

**Wintering Waterbird Response to CALFED's  
Environmental Water Account Program:  
Modeling and Monitoring to Better Integrate  
Agriculture and Management of Wetland  
Dependent Birds**

**Joseph P Fleskes**

# Initial Selection Panel Review

0084

Wintering Waterbird Response to CALFED's Environmental Water Account Program:  
Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland  
Dependent Birds

U. S. Geological Survey–Western Ecological Research Center

*Applicant amount requested:* \$1,140,163

*Fund This Amount:* \$0

**PANEL DISCUSSION:** The proposal has some good components but does not clearly articulate the linkage between the proposed project monitoring approach and the EWA program. The panel recognizes the need for development of protocols, and some elements of the proposal are needed, such as the proposed work with sandhill cranes. The technical reviews showed a wide range of views, from excellent to poor. Some important components that would have made the project's outcomes more useful to the ERP were a demonstration of a strong connection between waterfowl and other species of concern (e.g. shorebirds). Furthermore, there was only limited integration of agricultural activities to the proposed project activities, and limited direct relationship to the goals of the PSP. Based on its shortcomings the panel recommends to not fund the proposal.

**SUGGESTED REVISIONS:** None.

**FINAL RECOMMENDATION:** Do not fund.

Do Not Fund

# Technical Panel Review

**Proposal Name:** Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

**Applicant Organization:** U. S. Geological Survey–Western Ecological Research Center

**Amount Requested:** \$1,140,163

Panel Rating:

**Fair - Lacking in one or more critical aspects**

## Panel Summary

The panel felt that this proposal had one or more sound or worthy concepts. Based on its technical merits, however, this proposal is lacking in one or more critical aspects and should not be funded in its current form. This proposal rests on a strong scientific methodology but has other significant weaknesses. The panel felt that the project was expensive and the cost/benefit ratio was not established, especially considering the overhead rate. Of the various components of the proposal, the research component regarding sandhill crane ecology (Task 2) was rated the most favorably but overlaps considerably with another proposal from the same group (there is little justification for funding both). The description of modeling and model selection appears rather cursory. The model development component was weakened by the lack of clarity on the form the model would actually take or how data on different species would be combined. The panel voiced concern that the proposal hinges on the evaluation of the impacts of EWA water transfers and the assumption that fallowing would occur. However, those transfers are not assured, and the future of EWA remains in question. Funding portions of the project relating to EWA rice field fallowing scenarios and actual EWA fallowing actions should be contingent on a real reduction in rice acreage over the time span of the project.

One reviewer emphasized that the telemetry project described would produce high quality ecological data, but it was unclear

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how the data and proposed research would necessarily address population-level issues (i.e., vital birth and death ratios) and agricultural management issues. While research would focus on greater sandhill crane movements across the landscape, this information would not necessarily inform management decisions for other water birds. In the view of the panel, the proposal did a commendable job of attempting to address multiple species impacts; however, it did not follow through by adequately detailing how these objectives would be met. The proposal also lacked detail and discussion regarding how the data collected on the disparate species would be integrated to inform management decisions.

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*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

*Amount Requested:* \$1,140,163

## Goals

<b>Rating</b>	poor
<b>Comments</b>	The proposal does a fair job of describing the problem the project is trying to address and is stated on p. 1 as "... how CALFED's EWA program can best be implemented to maintain an economically healthy agricultural system, contribute to the conservation and recovery of threatened Greater Sandhill Cranes, and enhance and/or maintain the diversity, abundance, and distribution of waterfowl and shorebirds." This is an important goal however, the proposal has many flaws with respect to a fundamental understanding of the goals and objectives of the EWA program and how it operates. These errors cause me to have serious concerns about whether the approach described in the proposal would provide useful information to the EWA program. The proposal states it will guide the EWA program and develop existing baseline information on waterfowl, crane, and shorebirds relative to availability of winter-flooded rice and other habitats into a model to predict impacts of a range of EWA scenarios on the ecology of these wintering waterbirds (p.1). The proposal

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states that satellite imagery and other available data will be analyzed to measure change in area of rice, post-harvest flooded rice and wetland area, and relate changes in regional distribution to changes in these important waterbird habitats impacted by EWA and other CALFED programs (p.11). The proposal states it will include the use of the adaptive management process of gathering and modeling baseline data on relation of waterbird ecology to habitats potentially impacted by EWA, predict responses to EWA, and measure actual responses to EWA actions.

The proposal doesn't describe what it means by EWA scenarios. Presumably, it means rice fallowing; however, the EWA has not idled rice or cotton or any other crop since its inception in 2000. The proposal seems to imply that the EWA program is idling rice every year on a broad geographic scale. Idling rice to obtain water for EWA is a tool that has never been used to date; however, it may be used in the future. EWA is currently not having the impacts on rice lands that are assumed by this proposal. Given that the EWA is not idling rice on a yearly basis, and may not idle rice during the period of this proposed project, what hypothesis would be tested by this project? How could a Pre-EWA and Post-EWA evaluation be conducted given these circumstances?

The proposal describes ERP goals and objectives related to wintering waterbirds (p. 13). The proposal gives the impression that the purpose of the EWA is to enhance and/or conserve the diversity, distribution, and abundance of native waterfowl, shorebirds, and wading birds (p. 13). The EWA program goals to provide protection and recovery of at-risk,

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native fish species is not mentioned in the proposal. There isn't much detail on how information generated by this project (which is essentially a research project) will be used by farmers. The project describes only in general terms that results would help guide wetland and cropland management, restoration, acquisition, and easements programs and specific conservation and management recommendations will be submitted at the end of the project. The proposal states there will be presentations made at festivals and scientific workshops but I didn't see any details on targeted outreach to farmers. Some examples of management practices and benefits that farmers could use in integrating agricultural activities with ecosystem restoration would have strengthened the proposal.

**Justification And Conceptual Model**

<b>Rating</b>	fair
<b>Comments</b>	<p>The conceptual model is only fair because it lacks some critical aspects and important details (p. 5). The conceptual model consists of a narrative only. A conceptual model diagram depicting management practices with associated ecosystem and sandhill crane and wintering waterbird (and perhaps agricultural benefits) benefits would have been a useful addition to the narrative.</p> <p>The proposal describes the general assumption that a EWA program that fallows rice lands habitat may adversely effect sandhill cranes and wintering waterbirds in the Central Valley. The proposal describes several possible ways in which these birds may respond. Aerial surveys and radio telemetry tracking of greater sandhill cranes are proposed to monitor crane movements in response to changing habitat conditions due to fallowing. As stated above,</p>

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<p>it is not clear the experimental design will work if the EWA is not involved in rice fallowing during the period of this proposed project.</p>
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**Approach**

<b>Rating</b>	fair
<b>Comments</b>	<p>The proposal describes its approach, including study design and methodology, fairly well. It includes a detailed description of methods that will yield important information about the biology, distribution and demographics of greater sandhill cranes and wintering waterbirds. However, the proposal lacks detail regarding rice fallowing practices. There is no description of what constitutes the controls and the treatment areas; criteria for site selection; acres and spatial distribution of fallowed rice lands and duration of fallowed fields. I have doubts whether the proposed study design will be able to establish cause and effect relationships between the action of fallowing rice fields and crane/waterbird responses. The proposal should have acknowledged the difficulties of conducting this kind of field experiment and whether causality could be discerned within the period of this project.</p> <p>The proposal would have been stronger if it had incorporated more information from the EWA EIS/EIR, USFWS Biological Opinion (BO) and Action Specific Implementation Plan (ASIP) regarding impact analysis of rice idling on greater sandhill cranes and other wetland dependent bird species research needs and conservation measures. This information would also be relevant for the section on CALFED Program Goals and ERP priorities. The proposal does not include a description of methods to identify habitats and classification systems that will be used.</p> <p>The approach is appropriate for meeting the objectives of getting better information on the biology of greater sandhill cranes and wintering waterbirds. I</p>



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have less confidence in information that may be generated about the ecosystem and agricultural system to which the project will contribute. I'm not confident there will be practical information emerging from this project that will be useful for framers, cooperating agencies, NGOs and decision makers. As stated above, the proposal describes only in general terms that information could be used to guide wetland and cropland management, restoration, acquisition, and easements programs and specific conservation and management recommendations. I'm not sure it will provide any useful information to the EWA because of the deficiencies in the proposal described above.

**Feasibility**

<b>Rating</b>	fair
<b>Comments</b>	The proposal appears to be technically feasible (for some of the objectives) within the proposed timeline; however, the proposal lacks some important details, as described above

**Performance Evaluation**

<b>Rating</b>	poor
<b>Comments</b>	The description of performance evaluation is poor (p. 11). It appears minimal effort went into writing this section of the proposal which is essentially describing outcomes and deliverables, not performance measures. The proposal could have been strengthened by describing criteria to test hypotheses and performance measures that are supported by a conceptual model.

**Proposed Outcomes**

<b>Rating</b>	poor
<b>Comments</b>	The proposal doesn't have much detail on proposed outcomes and practical information that will be useful

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	<p>for framers, cooperating agencies, NGOs and decision makers. As stated above, the proposal describes only in general terms that information could be used to guide EWA implementation and various conservation programs. There is some critical information lacking regarding experimental design components, e.g. what constitutes controls and the treatment areas; criteria for site selection; acres and spatial distribution of fallowed rice lands and how the information would be useful in terms of integrating agricultural activities with ecosystem restoration. The proposal however, does state that data and other information will be provided to Oregon State University and USGS and that information will be disseminated to the public via festivals, scientific proceedings and a web site.</p>
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**Capabilities**

<b>Rating</b>	good
<b>Comments</b>	<p>The applicant has good capabilities of doing the technical work associated with the biology, distribution and demographics of greater sandhill cranes and wintering waterbirds. These objectives are the strengths of the proposal. On the other hand, it appears the proposal will yield biological information that is limited to greater sandhill cranes and wintering waterbirds and there will not be much practical information generated that will be useful for framers and decision makers implementing the EWA. Some critical components were not included in the proposal (such as a fundamental understanding of the EWA program), as described above.</p>

**Cost-Benefits**

<b>Rating</b>	poor
<b>Comments</b>	<p>The funding request is \$1,140,163 dollars. I think the budget is unreasonable because it is too high for the work proposed and because the benefits in terms of information value of the project are limited. There is</p>

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	an inadequate description of how this information will be useful to the EWA program; how this information could be used to integrate agricultural activities with ecosystem restoration; and a strategy for stakeholder and public outreach.
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**Overall Evaluation Summary Rating**

<b>Rating</b>	poor
<b>Comments</b>	This is a poor proposal overall. There are definite strengths with respect to the capabilities of the applicant and approach to obtaining useful biological information on the greater sandhill cranes and wintering waterbirds. However, it is very doubtful whether the project goals could be accomplished given the lack of understanding of how the EWA program operates.

# External Technical Review #2

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED’s Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

*Amount Requested:* \$1,140,163

## Goals

<b>Rating</b>	very good
<b>Comments</b>	The goals of this proposal are ambitious but very worthwhile, as large ecosystem programs require extensive data sets upon which to plan and act. Addressing how “ CALFED’S EWA program can best be implemented to maintain and economically healthy agricultural system, contribute to the conservation and recovery of threatened Greater Sandhill Cranes, and enhance and/or maintain the diversity, abundance, and distribution of waterfowl and shorebirds” is a major undertaking. Several different projects are outlined and proposed to address specific elements of the overall goal. The series are projects are being considered as one integrated whole. However it is not clear how the series of basic research projects proposed will be integrated into a database for planning and activities delivery. This may not be a shortcoming of the proposal or the principal investigators, as the actual integration is more a job of the management and conservation agencies.

## Justification And Conceptual Model

<b>Rating</b>	fair
<b>Comments</b>	

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Justification for the proposed work is clear. Large scale programs require and need large extensive landscape level datasets in order to function properly. The proposed work would integrate movement of wintering waterbirds with agriculture and other activities. A greater understanding of how management actions and conservations actions will impact the wintering waterbird populations would be very important for the overall Ecosystem Restoration Project. Understanding how potential changes in the agricultural systems affect the wintering birds is very important to understand.

The proposed conceptual model seems somewhat diffuse and not really an integrated model, as the goals of the project would suggest. Perhaps there is too much text in the Conceptual Model section that is not directly relevant to describing a conceptual model. The whole first paragraph, for example is a justification for the project proposed (which has been repeated in several other places) not really relevant to describing the conceptual model. The only Task that gets at some specific factors, as far as a model is concerned, is the sandhill crane model (task 2). Considering the stated goals and large scale at which the work is proposed, I think there should be a more comprehensive conceptual model available with perhaps some submodels for each of the important elements of the overall proposal. For example there could be submodels for sandhill cranes, and waterbird ecology etc. Considering the multiple publications that are cited that are serving as baseline data, seems a more comprehensive and explicit model could be developed for the proposed work based on the information already available and connections among the different elements of the work to be conducted. Since this proposal is described as an integrative

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	<p>project, a conceptual model that indeed integrates the different elements of proposed work would be more appropriate, and would help readers better understand how the different elements relate to each other. Currently, descriptions of models are presented as separate and no integration is obvious.</p>
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**Approach**

<b>Rating</b>	excellent
<b>Comments</b>	<p>The approaches described for each task appear to be appropriate for the objectives stated. For Task 2 standard techniques for trapping, banding and monitoring cranes are described. As well as home range and movement analysis based on radiotelemetry data. Aerial surveys are also well established methods for surveying waterbird and cranes over large areas. Task 3, model development appears to also follow well established procedures which some of the authors of the proposal have used successfully in the past. For task 4, radiotagging northern pintails will also follow well established methods and protocols. No new or different techniques are being experimented with, so it is likely that the proposed methodologies will lead to gathering the desired information without major complications.</p>

**Feasibility**

<b>Rating</b>	very good
<b>Comments</b>	<p>The proposed work appears to be completely feasible to accomplish with sufficient manpower and data gathering and analysis capabilities. Since well established methods will be used to gather the data in the field sufficient information is likely to be accumulated for the modeling portions of the project. Not having seen the actual models that are intended to be used, I am wondering how the different data sets will eventually be integrated into a coherent whole (e.i. cranes vs</p>

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	<p>pintails data, agricultural changes, other elements etc?). A diagrammatic and more integrated conceptual model would have helped me better understand the authors plan in this regard. The true test of how feasible this project may be may have to do more with how the results are presented and ultimately incorporated in management and conservation plans for the area.</p>
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**Performance Evaluation**

<p><b>Rating</b></p>	<p>fair</p>
<p><b>Comments</b></p>	<p>The proposed performance measures described in the proposal are very administrative in nature. For example, performance measures cited include items such as reports are mentioned which are important and must submitted. However, there is no clear definition of how actual work goals and objectives will be evaluated. There is no mention of field work benchmarks (except a period of time during which certain activities will occur) or a specific calendar of events with which to measure actual progress of work proposed as the project progresses. I assume that this will be done and will actually be described in the quarterly and annual reports that are listed as products to be delivered. For such an ambitious and complex project, it seems there should more specific benchmarks regarding data gathering and model development phases.</p>

**Proposed Outcomes**

<p><b>Rating</b></p>	<p>very good</p>
<p><b>Comments</b></p>	<p>If the proposed models are actually generated, the project should be very useful for management and conservation planning in the study area. The information on cranes and other water birds will give valuable information on how those wintering populations utilize the landscape and specific agricultural elements within the system. There are</p>

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	plans to store and make data available to interested parties. In this day and with the technology available this is easy to accomplish (making data available), however, to actually get the word out to interested parties and individuals requires more systematic and directed approaches to a do so. In general however, this has not traditionally been the role of research organizations and may be better left to departments within CALFED or extension service of a university.
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**Capabilities**

<b>Rating</b>	very good
<b>Comments</b>	The research team appears to be well acquainted with the study area and the major species of interest. They have collected previous information on several water bird species and the agricultural system in questions. Having USGS offices and Oregon State University as support infrastructure should ensure that researcher have adequate and appropriate support to develop the proposed project.

**Cost-Benefits**

<b>Rating</b>	good
<b>Comments</b>	At first glance the overall budget seems high. It appears that most of the budget will pay for salaries of a significant number of researchers and technicians. In most projects manpower is generally the most significant portion of budgets. I am not familiar with CALFED policies in regards to paying salaries of researchers at research institutions. If that is contemplated then the budget is appropriate for the work outlined and the number of staff positions that will be covered with the budget. The way the budget is presented it is not easy to tease out specific costs of activities or materials as only totals are presented



## Overall Evaluation Summary Rating

Rating	good
Comments	<p>Overall the proposed work is interesting and appears to be timely and necessary for better management in the study area and for better development and implementation of programs. Overall the proposal presents a realistic problem to which, based on methods and data proposed to be gathered, the authors could provide significant and valuable information. Some things remain unclear to me. For example hunting opportunities are mentioned as an important element of overall considerations for waterfowl management. However, no discussion is presented regarding how hunting opportunity or potential will be evaluated in the proposed work. Will it be evaluated in some form or fashion? A diagrammatic conceptual model would help determine where and what effect this and other potential factors may have on the overall system (or submodel) being evaluated. Crane compatible crop substations are mentioned as a possible recommendation. But then again there is no mention as to how this goal will be investigated and evaluated and how recommendations will be reached.</p> <p>A project of this nature, and as defined, should truly integrate separate work plans and objectives so that the whole is greater than the sum of the parts. When each aspect of work is looked at separately they are stand alone projects and could easily be separated or divided, as the authors acknowledge. This leads me to believe that an actual through integration of the project concept idea has not really occurred. The lack of one integrated model leads me to the same conclusion. In essence this proposal outlines a program of work that manages several projects to gather data that can then be modeled together, and not really a single multifaceted project. This is not necessarily a negative element of the proposal as the integration can be done post-hoc once all data has</p>

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been gathered. Again the lack of a more descriptive integrative conceptual model leads me to assume that this is the case for the proposed work versus having explicitly defined the factors and processes to integrate all elements of this work a priori.

After reading the entire proposal and understanding what the authors attempt to do I am left with questions as to how the ultimate data sets and models will be utilized. For example, what is the actual technological transfer mechanism from the authors to the managers and decision makers? Will there be a model provided but no modeler? Will the authors work with the ERP staff to truly incorporate the data sets and models into decision making? This may not be so much an issue that the researchers have to define but it should be one that CALFED should consider early on in the development of a project as the one proposed here.

# External Technical Review #3

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED’s Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

*Amount Requested:* \$1,140,163

## Goals

<b>Rating</b>	fair
<b>Comments</b>	<p>The problem is clearly stated and described. The goals and objectives are clearly stated. The idea is both timely and important. The proposal is conceptually strong, but lacking in important details, especially for the approach of Task 3 (model building). The project does not describe at all how it will assist farmers in integrating agricultural activities with ecosystem restoration.</p> <p>In their problem statement, the authors state that "The problem we are seeking to address is how CALFED's EWA program can best be implemented to maintain an economically healthy agricultural system . . ." From that point forward, however, the authors concentrate on ecological questions related to assessment of habitat uses by various assemblages of waterbirds and monitoring waterbird populations. The authors do not describe explicitly how their models or information will contribute to maintenance of an economically healthy agricultural system.</p> <p>Note that this proposal is virtually identical to a proposal submitted to the Science Program during the 2004 funding cycle as Proposal 2004 #0204. Many of the</p>

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	<p>comments I submitted as a reviewer of Proposal 2004 #0204 still apply. It is remarkable that the authors have not responded to my comments on technical and other aspects of that proposal, other than to resubmit essentially the same proposal to a different program.</p>
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**Justification And Conceptual Model**

<b>Rating</b>	good
<b>Comments</b>	<p>No hypotheses are explicitly stated, nor do they need to be for a project of this kind. The authors are to be commended for developing a strong and clearly articulated justification for their work. The work is timely and a post-implementation evaluation of the effects of EWA is a critical component of the EWA process.</p>

**Approach**

<b>Rating</b>	fair
<b>Comments</b>	<p>Aside from web site maintenance, it is not clear exactly what specific activities or tasks are included in Task 1. Because a similar web site already exists (<a href="http://www.werc.usgs.gov/pinsat/">http://www.werc.usgs.gov/pinsat/</a>), it would seem that some of the development costs of the web site already have been incurred and that someone also currently is paying for web site maintenance. Note also that the components of the project identified as "tasks" in this proposal really are objectives, with component tasks articulated under those objectives.</p> <p>The approach and methods to be used to meet the needs of Task 2 are clear and described well. I would rate the approach of Task 2 as "Very Good." However, the information provided related to the approach proposed for Task 3 is not sufficient to allow adequate evaluation.</p> <p>For Task 3, the authors describe the application of AIC to choose the most parsimonious model from an</p>

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<p>array of models that are not specified or described adequately in the proposal. The authors do not specify the parameters that will be used in their models, nor do they identify clearly what measures will be taken in the field or derived using GIS and remotely-sensed imagery to estimate those parameters.</p> <p>No procedures are described for validating the most parsimonious model once it is identified. While lower AIC scores may help to identify the most parsimonious model from an array of alternative models, the model with the lowest AIC score may not necessarily have high predictive abilities. As presented in this proposal, I rate the approach for Task 3 as "Poor."</p> <p>For Task 4, it is not clear what additional, essential information that is critical for evaluating the effects of implementing EWA will result from radio telemetry of Northern Pintails. I rate the approach of Task 4 as "Fair."</p> <p>In general, explicit linkages between the proposed research and the agriculturists of the region or the agricultural economics of the region are not well articulated.</p>
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**Feasibility**

<b>Rating</b>	fair
<b>Comments</b>	See comments above under "Approach." The approach of Task 3 is insufficiently documented. The need and justification for including radio-tracking of Northern Pintails as part of Task 4 is not explained.

**Performance Evaluation**

<b>Rating</b>	fair
<b>Comments</b>	Pre-treatment data already exist and post-treatment sampling is proposed, where the treatment is implementation of EWA. It is not clear what kinds of

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	<p>information that is critical for decision-making will be obtained from radio-tracking of Northern Pintails during the post-treatment sampling of waterfowl, crane, and shorebird population numbers and dispersion.</p> <p>A method for assessing the effectiveness of the outreach component is not proposed. A plan for evaluation of the proposed public involvement and outreach activities should be included.</p>
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**Proposed Outcomes**

<b>Rating</b>	poor
<b>Comments</b>	<p>The products proposed are of the kind conventionally expected from a project of this type. However, greater elaboration of the "outreach" component mentioned by the authors would be helpful. It is not clear how the researchers will "target" agriculturalists as an audience for their outreach efforts. Most of the outreach venues are bird clubs and nature centers, not farm bureaus or related organizations of farmers.</p> <p>The work described in this proposal is a "natural" for a relatively high-profile, coordinated, and professionally managed outreach effort. The outreach component needs to be described in greater detail. It is not clear what materials will be provided and how the anticipated audience(s) are characterized (birdwatchers, farmers, public school teachers and students, or others?). How many individuals in what stakeholder groups are expected to be reached over what period of time? If cranes make significant use of privately owned agricultural lands, farmers are a significant stakeholder group. Is an outreach component aimed specifically at farmers contemplated? Is involvement of USDA/Natural Resources Conservation Service a reasonable consideration?</p>

## Capabilities

<b>Rating</b>	good
<b>Comments</b>	Staff appear to be strong and experienced in all areas except outreach and extension. See related comments above. Consideration should be given to adding an outreach specialist to the team or input solicited from a professional outreach/public education/extension specialist.

## Cost-Benefits

<b>Rating</b>	poor
<b>Comments</b>	<p>One of my concerns with this proposal is the high cost of the project. In particular, the costs of Task 1, Project Administration, seem rather high, given that salary recovery for staff included in Task 1 also is proposed for subsequent tasks.</p> <p>Why are costs of salaries and fringes for USGS/WERC Staff included in the budget? Are these staff not permanent USGS/WERC employees with salaries and fringes already covered by USGS/BRD?</p> <p>From the USGS/WERC Mission Statement at <a href="http://www.werc.usgs.gov/mission.html">http://www.werc.usgs.gov/mission.html</a>, I found the following:</p> <p>"The most valuable resource of the Center is its dedicated staff. Their integrity and professionalism are the foundation for the Center's success. They work in an environment that encourages teamwork, growth, and problem solving. Center staff are accessible and responsive to all persons, groups, or organizations that request ecological information. Center scientists provide objective information on natural resources issues. The Center was created and operates under the principle of decentralized streamlined government. The Center maintains a small headquarters on the campus of</p>

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California State University at Sacramento. The structure of the Center is designed for fluid, high quality scientific response to priority resource issues throughout the Pacific Southwest. The Center's field stations, located in all major Pacific Southwest bioregions, form the core of its science program. Center stations were founded on the principle of client service, and the Center's research, inventory and monitoring, and information transfer agenda is shaped by client needs. Center scientists actively seek client input and participation at all phases of research projects."

Nowhere in the Center's mission statement does it say that clients will be charged fees for the "services" the Center can provide. A clear and explicit explanation of the rationale for charging the costs of USGS/WERC permanent staff salaries and fringes needs to be included in the budget justification narrative.

Likewise, a clear rationale for charging salary costs for a Professor at Oregon State University should be included. Typically, university professors engage in research as part of their jobs, unless the professor is working under the terms of a nine-month appointment. While it is customary to seek external funding for graduate student stipends, as is the case here, professorial salaries usually are covered by the university.

**Overall Evaluation Summary Rating**

<b>Rating</b>	fair
<b>Comments</b>	While the work proposed here is important and essential for evaluating the effects of implementation of EWA, the costs are very high. The authors have not given sufficient justification for the high costs. The procedural details for critical components of the project within Task 3 are insufficient to permit in-depth evaluation of their appropriateness for this project.



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While economic considerations related to agriculture are mentioned in the problem statement, there is no mention of how results of the proposed research will relate directly to or be integrated into the agricultural economics of the region. Methods of communicating results of the research to farmers are not clearly stated.

# Bay Regional Panel Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

## *1. Applicability to ERP goals and regional priorities.*

The proposal meets CALFED, ERP and regional objectives (ecosystem quality and water supply). It is a research/monitoring project to give CALFED options for implementing the EWA program while minimizing impacts to wintering Greater Sandhill Cranes, waterfowl, and shorebirds. The research/modeling will assess how water transfers from croplands will affect cranes and waterbirds. This project will support ERP objectives to recover endangered and other at risk species and maintain and/or enhance harvest species populations and associated habitat.

notes:

## *2. Links with other restoration actions.*

A proposal outcome is to look at crop substitutions, develop recommendations on crane-compatible land use and management strategies in the area - thereby linking to other restoration actions. Also the information will be useful to CALFED, other agencies, land owners, stakeholders, local governments.

notes:

## Bay Regional Panel Review

This work is dependent on the implementation of the Environmental Water Account (EWA) program. The project does not have any matching funds.

### *3. Local circumstances.*

The proposal appears feasible, has necessary handling banding permits to proceed. But timing depends on EWA program being implemented.

notes:

There is concern that more than one year's worth of data is needed to monitor cranes following implementation of the EWA.

### *4. Local involvement.*

Proposal is a research project to be carried out by agencies and academics. Stakeholders are not involved in study design, but methods to disseminate the information to the public are well defined. Study area is accessible by public roads.

notes:

### *5. Local value.*

The bird data and modeling information (EWA scenarios) will be of value to CALFED and other programs in ecosystem restoration - particularly for making recommendations for greater sandhill crane-compatible land use and management strategies. (Providing a buffer for restored habitats from adverse effects of encroaching incompatible development).

## Bay Regional Panel Review

notes:

The proposal would be a higher regional priority is the predictive model included Suisun Marsh and other appropriate San Francisco Bay areas.

### *6. Applicant history.*

Unknown to this reviewer.

notes:

### *7. Summary of Overall Panel Discussion and Review*

The proposal is technically strong and fits with the ERP goals. The project would be strengthened from a regional perspective if the study area was enlarged to include Suisun Marsh.

### *8. Panel Quality Ranking*

**Excellent**

notes:

### *9. Regional Priority Ranking*

**Medium**

notes:

# Delta Regional Panel Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

## *1. Applicability to ERP goals and regional priorities.*

Appears to meet goals and objectives of ERP. The project may be a priority for restoration goals depending on the acceptance or rejection of first proposal.

notes:

The panel questioned the applicability to ERP and PSP goals. The goals of the project were well-stated and do address the ERP and PSP focus, but from the methodology proposed it is unlikely that the applicant will achieve the stated goals.

## *2. Links with other restoration actions.*

The project could be used as a model for future restoration actions, although I'm convinced that portions of the study will provide significant insight for restoration goals.

notes:

The link to other restoration actions was unclear. The sandhill crane portion of the proposal was deemed the most useful.

## Delta Regional Panel Review

### *3. Local circumstances.*

The project appears to be proposed for an exceptionally large area, which brings into question the ability to achieve all goals. A smaller scale study with greater extrapolation may produce the same information.

notes:

### *4. Local involvement.*

The project probably has adequate landowner/stakeholder support given that work is primarily slated for government-owned lands. May be problematic if those lands are not adequate for subject animals, or if telemetered birds use inaccessible lands, post-tagging.

notes:

Local involvement was stated only at the information dissemination state, and there was no inclusion of other parties.

### *5. Local value.*

There is no proposed outreach to local farming or the rice commission. The value to local parties is vague. The panel was concerned that this work would duplicate knowledge from past studies on waterfowl (except for the sandhill crane component).

notes:

## Delta Regional Panel Review

### *6. Applicant history.*

At least one investigator is known has exceptional skill and expertise to achieve the goals for a portion of the project, Not clear on other participants, and most responsible parties for tasks are yet unnamed.

notes:

It is not clear if the fieldworkers would have the expertise necessary to implement the extensive field study.

### *7. Summary of Overall Panel Discussion and Review*

The proposal itself was weak. The value of the project was questioned because there have been many studies on waterfowl in the region. The proposed methodology does not clearly address the goals and the likelihood that the desired results will be achieved is questionable. Work on the effects of the EWA on waterfowl is appropriate, but the methodology is questionable. There was no documentation to show that the applicant understands the workings of the EWA which are key to this proposal. The monitoring methods are vague and the area to be monitored is very large. The panel was concerned that portions of the proposal are not feasible and that access to private land could be an issue. There was no link cited to economic effects on the amount of rice planted. Finally, the proposal was vague in how and who would accomplish the outlined tasks.

### *8. Panel Quality Ranking*

**Fair**

notes:

### *9. Regional Priority Ranking*

## Delta Regional Panel Review

**Low**  
notes:



# Sacramento Regional Panel Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

## *1. Applicability to ERP goals and regional priorities.*

The project is somewhat aligned with the goals and objectives of the CALFED ERP. I am not certain that it is a high priority, however. It does not seem particularly well suited to a PSP that is directed at helping farmers implement restoration, although it could help identify locations where restoration actions would be valuable to implement. At least some components of the proposed project are very similar to one that was proposed to the ERP Monitoring PSP a few years back.

notes:

## *2. Links with other restoration actions.*

The project expands upon past investments in the region only to the extent that it provides an evaluation of the value of particular sites for waterfowl and water birds. Some of these sites may have been influenced by CALFED activities although if such links exist they are not made explicit in the proposal. The project does, however, seek to develop methods for better evaluating future investments. Specifically it is intended to help guide implementation of the EWA.

notes:

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## Sacramento Regional Panel Review

### *3. Local circumstances.*

Yes, the project is feasible and appropriate for the project site. There are no local constraints that I am aware of that will limit the project's ability to move forward.

notes:

### *4. Local involvement.*

Yes, local involvement is adequate

notes:

### *5. Local value.*

The value of the project to the region does not appear to be as high as some other projects. Much has already been learned about crane and waterfowl use of these areas such that it would be difficult to justify the uncertainties that this project is designed to address as "critical". Studies of other waterbirds are needed, however, these are not the main targets for CALFED. In particular, I question the need for the telemetry work. Much has been learned already about movements of individual cranes by virtue of observations made on leg banded birds. Much of the response of the species studied in this project will be to general landuse patterns as opposed to EWA activities in particular. Thus it will be difficult to directly evaluate the effectiveness of EWA actions on these birds. Greater knowledge of the ecological dependencies of these species can however provide a basis for implementing the EWA in ways that can help offset adverse impacts of landuse

## Sacramento Regional Panel Review

changes in the valley...making the best use of what will in the future become scarce resources (water and lands managed for habitat).

notes:

The information collected would guide future implementation projects.

### *6. Applicant history.*

Ivey has performed very well on past projects. Produced an excellent report: SANDHILL CRANE MONITORING AT STATEN ISLAND, SAN JOAQUIN COUNTY, CALIFORNIA, 2002-03. I have no knowledge of past performance of others.

notes:

Past projects have been successful. The applicant has the expertise and could likely gain access to the lands necessary to complete the study.

### *7. Summary of Overall Panel Discussion and Review*

This project will provide information for strategizing future restoration activities rather than directly implementing ecological restoration on the ground. However, there is already a lot of good information available for these species and in this system, especially on waterfowl and cranes. The proposed work may be redundant and managers have much of the data needed to make informed decisions. Shorebirds are included in this study and have not been studied as rigorously as the other species included. Though there are not many shorebirds highly ranked by the MSCS, the data collected on shore birds would be beneficial. The panel suggests that these

## Sacramento Regional Panel Review

types of 'fallowing' projects would be improved by extending their focus to include a broader range of species.

Several components of this proposal are very similar to a 2004 ERP that had funding withdrawn due to budget cuts.

### *8. Panel Quality Ranking*

**Very Good**

notes:

### *9. Regional Priority Ranking*

**Medium**

notes:

# San Joaquin Regional Panel Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

## *1. Applicability to ERP goals and regional priorities.*

While this proposal mentions several ERP goals will be contributed to by this proposal, it lacks a focus on specific ERP and goals and instead focuses almost exclusively on Environmental Water Account goals. The goals and objective section for this proposal doesn't even mention ERP goals. The majority of the products that will result from this proposal will not benefit the San Joaquin region. Most aspects of this project are only relevant to other CALFED regions, namely the Sacramento valley region.

notes:

## *2. Links with other restoration actions.*

There is no evident link to prior San Joaquin region restoration actions and no restoration actions will be accomplished that could be used as a model in this Region.

notes:

## *3. Local circumstances.*

## San Joaquin Regional Panel Review

Due to the limited nature of the involvement of the San Joaquin Region in the proposed project it doesn't appear to have any local issues that would cause delays or prevent implementation.

notes:

The panel questions the feasibility of some parts of the proposal given the uncertain status of the EWA program - what if EWA is not implemented in the three-year timeframe of the research project?

### *4. Local involvement.*

There seems to be an adequate level of public involvement in this proposal. The project proponents propose to share data with wildlife area and nature preserves. They will also disseminate info to the public and scientific professionals by means of various public presentations.

notes:

The level of farmer participation in this monitoring project is difficult to determine.

### *5. Local value.*

This project has some, yet limited, application to the restoration of ecosystems in this region. The primary focus of this proposal is the Sacramento Valley region. This proposal only affects the San Joaquin region by the conduction of aerial surveys and possibly radio telemetry of water birds and greater sandhill crane usage. Major products of this proposal will not provide a useful benefit to this region. Flooded rice crops, the proposal's sole link to agriculture practice, are

## San Joaquin Regional Panel Review

not common in the San Joaquin region.

notes:

### *6. Applicant history.*

I am unaware of the applicant's prior performance beyond the fact that two different iteration of this project have been previously submitted to CALFED ERP & Science board respectively and have not received funding. They have received no prior CALFED funding.

notes:

### *7. Summary of Overall Panel Discussion and Review*

Panel members questioned the direct benefit of this proposal to the San Joaquin Region. The large monetary request seems to correlate with little direct benefit to the region as the proposal is written. The panel acknowledged that this type of research could be very useful to understand water bird migration patterns. More information about the San Joaquin regional movements of Sandhill Cranes, Northern Pintails and other species might provide important data to inform agricultural management decisions. However, rice fields are not prevalent in the San Joaquin Valley, and the proposed research is focused primarily on the Sandhill crane populations of the Sacramento Delta.

The proposal would be a higher regional priority if the water bird monitoring component in the San Joaquin Region (Task 4) received more emphasis and was a primary, rather than secondary, component. The panel recognizes that this proposal has been submitted to CALFED's ERP before, and may not be the best fit to the current PSP.

San Joaquin Regional Panel Review

***8. Panel Quality Ranking***

**Good**

notes:

***9. Regional Priority Ranking***

**Medium**

notes:



# Environmental Compliance Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

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?

**Yes.**

Comments

## Research

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?

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## Environmental Compliance Review

**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?

**Yes.**

Comments:

### **Collecting permit**

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:

**They have established access with willing participants during previous projects.**

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.**

# Budget Review

*Proposal Number:* 0084

*Proposal Name:* Wintering Waterbird Response to CALFED's Environmental Water Account Program: Modeling and Monitoring to Better Integrate Agriculture and Management of Wetland Dependent Birds

*Applicant Organization:* U. S. Geological Survey–Western Ecological Research Center

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

**Yes.**

2. Does the Budget Form include a detailed budget for each task identified on the Task and Deliverables Form and in the proposal text?

**Yes.**

3. Are the costs associated with each task and deliverable reasonable costs for performing the services?

**No.**

If no, please explain:

**Operating Expenses for Task Four seem too low. Need more detailed cost breakout.**

4. Is each person (employee, consultant, subcontractor, etc.) identified on the Personnel Form also included on the Budget Form?

**Yes.**

5. Are there estimated hours and an associated hourly rate of compensation for each person identified on the Personnel, Tasks and Deliverables, and Budget forms?

**Yes.**

6. Does the budget include the benefit rate for all personnel identified on the Personnel and Budget forms?

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## Budget Review

**Yes.**

7. Are the proposed labor rates comparable to state rates?

**No.**

If no, please explain:

**No, federal rates.**

8. Is more than 25% of the work proposed to be performed by subcontractors?

**No.**

9. Are project management expenses appropriately budgeted?

**Yes.**

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

**No.**

If no, please explain:

**42% in high.**

11. Does the proposal adequately explain major expenses? Are the labor rates and other charges proposed reasonable in relation to current state rates?

**No.**

If no, please explain:

**Grants w/this grantee have in the past gone over budget in the types of operating expenses (i.e. boats, aviation fuel, etc.). This proposal has a cost share plan, but no specifics such as: How much is the grantee covering the costs of aviation fuel, etc. What is their share?**

12. For equipment  $\geq$ \$5,000, was a separate worksheet filled out?

Please note: No overhead or indirect rate charges are allowed on the equipment purchases

**No.**

## Budget Review

13. Is the purpose for all travel clearly represented in either the proposal itself, or in the Tasks and Deliverable Form?

Please note: Recurring travel costs for a specific task or subtask may be combined into one entry on the Budget Form, but the number of trips and cost for each trip must be clearly represented.

**No.**

14. Are travel and per diem at rates specified by the California Department of Personnel Administration for similar employees?

**No.**

15. Are other agencies contributing or likely to contribute a share of the projects? costs?

**Yes.**

If yes, when sufficient information is available, please total the amount of matching funds likely to be provided:

**Approximate numbers but, need more detail to prevent overruns.**

16. If the applicant identified cost share or matching funds, are they also described in the text of the proposal?

**Yes.**

17. 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 negotiation a grant agreement?

**No.**

If no, please explain:

**No, applicant accepts Std T's &C's.**

18. Are there other budget issues or "red flags" that warrant consideration?

**Yes.**

If yes, please explain:

**Assumes access to bird roosting area or that they will be able**

Budget Review

to get within tracking range.

19. Provide revised amount requested based upon your review:

\$