

Proposal Reviews

#112: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

Point Reyes Bird Observatory

Initial Selection Panel Review

Research and Restoration Technical Panel Review

Delta Regional Review

San Joaquin Regional Review

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Environmental Compliance

Budget

Initial Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Initial Selection Panel Review

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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	X
In Part	-
With Conditions	-
Consider as Directed Action	-
Not Recommended	-

Amount: **\$356876**

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

None.

Provide a brief explanation of your rating:

Synthesis of the large, accruing datasets on riparian birds will be valuable to inform a great number of CALFED actions targeting bank and floodplain restoration. The products of this effort need to be integrated into an indicators analysis, allowing CALFED to better assess restoration project success and enhance management strategies.

Reviewers are concerned that both the choice of population dynamics models and the the lack of detail concerning the tools used to analyze available data are a project shortcoming. The panel recommends that the applicants seek advice in approach to data analysis from a top flight biostatistician and submit to peer-review their interim products to assure rigor and usefulness of results.

Research and Restoration Technical Panel Review:

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

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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	This is an extremely strong proposal. The synthesis of large data sets on bird populations and their linkage to restoration issues should provide valuable information that should be of immediate use by managers and decision makers. The PIs are very well qualified and while there were minor concerns over the statistical approach, the panel is confident the PIs will consider this aspect carefully. The probability of a useful product is very high. The panel feels synthesis activities should be strongly encouraged by CALFED. Further, the panel felt this type of project was not one in which local peoples need to involved in the data analysis; simply the results must be widely available.
-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?

This proposal has an extremely clear statement of goals: they will complete a major synthesis of existing data that will allow them to determine bird response to restoration/management parameters. The work is very well justified by the PIs and indeed the reviewers felt strongly that this type of activity should be high priority both from a scientific perspective and from a management perspective.

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 project is generally well designed to meet the objectives and for most of the objectives, has a high probability of success. The planned work may be a bit over-ambitious. The capabilities of the PIs are very strong. There were some concerns raised over a lack of details on the population dynamics models and the approach to evaluating the data in a patch dynamics framework. There were also concerns over the statistical analysis. The GLM approach may be too simplistic since nonlinear and complex relationships may exist. The performance measures were well specified given the space limits of the proposal format.

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 advance the state of knowledge significantly. Indeed, to quote one reviewer: this is the only study in the entire list to propose a synthesis and then application of a large data base on avian communities in the Sacramento/San Joaquin drainages. This work is well justified and in fact, [the products] over due. at this time it is especially important in order to begin to see some tangible results from CALFED funding in light of the already extensive data base on avian communities in the riparian zone. Thus, the contributions should be really significant and will contribute to restoration and species recovery. The results will be very useful for decision-makers.

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

Very high benefits; costs a bargain for the significance of the work.

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?

The Delta Regional review panel and the San Joaquin review panel each ranked this as high priority. They stated that the study results should be applicable to help carry out a widely supported ecosystem restoration plan for the area. The information should help inform impending decisions. Further, they indicated that this work is an important initial step in addressing the dearth of information on riparian birds in the San Joaquin region. The in depth analysis should improve restoration design to benefit riparian birds. The panel did note that if funded, the agreement would require the applicant conduct initial regional outreach to inform restoration project implementers of key factors to be modeled to ensure model outputs will be directly applicable to implemented actions.

The Sacramento Regional Review panel ranked this a medium priority saying they first wanted to hear from CALFED to be sure experimental design was sound and if there was enough time to determine the effect of many riparian restoration efforts. There were questions about the lack of involvement of local people and institutions.

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?

No issues identified.

Miscellaneous comments:

None

Delta Regional Review:

Proposal Number: 112

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

Overall Ranking: -Low -Medium **XHigh**

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

Panel felt this project should provide critical scientific information that will be helpful in making decisions in the Delta and its eastside tributaries. This is particularly critical given the riparian restoration targets in the ERPP.

1. Is the project feasible based on local constraints?

XYes -No

How?

Yes; I could not identify any local constraints that would impede the projects ability to move forward in a timely and successful manner.

Methods proposed are well documented.

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

XYes -No

How?

Yes, even though the proposal does explicitly tie in the six multi-regional priorities it does refer to two applicable strategic goals.

Goal 1 At Risk Species and Goal 4, Habitats; claims contribution to general Science Program Goal.

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?

#61608; The application explains how it relates to past and future projects in the area, including other projects previously funded by CALFED such as riparian restoration.

 The studys results should be applicable to help carry out a widely supported ecosystem restoration plan for the area. The information provided and predictive models developed should help inform impending decisions by landowners, ecosystem restoration agencies, environmental regulators, or other policymakers.

 The information should actually guide restoration and management and should help in the development of regional ecosystem restoration implementation plan.

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

-Yes XNo

How?

The proposed project only provides limited detail on a plan for local involvement.

Other Comments:

 Highly qualified researchers such as Dr. Nadav Nur and Dr. Mary Chase, and Geoffrey Geupel have the experience and perspective to ensure the success of this proposal.

San Joaquin Regional Review:

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

Overall Ranking: -Low -Medium **XHigh**

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

This proposal is an important initial step to addressing the dearth of information on riparian birds in the San Joaquin region. It provides for more in-depth analysis and model building that will hopefully improve restoration design to benefit riparian birds. Additional local outreach to restoration project implementors should be done to ensure that the models are relevant to ERP projects.

1. Is the project feasible based on local constraints?

XYes -No

How?

Analysis of existing data already accessible to applicant.

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

XYes -No

How?

Applicable to regional restoration priorities: yes and no:

Yes - If focus is on evaluation of bird use at existing restoration sites and models are focused on factors that can be manipulated readily in implementation of projects.

No Because the San Joaquin River basin is under represented in study/data sources relative to the Delta and Sacramento system. This project is still valuable to San Joaquin region priorities, but a small amount of dollars in CALFED Directed Action could do a lot to further songbird surveys on the San Joaquin basin restoration sites.

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?

Yes The applicants are the link to most of the restoration studies that involve avian monitoring in the region.

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

Yes -No

How?

PRBO has good working relationships with local land conservancy and land management agencies. Data they will be analyzing has resulted from those contacts. It would seem appropriate that these entities who would seek to apply the results of these analyses should be invited to provide input to early stages of model development to be sure output information can be applied. (i.e., the product would benefit from local peer review in addition to journal/publications review.)

The Panel felt very strongly that, if funded, the agreement would require that the applicant conduct initial regional outreach to inform restoration project implementers of key factors to be modeled to ensure that model outputs will be directly applicable to implemented actions.

Other Comments:

Concern about lack of project specific data from San Joaquin region, especially on restoration sites.

CALFED needs to fund additional riparian bird surveys in San Joaquin Valley, especially make it a priority action for 2003 PSP; if not a directed action now.

Sacramento Regional Review:

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

Overall Ranking: -Low Medium -High

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

Although the panel acknowledged that songbirds warrant more research and evaluation, they were hesitant to rank this proposal as a high priority until given specific guidance by CALFED.

1. Is the project feasible based on local constraints?

Yes -No

How?

The project appears to be feasible. The applicants are well qualified and have collected much of the necessary data already.

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

Yes -No

How?

The project addresses the multi-region priority 6, to ensure recovery of at-risk species by developing conceptual understanding and models that cross multiple regions, and regional priority 1, develop and implement habitat management and restoration actions in collaboration with local groups.

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

Yes -No

How?

The applicants have conducted songbird demographic studies for restoration efforts throughout the CALFED area, including projects being conducted by The Nature Conservancy and other agencies and private foundations. This study would utilize information collected from these and other restoration efforts to make comparisons across watersheds and to inform future restoration efforts.

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

-Yes XNo

How?

The proposal does not describe the involvement of local people and institutions. The study is primarily an analysis of existing data.

Other Comments:

The panel wondered how applicable this project would be to restoration efforts. Questions about experimental design arose, particularly whether or not there had been enough time to determine the effect of many riparian restoration efforts. The panel was concerned about the degree to which the applicants were coordinating with other organizations. There were also questions about whether CALFED identified this type of project as a priority.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **112**

Applicant Organization: **Point Reyes Bird Observatory**

Proposal Title: **Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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):

I know many biologists from PRBO and have worked with many of them, reviewed their proposals before. The only person I know on this proposal is Nur. I also have a student working on a CALFED project on restoration and upland/grassland birds, but there are no ties to this particular proposal. Therefore, my connections are basically "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	Because of its modest budget, high probability of success, synthesis nature, high usefulness to managers, high usefulness to riparian ecologists, and the high qualifications of the investigators working in a highly-reputed institution--as well as almost total lack of similar studies for other ecosystem components in the CALFED area of interest
-Good	
-Poor	

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

Basically, this is a proposal to pay the partial annual salaries of five biologists for three years. Their goals will be to form a team and then to synthesize and model a huge data base already available from previously funded, complete and other studies in riparian habitat in the CALFED zone. They also propose to incorporate newly gathered data in the area during the of the study. Goals are clearly stated and represent a needed step. These authors will also

apply the most current and up-to-date demographic and habitat models to these data in order for restoration managers to evaluate and improve currently-applied techniques. It is all founded on basic survey and ecology of the riparian bird communities in the CALFED zone. Tasks to be completed, along with listed deliverables are provided rather than specific hypotheses.

For this type of proposal, the goals are clearly stated and important. Just to see what else has been proposed in the RFP, I reviewed the titles of all the proposals, and it is interesting that given the numerous aquatic ecology, toxicology, and fish ecology studies proposed, this is the only study in the entire list to propose a synthesis and then application of a large data base on avian communities in the Sacramento/San Joaquin drainages. And most of the expensive field work is already done. In fact, I found this proposal to be one of the very few proposals to actually synthesize and condense a large body of information into a useable system for riparian bird evaluations. Much of this is based on a solid knowledge and data base. Not to be sarcastic, but it seems that many modeling studies often have gradiose end-points and often the modelers themselves have never been in the field or conducted field studies. This research team is comprised of people who have actually been involved in field ecology studies and who know their data bases and their potential weaknesses, working with a solid data base on avian demography (for selected indicators), population performances and densities, and habitat (vegetation) associations. In the list of this-year's proposals, it was refreshing to see a study proposal like this which has a high probability of success in truly synthesizing this large data base. Although I have not seen the details of any other proposals, based on the titles along, I would rank this study proposal very high on the entire list. Not that I do not support studies that seek to test very specific hypotheses--these are equally important; but for the money, this particular synthesis study is actually a bargain for what it will be doing.

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?

As implied above, this study is well-justified and in fact, due. The synthesis nature of the study is especially important at this time in order to begin to see some tangible results from CALFED funding--in light of the already extensive data base on avian communities in the riparian zone. The US Forest Service has led the way in the past 2-3 decades in applying avian community ecology to forest management practices, and the PIs of this project are well-experience and have worked in both the field and synthesis aspects of data-bases on upland forest bird communities. The state-of-the-art is high in this area and the organization and PIs of this proposal are national leaders in this area.

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 in the field has already been completed and field data on birds and vegetation accumulated with widely-used and approved techniques. The approach of this particular study is simple, they are going to apply current models and ideas to this type of ecosystem (and one of very real importance to the specific conservation and management goals of CALFED, especially restoration). These models will be refined and applied to riparian ecosystems. Decision-makers will have the best information available, there will be ideas on how to make it better, and it will be synthesized and interpreted with models that reflect the most current information and thinking on avian community ecology. These people will be very busy in the next three years.

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?

Actually, on first impression, the budget seemed a bit high, but when I read through the proposal, realizing that an extensive field data base already exists, that it will be analyzed and interpreted by a team of well-experienced avian community ecologists, and that it has great practical application to a wide area, including the entire CALFED zone, I have come to the conclusion that this is not only highly feasible but it promises to be highly successful--and that the proposed budget is actually a bargain. Then, if the future managers who will use these data will only listen!

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?

Basically, one needs to look at the tables on page 12 and 13 of the proposal to evaluate the end-points and when they will occur. On doing this, everything seems perfectly reasonable. The most important step, and a landmark point in evaluating performance measures will be in September 2003, when the data base construction will be basically complete. I view this as the most difficult task and when that is done, it seems like the rest will come along fairly smoothly. Great coordination among various PIs and ongoing field studies will be required. Meetings among PIs and others involved in the data base construction will be important in this, but one can see in the budget, that there is little funding for travel, nor does there seem to be any funding for possibly needed travel by project personnel to various field sites. Will the specific studies that will be ongoing in the field from 2002-2005 be responsible for those travel costs? By September 2004, managers will have a new version of the conservation plan in their hands, giving them a year to finalize monitoring and evaluation before this proposed study is completed. This brings up the possibility and future need for new proposals to evaluate newly recommended management policies and objective to devise future studies to evaluate the performances of management (including restoration) in the future. I would expect that at least 3 more years of intensive work, plus some kind of continuing monitoring of management will be necessary. This is where a project like this will lead, and justifiably and logically so.

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?

I think this is addressed above. I think the products are well-outlined and clearly stated in the proposal. These products will be of use not only to resource managers in riparian system, but also to more basic biologists who are interested in the ecology of such systems, the conservation and ecology of particular bird species in these systems. I expect some good avian community ecology to come out of this synthesis.

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 "home" institution, PRBO, has become a national leader in terrestrial, songbird ecology, having conducted many diverse projects in many habitats. The individual investigators for the specific project proposed represent a diverse and well-experienced/trained investigators giving the team the needed breadth to complete a project like proposed here: experienced field

biologists and field ecologists, population biologists, statistics, GIS analysis, data-base analysis, etc. The infrastructure provided by PRBO for this team represents one of the best and ideal outcomes that could be hoped-for in a project with these goals. It fits so well into CALFED goals.

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

If anything, for the final products, I think the budget is a bit light. I think there should be more funding for coordination meetings and field site visits by the project team. This would actually be quite modest and not really add significantly to the total funding for the project. As I said above, nearly all of the proposed funding is for salaries and infrastructure support, and that is entirely reasonable. The overhead portion of the study represents the infrastructural support needed to commit PRBO to fully support the project, and in light of comparisons with, say, consulting firms and what will be provided, this is not unreasonable.

Miscellaneous comments:

Overall, I think this project will provide CALFED with a lot of "bang for the buck" and I am surprised that the proposal has not included some other potentially necessary items, for this 3-year plus study, involving fully 5 biologists, working within a well-supporting institution.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **112**

Applicant Organization: **Point Reyes Bird Observatory**

Proposal Title: **Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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 project was clearly well thought out and well researched. They had multiple questions of interest and multiple hypotheses related to those questions of interest. The goals of the project are timely and seem very relevant to understanding effects of land use practices on avian communities in riparian areas of the Bay-Delta region. This project, if successful, could also improve abilities of managers to implement and monitor restoration.
-Good	
-Poor	

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

The goals, objectives and hypotheses are all clearly stated and well explained. The objectives of this project, which are to develop and test models of songbird responses to restoration and habitat conditions at varying scales, as well as to evaluate and improve management strategies for riparian zones, are very relevant to the interests of this program.

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 conceptual model and associated hypotheses are very well explained. They place their proposed project in the context of the relevant literature, including previous studies of riparian bird communities and responses to restoration. They are also interested in evaluation and improvement of adaptive management, which is currently a popular, yet under-studied and often inconsistent management practice. Their selection of a research/monitoring project is appropriate.

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 appropriate for meeting the objectives of the project. It is clearly organized and will take advantage of existing data as well as incorporate data from ongoing research. The applicants were careful to minimize confounding variables and should be able to make clear and convincing statements about the questions of interest. They propose a detailed study across multiple scales, from local to landscape, which is relatively rare. The results will likely add a great deal to knowledge about the effects of restoration and habitat conditions on bird populations. They will also likely aid in improvement of riparian restoration techniques and adaptive management practices.

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?

Description of the suggested approach is complete and is technically feasible. It may be difficult to isolate the effects of as many variables as they suggest. However, given the size of the team and their described expertise, it seems reasonable that they could obtain significant results in the proposed time frame.

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?

This project involves model development and testing as an integral component of the approach. These models should provide built-in measures of performance relative to the stated goals of the project. It is only unclear how effective the adaptive management model would be at measuring performance of the project itself given the relatively short time frame of the project and the limited amount of 'new' data that can be incorporated during that time.

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?

There are likely to be a number of publications produced as a result of this project. This project, if successful, may also strengthen the practices of adaptive management, improve riparian restoration techniques and aid in monitoring/evaluating bird community responses.

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 individuals involved in this project all have demonstrated expertise in fields necessary to complete this project. Most have prior involvement in producing or managing the data that would be used in this study. They also likely to have the infrastructure necessary to complete the project. All researchers are currently affiliated with Point Reyes Bird Observatory.

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

The budget seems reasonable for the scope of the project.

Miscellaneous comments:

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **112**

Applicant Organization: **Point Reyes Bird Observatory**

Proposal Title: **Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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
<input checked="" type="checkbox"/> Excellent	Very useful research to guide restoration efforts, good (albeit very ambitious) approach/design, very competent project team with much relevant experience and good publication track record. This is the best 2002 CALFED proposal I have reviewed.
<input type="checkbox"/> -Good	
<input type="checkbox"/> -Poor	

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

The goals of this project are clearly stated and are to identify the major factors influencing the success of hydrologic, vegetation management, and restoration activities on bird populations, to develop recommendations on how such activities can be adjusted to best benefit songbird populations, and to evaluate the existing monitoring program. The goals and hypotheses are clearly stated

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 study is well justified in the proposal and embedded in a well thought-out conceptual model that includes habitat linkages as well as biotic interactions.

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?

Yes, the approach is well designed for meeting the objectives and the project will likely generate novel information/approaches. I could have used more detail on 3 aspects of the methodologies, but this limitation may have been driven by the space-constraints of the proposal:

Population Dynamic Models: There was little detail given concerning how population dynamics would be modeled. Would this be undertaken at a site level (assuming no migration among sites) or would a meta-population approach be used? Will the model be age structured or assume survival is constant for birds > age x? How will the linkages between habitat and population parameters (nesting survival, dispersal, etc.) be specified? Are there plans to calibrate the model based on one dataset and validate it on an independent set? How will uncertainty in model parameter estimates be incorporated in the analysis?

Statistical Analysis: I found the description of the statistical analysis a bit lacking with possible room for improvement. There may be more appropriate statistical means to evaluate significant habitat variables rather than using GLM as proposed. The functional forms of habitat variables are certainly not simple, and probably not linear. To paraphrase Rice (1993); Although ecological theories can yield predictions of how animals should use habitats, theory predicts in only general ways the shape of specific abundance-habitat functions. When abundance and habitat data are plotted, the relationships commonly show combinations of thresholds, floor and ceiling effects, asymmetric ascending and descending limbs, marked skewness or kurtosis, differing variability in abundance at different positions along a habitat gradient and other diverse statistical problems. Curvilinear models may fit the data better than linear models, but they do not necessarily fit the data well. Rice (1993) suggests the use of multivariate kernel density estimation as an improved means of addressing these issues (see Rice, J.C. 1993. Forecasting abundance from habitat measures using nonparametric density estimation methods. *Can. J. Fish. Aquat. Sci.* 50: 1690-1698).

Mark-Recapture Estimates of Survival. These estimates will be critical for parameterizing the population dynamics model, but I am uncertain as to whether the current monitoring program (and past data) is marking and recovering a sufficient numbers of animals to obtain reliable estimates. The type of Mark-Recapture model that would be employed to develop population size, recruitment, migration, and mortality rate estimates (all or some of the above) was not specified (open, closed, etc.).

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 reasonably well documented given the extensive scope of the project and the space limitations of the proposal. The project is very, very ambitious with each task being a fairly significant contribution (database, habitat models, population dynamic models, monitoring design assessment). Thus the feasibility of meeting all the objectives may be lower than on other projects, not because of the approach or capabilities of the researchers (which appears

top-notch), but because the project is very ambitious. I do not consider this a limitation, if they deliver half of what is promised I would still consider the overall cost-benefit of the project to be 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?

Yes, the statistical approaches will allow the comparison of alternate models describing the importance of habitat use on population parameters. Population dynamic models will be evaluated by comparing their predicted trends with observations (not specified but assumed). Monitoring designs will be evaluated using traditional statistical power analyses. The details of how these evaluations would be done was not specified in much detail, but this was probably due to space constraints of the proposal.

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?

Yes: peer-reviewed journal articles, an accessible habitat/population survey database, and recommendations for restoration strategies that provide the biggest benefits to songbird populations.

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?

Based on the clarity of the proposal and the publications of the proponents, they are exceptionally well qualified, have all the necessary support, etc. to accomplish this project.

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

Yes

Miscellaneous comments:

External Scientific: #4

Research and Restoration External Scientific Review Form

Proposal Number: **112**

Applicant Organization: **Point Reyes Bird Observatory**

Proposal Title: **Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.**

Conflict of Interest Statements:

I have no financial interest in this proposal.

Correct

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
<input checked="" type="checkbox"/> Excellent	This is a very well written and interesting proposal by a strong group of scientists. The methods are clearly outlined and the nature of the data synthesis is not only substantial but will have broad benefits regionally. I actually ranked this Very Good but that option was not available on the template here due to the patch dynamics issue. I used the Excellent as my default because in general I think this is sound.
<input type="checkbox"/> -Good	
<input type="checkbox"/> -Poor	

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

The PIs propose a major synthesis project that will develop multi-scale statistical models (for linking bird population success to a variety of restoration-related parameters), population dynamic models, and restoration & management recommendations for songbirds. This is an extremely well written proposal with the goals and objectives very clearly stated. The explanation of how these goals will be reached is clear and every goal is linked directly to a specific task. The statement of hypotheses is clear. They are not trivial but scientifically substantial. The idea is very timely since much data on bird populations have been collected

for this region these data need to be synthesized and the big picture needs to be viewed in order to maximize restoration of bird populations throughout the region.

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 of these bird populations and the need for collating multiple data sets and synthesizing the state of knowledge. The conceptual model is very clearly stated. In most cases, the underlying basis for the work is very well explained and the overall research project is well 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?

The approach is well designed in general and will allow them to meet the objectives. It would have been appropriate for them to provide more detail on the population dynamic models they plan to develop (e.g., IBMs? Leslie Matrix based models?). Given Nurs work, I am certain they have a plan but not having read the papers they refer to (some in hard to get reports), I had no clue what their plans were here.

Second, the patch dynamics component (Task 2, Subtask A, Effects of Habitat Configuration & Landscape Context) was the most poorly developed. They basically list all the possible things one could do with some spatially explicit data e.g., test for the effects of patch size, isolation, (bottom page 4, top of page 5) core area, mean nearest neighbor, contagion, and the even throw in fractal dimensions (middle of page 5). Having worked extensively in this area, I can say they have a grab bag approach here. It was not clear what they were testing for or if this was just data snooping. I realize there is an interesting literature here on birds and landscape metrics but there has also been a lot of correlative type work that is not directed by explicit hypotheses. So, they should have proposed a hypothesis on how the spatial patch configuration might influence some aspect of bird pop dynamics and then justified what metrics might best capture that configuration.

I want to add on a very positive note, that Subtask C was excellent. Very clear and focused.

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?

With the exception of the section on the spatial ecology (see 3) above, the project does appear technically feasible. The approach is very clearly outlined and within the grasp of the authors. The team is very well qualified and the likelihood of success high. This project has a high likelihood of success which I would define as contributing to an understanding of what landscape features (many of them directly related to restoration) promote survival and growth of songbird populations. This information will be VERY useful to others and at many sites.

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 include completion of the statistical analyses, delivering on the results (presumably in the form of reports, although it is not stated) to a broad audience.

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?

Absolutely I would rate this as extremely high

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 team is certainly well qualified and has done past work that demonstrates this

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

High benefits to the cost (\$total = ca. \$356K)

Miscellaneous comments:

Prior Performance/Next Phase Funding: #1

New Proposal Number: 112

New Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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

CALFED #99-B13, USBR #00-FC-20-0021 - University of Washington - Understanding Tidal Marsh Restoration Processes and Patterns

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 contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

-Yes -No **X**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?

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

If no, please explain any inaccuracies:

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

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

If no, please explain deficiencies:

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

-Yes -No **X**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:

While I administer CALFED Agreement 99-B13 with the University of Washington, I have no direct knowledge of PRBOs performance on that project.

Prior Performance/Next Phase Funding: #2

New Proposal Number: 112

New Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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

N/A

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 contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

-Yes -No -N/A

If no, please explain any difficulties:

NFWF does not have any direct Recipient Agreements with applicant. Applicant has been a subcontractor.

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

-Yes -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?

-Yes -No -N/A

If no, please explain deficiencies:

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

-Yes -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 -N/A

If no, please explain:

N/A

Other Comments:

Prior Performance/Next Phase Funding: #3

New Proposal Number: 112

New Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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

00-F08, McCormack-Williamson Tract Phase II Monitoring this project was listed in table provided to me but was not identified in the applicants proposal. The applicant does identify 98-F15 (Lower clear Creek) in proposal but they acted as subcontractor with this project. I have not administered any projects directly with this applicant.

2. Prior CVPIA project numbers, titles, and programs: *(list only projects for which you are the contract manager)*
3. Have negotiations about contracts or contract amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

-Yes -No **X**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?

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

If no, please explain any inaccuracies:

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

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

If no, please explain deficiencies:

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

-Yes -No **X**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 was not primary contractor in previous project listed. They did do subcontractor work, however.

Environmental Compliance:

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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

Yes No

If no, please explain:

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

Yes No

If no, please explain:

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

Yes No

If yes, please explain:

Other Comments:

Budget:

Proposal Number: 112

Applicant Organization: Point Reyes Bird Observatory

Proposal Title: Songbird population responses to riparian management and restoration at multiple scales: comparative analysis, predictive modeling, and the evaluation of monitoring programs.

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

Yes -No

If no, please explain:

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

Yes -No

If no, please explain:

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

Yes -No

If no, please explain:

4. Are appropriate project management costs clearly identified?

Yes -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 -No

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

6. Does the budget justification adequately explain major expenses?

Yes -No

If no, please explain:

7. Are there other budget issues that warrant consideration?

-Yes No

If yes, please explain:

Other Comments: