of success?

Since no technical detail is provided, it is not possible to comment responsibly upon the likelihood of success, especially with regard to the artificial introduction of plant propagules. However, it could reasonably be expected that the proposed alteration of site topography and hydrology alone would result in some, perhaps a marked, degree of improvement. But if this project is limited to research, any judgment regarding the likelihood of success would have to be based upon the applicants experience with similar projects under similar circumstances. A discussion of the applicants basis and conclusions in this regard would be valuable.

c. Is the scale of the project consistent with the objectives?

Apart from the size of the project, no capacity, performance, and problem magnitude data are given upon which to base a conclusion.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   a. Does the project include appropriate performance measures to measure success relative to the project's goals and objectives?

   The acquisition goals are measured by successful acquisition. Research goal performance appears to be based on a general description of research type and research tools.

   b. Is there enough detail as to how the performance measures will be quantified?

   For acquisition, yes. For research, no.

   c. For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   No.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   a. Are products of value likely from the project?

   Yes, undoubtedly there will be products of value. There is insufficient information presented to determine their relative value, however.

   b. Specifically for restoration projects, are products of value also likely from the monitoring component?

   Yes, any monitoring at all is bound to provide products of value, but it is unclear how valuable and relevant they may be.

   c. Are interpretative outcomes likely from the project?

   Yes.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   a. What is the track record of applicants in terms of past projects?

   According to the applicants general statements, the track record appears to be extensive, but there appears to be no evidence supplied with respect to the quality of that record. One can only presume that the applicant will perform as well or better than in the past.

b. Is the project team qualified to efficiently and effectively implement the proposed project?

The project teams qualifications are stated in very general terms, and in that sense would appear to be adequate. No evidence was noted in the review of the proposal that would specifically indicate any particular degree of efficiency and/or effectiveness.

c. Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Apparently yes, but while complete references are vague, some reliance upon subcontractors of unknown and in some cases unstated qualifications appears likely, and some of them may be engaged by the applicant exclusively and without competitive bidding or with respect to any review of qualifications or consideration of other potential subcontractors.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

Is the budget reasonable and adequate for the work proposed?

As nearly as this non-accountant and non-appraiser reviewer can determine from the budget data submitted, about 88% ($2,545,000/311 acres = $8,183/acre) of the funds will be applied to land acquisition and 12% ($309,757/311 acres = $996/acre) to restoration-oriented research.

Without detailed appraisal data on comparable properties and baseline data on administrative costs of acquisition, it must be assumed that, especially given the track record of this applicant with CalFed, such costs are realistic if not reasonable. Pay rates certainly seem reasonable and the hours submitted do not seem excessive, but then this reviewer has no basis beyond that for any judgment.

The reasonableness of the restoration planning work depends entirely upon its substance and relevance in service of project goals. The proposal does not describe the work and the amount of hours or other cost indices and derived benefits upon which a sound judgment of cost/benefit could be based. Costs are not allocated according to task, so it is unclear whether or not extensive engineering is included or whether a significant proportion of the total is allocated to acquisition of remote sensing data and its assembly, analysis and interpretation. There is no discussion of specific methodology beyond mention of such tools and techniques of research or any indication of what level of information is required. Additionally, there is no discussion about how benefits are allocated (e.g., restoration planning, value to science, interpretation and education, etc.). However, the pay rates seem reasonable for the professions stated, so in that sense it should be reasonable to conclude that the total should be reasonable, provided that the work products are optimally useful and directly relevant to achieving project goals.

Miscellaneous comments:

Reviewers and applicants are both imperfect communicators. This applicants overall reputation is significant, and that alone may be considered sufficient justification for award, particularly when combined with the fact that performance on several existing and past contracts are very likely a superior indicator to a literal interpretation of the merits of the present application. While questions have been raised in good faith here about details, the applicant should perhaps be afforded the opportunity to respond and correct any erroneous interpretations of the reviewer so that CALFED can be guided by balance in its deliberations. In the same spirit, the applicants responses should be made available to the reviewer.

It is the reviewers responsibility to call attention to issues that could perhaps improve the application so that it can be made as responsive as possible to the review guidelines and not to merely find fault. The goals appear to be solid, needed, and with great potential for much benefit. The applicants reputation is almost good enough to justify award on faith alone, but a critical and objective review of the merits is the reviewers solemn responsibility, making it necessary to set aside his faith in the applicants reputation as a sole, or even primary, measure.

External Scientific: #6

Research and Restoration External Scientific Review Form

Proposal Number: **170**

Applicant Organization: **The Nature Conservancy**

Proposal Title: **Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
XExcellent	**It is very difficult to rate a component of a project even when it has been presented with the total project. My summary rating is therefore greatly influenced by the overall track record of the Nature Conservancy in obtaining properties and developing the appropriate restoration plan.**
-Good	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   Goals,objectives,and hypotheses are clearly stated and internally consistent for the overall project as well as the proposed component. The concept is timely and important.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The proposed component of the project is phase II of a four phases. And consists of the aquisition of 311 acres in three parcels of land that high restoration potential identified during phase I. Implementation of restoration activities will be requested under future funding. This makes it very difficult to answer this question.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   This project does not fit the mold for this review question, because the proposal is for a part of project. However, the overall project is well designed and should meet the objectives of the overall project. The proposed component will add to the base of knowledge, because it involves baseline studies of the three parcels. This data will ultimately be useful to decision-makers.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   The approach is fully documented and technically feasible and has a high likelihood of success. The scale of the project is consistent with the objectives.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   The proposed project component includes appropriate performance measures.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The product of the proposed component is the aquisition of acreage with potential for restoration. The baseline data gathered will be valuable as before data. For a complete Before-After Control-Impact design, data from similar tracts that will not be restored should be added. This will enhance the likelihood of interpretative outcomes.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   The applicants have a very good track record and can implement the proposed project component. They have added subcontractors to provide the expertise and infrastructure that is needed for the succesful completion of this project component.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   I have no idea about land prices in California, but the distribution between actual aquisition costs, salaries, and consultants seems reasonable.

Miscellaneous comments:

Prior Performance/Next Phase Funding: #1

New Proposal Number: 170

New Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   97-N02, Sacramento River Floodplain Acquisition and Riparian Forest Restoration 97-N03, Sacramento River and Riparian Forest Restoration 97-N04, Sacramento River Meander Restoration 97-N08, Lower Mill Creek Riparian Restoration 97-N14a, Cosumnes Floodplain Acquisition and Restoration 01-N10, Cosumnes/Mokelumne Corridor Floodplain Acquisitions, Management, and Restoration Planning 01-N23, Staten Island Acquisition All Ecosystem Restoration

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   N/A

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

   -Yes **X**No -N/A

   If no, please explain any difficulties:

   There were two related difficulties: first, after outlining six terms during the PSP process to be reconsidered, applicant raised several additional terms for renegotiation; and second, the State brought several terms back to the table as well. Both difficulties resulted in unanticipated negotiations over terms not raised during the PSP process which diverted considerable time as well as State resources. This situation was amplified due to NFWF's limited ability to negotiate contract terms.

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

   XYes -No -N/A

   If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

   XYes -No -N/A

   If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

   XYes **-**No **-**N/A

   If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

   -Yes **-**No **X**N/A

   If no, please explain:

   This proposal contemplates the next phase of a project not managed by NFWF.

Other Comments:

Prior Performance/Next Phase Funding: #2

New Proposal Number: 170

New Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   00-F03, Floodplain Acquisition and Sub-Reach/Site Specific Management Planning: Sac River (Red Bluff to Colusa); 98- F18 Floodplain Acquistion, Management and Monitoring on the Sac River; CALFED ERP

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

   XYes -No -N/A

   If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

   XYes -No -N/A

   If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

   XYes -No -N/A

   If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

   XYes -No -N/A

   If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

   -Yes -No **X**N/A

If no, please explain:

Other Comments:

Applicant has performed well in implementing previous projects.

Prior Performance/Next Phase Funding: #3

New Proposal Number: 170

New Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   Acquisition of Southam Orchard Properties for Preservation of Riparian Habitat, CVPIA grant Hartley Island Acquisition, CVPIA 11332-7-G017 Singh Walnut Orchard, 11223-0-G014 L&L/Hamilton, 11332-7-G030 Birkes, 11332-8-G124 Dana, 11332-8-G048 Latimer, 11332-8-G123 Deer Creek Fencing, 11332-0-G016 Eagle Canyon (Pelton) Ranch, 11332-0-G104 Leininger easement, 11332-7-G030

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

   XYes -No -N/A

   If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

   XYes -No -N/A

   If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

   XYes -No -N/A

   If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

   XYes -No -N/A

   If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

XYes **-**No **-**N/A

If no, please explain:

Other Comments:

I have listed all the projects funded by the AFRP through The Nature Conservancy. Excellent contractor to work with. Always on time and within budget and provides high level products.

Environmental Compliance:

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

   -Yes **X**No

   If no, please explain:

   Not enough detail on specific restoration activities to detrmine what permits may be needed. Depending on specific activities, additional permits that may be required include: grading permit, encroachment permits, 1600 agreements, 2081 and/or Section 7 consultation.

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

   XYes **-**No

   If no, please explain:

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

   -Yes **X**No

   If yes, please explain:

   As long as all necessary permits and documentation are completed, this project is feasible.

Other Comments:

Budget:

Proposal Number: 170

Applicant Organization: The Nature Conservancy

Proposal Title: Restoration of the Confluence Area of the Sacramento River, Big Chico and Mud Creeks

1. Does the proposal include a detailed budget for each year of requested support?

   XYes **-**No

   If no, please explain:

2. Does the proposal include a detailed budget for each task identified?

   XYes **-**No

   If no, please explain:

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

   XYes **-**No

   If no, please explain:

4. Are appropriate project management costs clearly identified?

   XYes **-**No

   If no, please explain:

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

   -Yes **X**No

   If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

   The totals differ by approximately $28,000. This figure does not appear to be cost share funds.

6. Does the budget justification adequately explain major expenses?

   XYes **-**No

If no, please explain:

7. Are there other budget issues that warrant consideration?

   -Yes **X**No

   If yes, please explain:

Other Comments: