Cosumnes River Preserve restoration monitoring data integration for adaptive management

Jaymee Marty

Initial Selection Panel Review

Not Recommended

Amount Sought: **$**885,420

Fund This Amount: $**0**

Brief explanation of rating:

This proposal focuses on mapping and characterizing terrestrial land cover, establishing long-term permanent plots to monitor riparian and floodplain vegetation structure, and monitoring bird populations as indicators of ecosystem function. The Technical Panel considered this proposal to be "adequate", and the Regional Panel scored it as "high." However, the Selection Panel recommendation is not to fund this proposal. Although the Cosumnes River is a priority area for the ERP, this proposal does not take a comprehensive approach to monitoring the impacts of previous ERP investments. Specifically, the proposal does not include any aquatic (including fishery) monitoring or assessment. It is also unclear how the information generated, including the proposed decision support system, would be used by or useful to decision-makers. The Technical Panel also concluded that the proposal lacks an explicit coherent description of performance measures.

Technical Panel Review

Technical Review Panel's Overall Evaluation Rating:
Adequate

Explanation Of Summary Rating

This proposal satisfied adminstrative requirements and received a High ranking from the Regional Review Panel. However, the Technical Review Panel did not find the level of methodological detail needed to rate this proposal Above Average. Further, application of the proposed decision-support tool is predicated on the assumption that the aspects of habitat that would be monitored are limiting to biota. That assumption was not supported in the project justification and would not be tested as part of this project.

Goals And Justification

The proposal identifies restoration actions whose outcomes will be monitored. The goals and objectives of the restoration actions are adequately stated. The proposal presents a sequence of conceptual models. The overarching conceptual model (Fig 2) is incomplete in that it assumes that biological response variables (e.g., abundances of Swainson's hawk, etc.) are entirely functions of "physical habitat" and hydrology. This deficiency is significant because it underlies the untested assumption that "habitat" is limiting. The proposal also fails to describe how the use of bird species composition--as an index of some overall notion of ecosystem function--can be integrated into decision making. The proposal does not include a clear statement of the hypotheses that would be tested, and therefore we cannot fully ascertain relevance to existing knowledge.

Approach

The approaches, for each individual objective, are generally appropriate. However, the proposal lacks the level of methodological detail that is needed to fully assess the merits of this proposal. The linkage between the objectives for monitoring and development of a decision-support tool is not clear. The project builds upon previous monitoring and uses prior monitoring data in some fairly novel ways. The data and products are likely to be very useful to decision makers.

Feasibility And Likelihood Of Success

The project seems technically feasible. However, critical sampling details are missing for several tasks (e.g., dimensions for plots for Task 3.1 and sample size goals for all Task 4 subtasks) The scale of the project is consistent with the objectives. This project seeks to provide a decision support system. That system is feasible as the authors describe it. However, this project will not confirm the underlying causal mechanisms that are needed to make that DSS useful in a predictive sense. That is, this proposal documents the feasibility of the development of the DSS, but not the feasibility of application of the DSS to decision making. Recognizing that important limitation, this project is still a worthwhile first step.

Performance Measures

The proposal lacks an explicit coherent description of performance measures. The proposal seems to imply that The Nature Conservancy's "Measures of Success" conceptual framework will be used to develop performance measures, but this was not clear to the external technical reviewers.

Products

The project will almost certainly produce information that is useful to resource managers. It will also provide circumstantial evidence about responses to restoration actions. However, causal linkages remain lacking and that

deficiency greatly constrains the value of the proposed decision support system. Adequate provisions are planned for management and dissemination of the data. The author's have planned for the submission of manuscripts to peer−reviewed scientific publications. The team has a solid record of producing results that stand up to peer−review.

Capabilities

The team has excellent qualifications that are commensurate with the project. The disciplinary mix is generally appropriate and well described. The team has a solid performance record that clearly documents their ability to complete the project.

Budget

The budget may prove to be insufficient to complete all of the tasks.

Regional Review

The regional review panel gave this proposal a "High" ranking. That panel confirmed applicability to ERP goals and regional priorities. Linkages with other efforts were generally deemed adequate, but the regional panel questioned how this project and the complimentary proposal #105 might be coordinated if both are funded. There is a strong coalition of local stakeholders who support the relevant restoration projects. The GIS tool may prove very useful to local planners.

Administrative Review

The budget reviewer did not indicate any significant or insurmountable problems. That reviewer requests that "If the grant is awarded a detailed list of equipment purchases should be provided by the grantee so reviewers can better evaluate whether it is more cost effective for the state to purchase large dollar equipment items through the state procurement process. If the equipment list is available within the State inventory or stock, then purchase of some or all of the listed

items may be provided, loaned, or leased by the state to the grantee. In the event, that the equipment is purchased by the grantee, the grantee shall maintain an inventory of major equipment for auditing purposes and potential use for future projects. Grantee shall follow State Contracting Manual [SCM] Section 7.61 thru 7.62 rules pertinent to equipment purchase, lease, etc." Some additional budget detail seems to be needed, as described in the Budget review. The Prior Phase reviewers (2) did not indicate any ongoing impediments to success. The Environmental Compliance reviewer did not indicate any problems or impediments, but had no knowledge about whether State scientific collector's permits have been obtained.

Additional Comments

The plan to make map products available to the public was a strong point of this proposal.

Delta Regional Review

Delta Regional Panel's Overall Ranking:
High

Summary:

This project will provide important data collection and analyses on multiple restoration sites that will be essential to guide future riparian and floodplain management decisions and planning on the Lower Cosumnes River.

1. Applicability To ERP Goals And Regional Priorities.

This project proposes to go beyond some of the baseline monitoring that has occurred on the Preserve by implementing a collaborative partnership with UCD and PRBO by refining and measuring indicators for selected key ecological attributes and targets in a high priority area. There is mention of several R species which could benefit from this effort but the monitoring is limited to riparian birds and vegetation. The monitoring will consist of; 1) measuring habitat distribution and amount using aerial photos and remote imagery; 2) measruing habitat structure by establishing long-term permanent plots; and, 3) habitat function by monitoring riparian bird populations as indicators of ecosystem function. A fairly extensive data set is already available for the Preserve, so data from this effort could greatly improve our understanding of the previous restoration actions and improve future management and restoration decisions on the Preserve.

2. Links With Other Restoration Actions.

The program will assess multiple restoration actions in the Lower Cosumnes River watershed, but the proposal only identifies vegetation and riparian birds as targets for monitoring. This project recognizes another proposal (#105) for the same geographic area that is complementary in its efforts but it is unclear how the two proposals (if funded)

will coordinate methods for consistency and avoid duplication.

It is also unclear what, if any, linkages or references may be necessary in regards to ongoing planning for the upper Cosumnes River watershed. We believe there are several planning efforts (such as ground water storage) going on upstream of the preserve but it is unclear how, or if, those efforts might influence future management and restoration opportunities on the Preserve.

3. Local Circumstances.

The GIS component of this project may be very valuable to decision−makers for planning and restoration purposes.

There is a stong coalition of stakeholders and support for the Preserve so the project should be feasible in the projected timeline. Due to the fact that some of the newer acquisitions, such as McCormack−Williamson Tract may be tied up in planning for multi−purpose projects like the North Delta Improvements Project, recent ERP funded acquisitions may not be available.

4. Local Involvement.

The local involvement at the Preserve is very positive. They have an existing public outreach and educational program that they administer with the cooperating agencies through a memorandum of agreement. Local school districts and universities are heavily involved in the educational component as well and will continue to be involved.

5. Local Value.

This proposed monitoring plan could greatly improve our understanding of past restoration actions on the Preserve and assist with future planning and restoration of the Preserve. The approach could be applied on other sites where riparian and floodplain restoration are objectives.

6. Other Comments:

If both Proposal 105 and 116 are funded, specific coordination between the two efforts should be developed to ensure consistency and application of the methods.

The Technical Panel should also determine the degree of overlap with the monitoring proposed in Proposal 105 (The COYOTE Project). If Proposal 105 is meant to complement this proposed study, it should be determined if the two projects would utilize the same field methods.

External Technical Review #1

Goals And Justification

This proposal is a refreshing deviation for the usual approach to restoration monitoring because it includes the development of a decision support tool for future restoration efforts. The objectives of this tool are well-described even if the methods may require some refining. More traditional monitoring exercises are proposed as well including continued bird and vegetation monitoring as well as habitat mapping. The weakness of the proposal is in articulating how the data collected will be integrated into model development. In other words, how will Task 2 – 5 be integrated to increase our understanding of the benefits of floodplain restoration and what should be done to enhance the desired outcomes for biodiversity conservation and ecosystem function? Like much of the bird monitoring that has received support in the past, it is not at all clear how the information collected will be useful for decision makers. It is not clear how bird species composition is a surrogate for ecosystem function as suggested throughout the proposal. However, long term studies of vertebrate communities are far and few between so I hold out help that all the bird data will tell us something someday and understand. In conclusion, most tasks are sufficiently defined but not well integrated

Approach

Task 2 describes advanced remote sensing to provide a vegetation map. However, it is not clear what elements should be mapped to inform either the proposed models or land management activities. For example, what are the target species referred to? What weeds are presenting a problem for flood plain restoration if any? As written this task is expensive and time consuming and the benefits of the proposal approach are not well-justified. However, they do need a vegetation map if in fact one is not already available for the area. More importantly this information would be most useful for multiple time steps so that trends in patterns of regeneration can be determined. The investigators are very

experienced and I suspect they will ensure that they get what they need in a cost−effective manner. Task 3 Vegetation monitoring will provide more information on the structure of control and restored sites and quantify the composition of restored forest patches. The methods are clearly described. Again, a better link to how habitat structure and composition will be used to enhance the mapping and modeling tasks would be useful. Task 4 It is clear that the proposed bird monitoring will provide addition data from existing monitoring locations and there are benefits to long−term vertebrate studies. However, given that there is extensive amounts of data already collected, PRBO should have included preliminary results that justify further research. The life history data that they are proposing to collect in order to examine source/sink status, effects of restoration, and other objectives is labor intensive and requires multiple years in order to determine demographic variables such as reproductive success. There is no evidence provided that the data they are going to collect will have the power to detect an effect of restoration or determine the desired demographic variables. This should be estimated from earlier data and simulations from natural ranges of variability if necessary. How did Swainsons' Hawk get selected as an important indicator taxa? P.S. If you claim state−of−the−art methods make sure the reference for these methods isn't 9 years old Task 5 is the most creative and desirable aspect of the proposal needs more attention given the inherent challenges of the modeling exercise. In particular, including multiple benefits is important but remains a difficult challenge when trying to develop a single benefit function. If benefits are not correlated then they will need to be treated independently making it difficult to weigh trade−offs between various benefits that various treatments will result in. Normalizing all the benefits and combining them is not sufficient. In addition, ad hoc weighting schemes are highly undesirable. The conceptual process proposed is adopted from existing methods used to target investments in land conservation that not adequately address optimal site selection for restoration purposes. I recommend a thorough reading of JunJie Wu's work on the subject*. My recommendation is that quantifying the multiple benefits and assessing tradeoffs inherent in proposed

actions is important, as is considering the cost of various possible future adjustments.

*** J. Wu and W. G. Boggess 1999. The optimal allocation of conservation funds. Journal of Environmental economics and management 38:302−321.**

Wu, J., Skelton−Groth, Boggess, W. G., and R. M. Adams 2003 Pacific salmon restoration: trade−offs between economic efficiency and political acceptance. Contemporary Economic Policy 21(1):78−89

Technical Feasibility

All the tasks are feasible but not for the proposed budget. This is a mix of individual tasks which are all valuable in their own right; however, together they do not make a cohesive effort to address a significant problem. The causal relationships between restoration efforts and ecosystem composition and function are important to determine. A vegetation map (task 2), vegetation community composition and structure (task 3), and bird composition and demography (task 4) all could be useful in addressing this question but the investigators have not demonstrated how this will be done which is particularly disappointing given the amount of preliminary data that must exist for this system. A decision support tool that examines how likely future adjustments to the system may result in multiple conservation benefits is a great idea that will require a great understanding of the causal relationships mentioned above and thoughtful exploration and modeling of the system. If all tasks receive funding, I strongly recommend that the investigators narrow their modeling focus to perhaps combining a hydrologic model with a forecast of forest regeneration and possibly couple these forecasted results with a single bird species occurrence model that is highly dependent on riparian forest cover. If a multi−purpose decision support system as is currently described is recognized as a priority then sufficient support should be provided to the exclusion of the other tasks and additional investigators will most likely have to be included.

Performance Measures

As I alluded to above, it is not clear that the resulting bird data will have the power to detect an effect of restoration. The vegetation data on the other hand can be used to compare restoration treatments on the ground.

Products

The decision-support tool could be a most interesting product and if the researchers work with decision-makers from the beginning could even prove to be useful to them. However, the current methods are greatly-over simplified and will not produce the desired outcome. To meet the stated objective more support will be needed, as well as additional involvement from scientists and decision-makers. The proposed vegetation maps are likely to be used by scientists and managers alike. The utility of the bird data remains to be seen.

Capabilities

The team is highly qualified for the tasks being proposed. However, the decision-support tool may require the addition of economist and physical modeler as well as early participation from the end-users.

Budget

Not sufficient for all the tasks listed.

Additional Comments

The Consumnes River restoration project is very impressive and great insights have been gained from the efforts of the investigators and managers involved. I highly recommend that this effort be funded. I think CALFED would benefit more if the project could be narrowed down to make sure that the most desirable products can be achieved and provide useful to future restoration efforts and decision-makers. As it stands now, it is difficult to understand the cumulative benefit that

the various proposed tasks will result in.

External Technical Review #2

Goals And Justification

While I suspect that this proposal describes work that is important and well-designed, I find the proposal itself difficult to evaluate due to its disjointed articulation of tasks, goals, and outcomes.

The restoration actions whose outcomes will be monitored are referred to, as far as I can tell, only tangentially (e.g. levee breaching/improvement, on page 1). The proposal does present a statement of the goals/objectives of these restoration actions (pages 1-2). The proposal also presents a conceptual model that explains the underlying basis for the restoration actions (Figure 2.1), though the model itself is a bit difficult to interpret. Additional detail about the levee breaching/improvement would be very helpful, especially with respect to where and how levees have been breached, and the hypothesized implications of these actions.

As far as I can tell, the proposal does not clearly state the hypothesis that the proposed monitoring will test. It seems that the hypothesis is that the key ecological attributes and indicators defined by the Measures of Success framework and scorecard are functional and feasible. Testing this hypothesis is a critical information need, but the proposal does not adequately describe how this will be achieved.

Approach

The project has multiple objectives that do not seem fully linked. The first objective is to monitor past restoration actions by refining and measuring indicators for selected key ecological attributes and targets. The second object is to use the monitoring data and other datasets to developed a DSS for adapative management. The DSS is also described as a prioritization tool for defining a conservation blueprint; it is unclear how the prioritization and adaptive management inform each other.

It appears that the project adequately builds upon previous monitoring, largely because the investigators and partners are well networked and have a history of work in the region of analysis. There is no explicit description of how modifications have been made in response to lessons learned during prior monitoring, though it is implied in discussion of previous grants.

The M activities described are likely to make significant contributions to our knowledge base, if they are able to help managers evaluate if key attributes and indicators identified as 'measures of success' are in fact adequate to ensure viable species populations, intact habitats, and processes functioning within natural ranges of variation. It will be important to link the indicators explicitly to prior restoration activities –– it is unclear how this will be done through this proposal. Also, the project seems to focus only on birds as indicators of habitat function, yet the proposal states that conditions benefitting one species may be detrimental to others. I would like to see more explicit inclusion of additional non–avian species (e.g. fish) in the monitoring. If these data are available from other sources, their inclusion should be made explicit.

Technical Feasibility

The project is largely well–documented and appears technically feasible. However, description of the DSS remains problematic, as it is unclear what the outputs of the DSS will be and how they will tie back into the M

The scale of the project appears consistent with the objectives, except for the fact that conditions outside of and upstream of the study area (and Preserve) may have impacts on indicators within the study area. The potential effects of off–site activities should be addressed explicitly, particularly for the sake of decision–makers.

Performance Measures

Data collected by the proposed monitoring should allow evaluation of the restoration actions being monitored, but there is not enough detailed information given in the proposal on the restoration actions to fully assess this question.

Specific performance measures do not appear to be proposed, other than reference to the indicators defined in the Measures of Success framework. The rationale for the performance measures is adequately demonstrated in the Justification section, and it is clear that past work on developing the indicators has been fairly thorough.

The data and performance measures should allow evaluation of the conceptual models, though a more explicit explanation of how this will happen would strengthen this proposal.

The monitoring and evaluation plan, as described in the proposal, is neither explicit nor detailed enough to assess the performance of the restoration actions.

Products

The project will almost certainly lead to information that is useful to managers, decision−makers, and scientists. A fair amount of thought has been given to how the data can be accessed by others. Data handling, storage, and dissemination measures appear to be adequate. The project seems well−designed to produce high−quality results that are likely to stand up under peer−review.

I would suggest that the DSS may be less useful than the data products, unless it can be used more broadly than simply in the study area. There are many DSS programs available and in development, and creating a one−off program does not encourage replicability elsewhere. Similarly, it will be important to build in evaluation of the DSS results to test if they are robust (e.g. comparing to random selection of priorities).

Capabilities

The team's qualifications appear commensurate with the project, and in fact the project seems designed as much to match the team's qualifications as vice versa (and as such the mix of disciplines is appropriate). The team's performance record indicates that they have the ability to complete the project.

Budget

The largest part of the budget, by far, is intended to go toward Services and Consultants, for vegetation mapping, bird monitoring, and the model. The budget justification does not appear to give details as to how much of these funds will go toward consultant salaries. On a related note, it would also be helpful to see the project outputs listed by year.

Additional Comments

I found this proposal difficult to review because it seems to be two (or more) proposals bundled together. Greater detail on how the two objectives each relate to the restoration activities, and how the outputs of the two objectives will inform each other, would be appreciated.

External Technical Review #3

Goals And Justification

The proposal clearly identifies the overall restoration actions and monitored outcomes. In the first section (Intro, Problems, Goals, &Objectives), the proposal outlines the project goals, but these are clouded somewhat by the nested series of subtasks and subgoals outlined in respective sections authored by the parners (TNC, UCD, PRBO). Some of this is, of course, the inevitable consequence of such a large, multidisciplinary, multi−organization effort. Nonetheless, the goals of each group could be better articulated with the overall objectives, and the onus is on TNC, as the project manager, to keep all members on tasks germane to the project's big picture.

Approach

The approach is solid. The proposal builds well on previous work, extending monitoring activities and advancing new methods where/when appropriate. The long−term (e.g., since 1995) monitoring data potentially stemming from this proposal will prove VERY informative. The lessons learned after completion of the anlayses described will, indeed, inform decisions by providing relevant knowledge on how systems respond to various restoration practices over time. The data and conclusions will be useful to decision−makers and ecologists alike.

Technical Feasibility

My evaluation of feasibility is restricted mainly to the bird work, as that is my expertise. The data collection and data management is certainly feasible. I can think fo no better organization or group of scientists than PRBO to execute the proposed work −− they have many years of expertise in this manner and have proven themselves. In fact, they've literally written the books regarding HOW to conduct the studies they propose in this project. The analysis fo the data seems to me

a collosal task, and though they have the necessary expertise and oversight, I was unclear in the budget how much labor was devoted to thoroughly and properly analyzing the data.

The modeling work (Task 5) reads too ambitiously to me. Perhaps the proposers have more detailed modeling plans than could be expressed in the page limitations of the proposal, but the notion of "adapting and coding algorithms for at least 4 methods [log regression, CART, GARP, and neural nets]" for the numerous response variables listed in Table 4.1 seems unrealistic –– at least without tremendous time &support for such analyses. This analytical work will necessarily need to be cooperative between the respective experts (e.g., bird, fish, plant folks) and the modelers.

Performance Measures

Various performance measures are proposed, including TNC's "Measures of Success", which have been applied and described in impressive detail for the Cosumnes project (in their Table 1.3 and Section A2). I found this very thorough.

Products

The products are pretty well described, especially for the decision−makers, agencies, etc. There is explicit funding for the presentation of findings at meetings (e.g., posters, presentations), but I feel more emphasis should be placed on disseminating the information to scientists via scholarly publications (since many academic scientists don't attend the meetings at which previous results of this project have been presented). The group is doing some amazing work that sheds great light not just as a case study of restoration but also on more general ecological concepts. This information should be exported more explicitely to schoraly journals.

Capabilities

The complement of TNC, UCD, and PRBO is excellent. All have proven track records for the tasks each proposes to tackle. My only comment (also mentioned above) is that I think PRBO

should disseminate more of its discoveries to the scientific community via published journal articles (in addition to their extensive record of preparing various reports).

Budget

Yes, though I think they should aks for (and receive) more money to better complete the analyses (model devleopment) and dissemination (manuscript preparation).

Additional Comments

This is a unique opportunity to examine various parameters of riparian habitat restoration over large spatial and temporal scales by integrating monitoring and assessment in support of adaptive management. I recommend it be funded.

External Technical Review #4

Goals And Justification

The text clearly states that all lands previously acquired with CALFED funds (some 18,600 acres now part of the Cosumnes River Preserve) and an additional 10,827 acres (in the northeast Delta) will be targets of the proposed monitoring strategy. As described, a suite of restoration activities has occured over the years on some of these lands, and while baseline biological studies have been implemented (i.e., habitat mapping, senstive species surveys, etc.)in an effort to generate data and knowledge, TNC has not devised or implemented a uniform, coordinated, comprehensive approach. To rectify this issue, TNC is proposing to monitor past restoration actions and evaluate that information in order to determine what adjustments might be necessary to better achieve restoration objectives on these lands. Secondly, TNC is proposing to develop what they call a "decision support tool" (for restoration and management of riparian forest floodplain habitat along the lower Cosumnes) to get at cumulative response to multiple restoration actions. As far as the conceptural model and hypotheses are concerned, both are well articulated and well documented, with clear references to the literature and the ERP Strategic Goals. Both hypotheses address questions critical to the collective understanding of the physical actions that will best restore floodplain and tidal ecological processes, as well as understanding how key species benefit (or not) from a variety of approaches. The outcomes could have broad−reaching implications for current and future restoration work in the Bay−Delta.

Approach

The approach appears to be well designed and, in my opinion, if implemented as described, should meet the project's objectives. In the proposal, past monitoring efforts (implemented by the Cosumnes Research Group) are fully described in terms of location, sampling frequency, period of record, etc., and the project proponent indicates that methods

and analyses have been summarized in peer−reviewed journals. Moreover, these data have informed the conceptual model and hypotheses put forth in the proposal. The missing link is the existence/availability of a tool to allow for the integration of (hydrologic, biologic, community) data in hand. (For example, PRBO has collected data for the past ten years on avian populations at the Preserve. This project would allow for the analysis of this data in relationship to response to past restoration actions over a meaningful ecological timeframe.) TNC proposes to refine and measure indicators for key ecological attributes and targets (including those associated with hydrologic function, channel morphology, distribution of vegetation and community compostion, water quality characteristics, and species occurrence). If successful, the knowledge contribution could be significant since CALFED has made strategic and significant investment in the Cosumnes Preserve, and to date, we do not have a clear understanding of the to date without , because the information would improve our understanding of the myriad relationships in play, and our understanding of how the Preserve ecosystem is is/has been responding to past restoration/management actions. This knowledge might help inform efforts at other sites where riparian restoration projects are proposed or underway, ultimately leading to greater success in designing restoration projects and achieving the desired result (i.e., contributing to the ERP goals).

Technical Feasibility

TNC proposes to develop a means of characterizing land cover, and monitor and evaluate vegetation in restored and reference sites, document species occurrence/abundance in those sites, relate this to other site characteristics and dynamics, feed this information into GIS−based tools and statistical models to generate spatial profiles that will inform and lead to the development of a priority setting tool that will allow for the consideration and weighting of competing values/threats and multiple other factors. The proposal is well written in terms of adequately describing these tasks and subtasks and their relationships to eachother. As described, the project is consistent with the stated objectives.

Performance Measures

As the ERP has not yet developed performance measures for lowland floodplain systems, TNC proposes applying a "Measures of Success" framework (developed internally) to assess conservation impact. The proposal indicates that this framework was applied at the Preserve in 2001 to identify potential indicators and viability ratings for key attributes, though TNC has not verified those ratings as to their functionality, feasiblity, or compatibility. The project aims to assess whether reaching a given "rating" for an indicator translates into the achievement of long−term viability of target sytstems and species, and whether or not optimizing benefits for a particular species or community has adverse ecosystem effets on the whole. This seems to translate as the development of "performance measures". Monitoring tasks and subtasks are clearly described as the approach, and to the relationship to other related tasks, and as described appears that the effort will allow for the assessment of the performance of past restoration actions/efforts.

Products

Yes, the proposal references several products/deliverables that will be useful to managers, decision−makers, scientists, stakeholders, and others. TNC lists three categories of products to accomplish this: 1) Reports: These status and final resports would be submitted to the ERP staff and other agencies on a quarterly and annual basis and include data summaries, summaries of stakeholder workshops, recommendations for making adjustments to monitoring protocols, and updates on indicators and performance meansures. 2) Website &Database: TNC intends to make all data available on a publically accessible website and they will make an interactive version of the decision tool available as well. 3) Publications and Conferences: They propose securing multiple publications in peer−reviewed journals, and making presentations at the State of the Estuary and CALFED Science Conference, and a national conference.

The proposal indicates that information systems necessary for the project will be managed by UCD ICE. They propose to standardize project metadata bases allowing it to be searchable via numerous portals.

The project partners have solid reputations for producing high quality data nad results that will stand up to peer−review.

Capabilities

The core of the multi−disciplinary team engaged on this project has worked together at the Preserve − with apparent success − for many years. All have extensive academic, as well as applied, knowledge in Bay−Delta and Central Valley ecosystems in the fields of restoration ecology; ornithological, aquatic, riaprian, and fisheries monitoring; population modeling and statistics; and environmental applications of GIS and other databases. The collaboration between TNC, UC Davis, and PRBO seems to be very−suited to accomplishing the objectives described in the proposal.

Budget

Yes, considering the breadth of experience among the principals, their past record of success and of collaboration, coupled with the potentially significant gains in knowledge that might have far reaching implications for future riparian restoration efforts, and for addressing multiple ERP goals and restoration priorities, the budget appears to be adequate and reasonable.

Additional Comments

None.

Budget Review

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

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

3. Are project management expenses appropriately budgeted?
Yes.

4. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs? Are indirect rates, if used, appropriately applied?
Yes.

5. Does the budget justification adequately explain major expenses? Are the labor rates and other charges proposed reasonable in relation to current state rates?
No.

If no, please explain:

Major Expenses – If the grant is awarded a detailed list of equipment purchases should be provided by the grantee so reviewers can better evaluate whether it is more cost effective for the state to purchase large dollar equipment items through the state procurement process. If the equipment list is available within the State inventory or stock, then purchase of some or all of the listed items may be provided, loaned, or leased by the state to the grantee. In the event, that the equipment is purchased by the grantee, the grantee shall maintain an inventory of major equipment for auditing purposes and potential use for future projects. Grantee shall follow State Contracting Manual [SCM] Section 7.61 thru 7.62 rules pertinent to equipment purchase, lease, etc.

6. Are other agencies contributing or likely to contribute a share of the projects costs?
No.

7. Does the applicant take exception to the standard grant agreement's terms and conditions? If yes, are the approaches the applicant proposes to address these issues a reasonable starting point for negotiating a grant agreement?

No.

If no, please explain:

Several comments and exceptions on exhibits A,B,C and D.

Contract Language Exceptions – Proposals submitted by grantees which identify exceptions to State of California's standard contract language provisions as provided in the 2004 PSP; and/or submit alternative contract language in lieu of the State's standard contract language should be carefully reviewed prior to awarding grant funds. Review will initially be conducted by the funding agency's contract office and referred to the legal department as needed.

8. Are there other budget issues that warrant consideration?
Yes.

If yes, please explain:

Recommend evaluation of other direct costs for student fee remission ($39,000).

Other comments:

Subcontracting – Proposals for work to be performed by subcontractors or other entities in excess of the 25% of the total project dollars the grantee is required to provide a justification for subcontracting services. If subcontractors are pre-selected and identified in the proposals as part of the project team, the grantee should provide a justification on how each subcontractor was selected. Grantee shall identify labor rates and indirect costs rates paid to each identified subcontractor to ensure that labor rates are comparable to State rates.

The Subcontracted work should be identified with a rate and hours and attributed to each task and deliverable for each year. A performance evaluation is also recommended for subcontractors that receive more than 50% of the grant funds. If the subcontractor has not been identified, a position

description complete with education level, experience, and abilities be submitted and the rate and hour associated with that position will be attributed to a task, and deliverable. The grantee is also required to comply with the State competitive bidding process as stated in the PSP.

The Grantee should charge a reduced indirect cost rate to the state for services that will be subcontracted by the grantee. (Researching SCM Section 3.06 B).

Environmental Compliance Review

1. Is compliance with California Environmental Quality Act (CEQA) required for this project?
No.

2. Is compliance with National Environmental Policy Act (NEPA) required for this project?
No.

3. Does this project qualify for an Exemption or Exclusion under CEQA and NEPA, respectively?
Does not apply.

4. Did the applicant correctly identify if CEQA/NEPA compliance was required?
Yes.

5. Did the applicant correctly identify the correct CEQA/NEPA document required for the project?
Does not apply.

6. Has the CEQA/NEPA document been completed?
Does not apply.

7. If the document has not been completed, did the applicant allot enough time to complete the document before the project start date?
Does not apply.

8. If the document has not been completed, did the applicant allot enough funds to complete it?
Does not apply.

9. Did the applicant adequately identify other legal or regulatory compliance issues (Incidental Take permits, Scientific Collecting permits, etc,) that may affect the project?
No.

Comments:

There is no indication that scientific collecting permits have been obtained. However, since the PRBO has been working on the Cosumnes River Preserve for the last 10 years, these permits may have already been obtained to cover this work. If permits

have not been obtained, please consult with the Dept. of Fish and Game and US Fish and Wildlife Service.

10. Does the proposal include written permission from the owners of any private property on which project activities are proposed or, if specific locations for project activities are not yet determined, is it likely that permission for access can be obtained?
Yes.

Comments:

Applicant has obtained permission to access property from Sacramento County, DFG, State Lands Commission, DWR, BLM, and BOR. Copies of the permission letters are not included with the proposal.

11. Do any of these issues affect the project's feasibility due to significant deficiencies in planning and/or budgeting for legal and regulatory compliance or access to property?
No.

Prior−Phase Funding Review #1

List the other CALFED or CVPIA grants received by this applicant for which your agency manages contracts:

Project Title	Cosumnes Start−up stewardship and restoration
CALFED Contract Management Agency	CA Prop 204
Amount Funded	$ 1,985,100
Date Awarded	1998/01/01
Project Number	97−N14a

Project Title	Cosumnes/Mokelumne Corridor Floodplain Acquisitions, Management and Restoration Planning
CALFED Contract Management Agency	CA Prop 204
Amount Funded	$ 3,044,342
Date Awarded	2001/01/01
Project Number	01−N10

Project Title	Staten Island Acquisition
CALFED Contract Management Agency	CA Prop 204, CA Prop 13
Amount Funded	$35,110,873
Date Awarded	2001/01/01
Project Number	ERP−01−N23, DWR4600002052

3. Have negotiations about contracts or contract amendments with this organization proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?
No.

Previously funded land acquisition contracts required significant negotiation for special terms and conditions. Negotiations for standard terms have proceeded smoothly.

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

Yes.

5. Has this organization made adequate progress towards these project(s)' milestones and outcomes, without unreasonable divergences from project schedules or poor−quality deliverables?
Yes.

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

7. If this application is for a next phase of a project whose contract your agency currently manages, will the project(s) be ready for next−phase funding to monitor and evaluate project outcomes in fiscal year 2005/6, based on its current progress and expenditure rates?
Yes.

Prior−Phase Funding Review #2

List the other CALFED or CVPIA grants received by this applicant for which your agency manages contracts:

Project Title	Cosumnes River Acquisition, Restoration, Planning and Demonstration
CALFED Contract Management Agency	FED (USFWS)
Amount Funded	$ 750,000
Date Awarded	1999/01/01
Project Number	98−F19

Project Title	McCormack−Williamson Tract Acquisition and Wildlife−Friendly Management Project
CALFED Contract Management Agency	FED (USFWS)
Amount Funded	$ 5,355,470
Date Awarded	1998/01/01
Project Number	99−F04

Project Title	McCormack−Williamson Tract Restoration − Wildlife−Friendly Levee Management
CALFED Contract Management Agency	FED (USFWS)
Amount Funded	$ 680,237
Date Awarded	1999/01/01
Project Number	USFWS 114200J039

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

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

5. Has this organization made adequate progress towards these project(s)' milestones and outcomes, without unreasonable divergences from project schedules or poor−quality deliverables?
Yes.

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

7. If this application is for a next phase of a project whose contract your agency currently manages, will the project(s) be ready for next−phase funding to monitor and evaluate project outcomes in fiscal year 2005/6, based on its current progress and expenditure rates?
Yes.