SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO–SAN JOAQUIN DELTA REGION

Michael L Casazza

Initial Selection Panel Review

0073

SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

US Geological Survey

Applicant amount requested: **$**493,033

Fund This Amount: $**493,033**

The proposal is responsive to the PSP. It is well written and project area is centered in sandhill crane habitat. Significant opportunity exists with this project to determine sandhill crane utilization of land purchased by the ERP. Recommendations coming from this project should prove to be practical for land managers. The panel felt that this project should be funded as long as the proponents meet the following conditions: (1) provide a more detailed budget, (2) include pre−project contact with landowners, and (3) strengthen the linkage to changing ag practices.

Fund With Conditions

Technical Panel Review

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

Amount Requested: $493,033

Panel Rating:
Good − Quality but some deficiencies

Panel Summary

The Panel indicated that developing an understanding of the movements of sandhill cranes on agricultural lands would help to support science−based management of the species. The Panel found that the proposal did a fairly good job presenting study detail, but also found the approach to be simplistic. Furthermore, the Panel felt the proposal could have gone further in showing the linkage of the proposed data collection effort to the change in agricultural practices. The linkage between the data collection, development of the conservation strategy, and change in agricultural practices should have been incorporated into the proposal discussion.

In terms of developing a future conservation strategy, the proposal would be better if it not only addressed "where" the birds were going, but "why" and “what” they are doing at a particular location. If the project does not address those questions, a lot of funds are being spent for basic telemetry data. The proposal lacks detail on statistical analysis, model building and model evaluation, a shortcoming that prevented several reviewers from providing a higher ranking. One reviewer asserted that the statistical methods proposed for habitat selection are out of date. At least some of the panel members felt that although good ecological data would be gathered, this proposal would not answer questions such as how much habitat is needed to support a given number of cranes or under what conditions habitat ceases to be used by cranes. These questions could be addressed by coupling this work with

sampling behavior of un−telemetered birds and examining food supply in areas that receive different levels of use. Adding these components ought to be possible within the proposed level of funding.

External Technical Review #1

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

Amount Requested: $493,033

Goals

Rating	**excellent**
Comments	**The project description and goals sections provide a good summary of how the results of this project could be applied to evaluate the land acquisitions by the CALFED ERP in terms of their contributions to enhancing populations and habitats for the Greater Sandhill Crane in the Delta region. To date, approximately $46 million has been spent to acquire, manage, and enhance more than 20,000 acres to improve habitat conditions for wetland−dependent wildlife. This study should provide an excellent opportunity to examine the existing values of these lands for cranes, and it should result in useful recommendations for regional improvements in water management and agricultural practices. One minor point, the reference to the protected status of the Lesser Sandhill Crane should be corrected to: "Bird Species of Special Concern—Second Priority."** **As written, it appears that there is little known about the habitat use, population abundance, and preferred crops of cranes in the Delta since these questions are posed as hypotheses. It seems, based on the literature cited, that much of this information is already known about preferred crop types (e.g., corn, rice, and pastures) and those that are not used by**

	cranes (e.g., vineyards, orchards, and row crops). Similarly, cranes are large and conspicuous and many previous studies have estimated their wintering population in this area—including arrival and departure dates. The goals of this study might be more accurately stated to reflect that the "real" questions being asked relate to winter site fidelity, daily and seasonal movement patterns by both subspecies, winter home range size, and the effects of adjacent land uses on crane behaviors that can best be studied through radiotelemetry. Thus, the first goal should be to summarize the existing information on specific use areas, population estimates and trends, and then to identify the key unanswered questions that this study will elucidate.

Justification And Conceptual Model

Rating	**very good**
Comments	**This section presents a credible model for testing the hypotheses posed in the previous sections. However, it seems that surrounding land uses would be important to map and evaluate as variables in this model. The reference to a "geometrically clean" conceptual model is not clear in this context. In regard to the data collected for objectives 3 and 5, are the flight distances for both subspecies intended to measure maximum or average distances? This is not clear, and it would make an important difference in how the sizes of these circles are estimated.**

Approach

Rating	**very good**
Comments	**Under Task 2, should the reference to two species actually be subspecies? I read this proposal twice, and still cannot determine the duration of this study. It seems that weekly counts will be made in important, high-use areas starting in September—but how long will these be continued? From the budget presentation, this**

	appears to be a 3−year study but the Approach section does not specify the duration. If there is only going to be one year of field work, there will be no opportunity to examine year−to−year trends in population size or habitat use—and these could change seasonally and annually. It seems this study will focus, at least initially, on traditional high use areas. However, using this approach could result in overlooking other large populations that may exist. For example, in addition to the localities listed I have recently observed several hundred cranes roosting at the McCormack−Williamson Tract (just north of Staten Island), and the flooding cycle of this island could be changed dramatically by proposed levee removal projects. The proposal does indicate that aerial surveys will be done of the entire study area every two weeks, so it is likely that most population will be located and these can be surveyed later during ground−based surveys. The proposal indicates that 30 Greater Sandhill Cranes and 40 Lesser Sandhill Cranes will be equipped with radiotransmitters—what is the expected lifespan of these devices? In other words, will it be possible to study the movements of individual birds in more than one year? Again, the duration of the data collection phase of this project is still not clear to me. Finally, will GPS be used to delineate and map the high use areas?

Feasibility

Rating	**excellent**
Comments	**This study seems to be very feasible, and the researchers appear to have all the required permissions to trap and handle cranes. The sample design does not require access to private property, but it certainly would be preferable to follow and study the cranes whether they are using public or private lands.**

Performance Evalutation

Rating	**excellent**
Comments	**This section is quite complete, and it provides a table of project activities with measurable metrics, or deliverables.**

Proposed Outcomes

Rating	**very good**
Comments	**As stated in the goals section, this research project should result in the development of "wildlife friendly farming practices" that will provide tangible benefits to wintering cranes and other water birds. The proposed outreach program, including agricultural interests, wildlife refuges, schools, and environmental organizations will help to raise public awareness of the importance of the delta region for wintering cranes.**

Capabilities

Rating	**very good**
Comments	**The proposed principal investigator, Michael Casazza, apparently has not published previously on Sandhill cranes, based on his resume. However, he does have substantial avian research experience—principally with Band-tailed Pigeons—including the use of radiotelemetry. Joseph Fleskes appears to have significant research experience with waterfowl, especially Northern Pintails and demonstrable experience using radiotelemetry. Gary Ivey is an established expert on Sandhill Cranes and has studied this species in California, Oregon, and Washington—he is also experienced at trapping, banding, and monitoring this species.**

Cost−Benefits

Rating	**excellent**
Comments	**The detailed cost break−down was very informative, and it provides a good justification as to how this money will be spent. Again, from the costs it appears this is a 3−year study, but I did not see the project's duration mentioned explicitly in the Approach section.**

Overall Evaluation Summary Rating

Rating	**excellent**
Comments	**This appears to be an excellent study that will enhance our knowledge of Sandhill cranes in the Delta region. It should result in clear recommendations for land management practices and should increase public awareness of this threatened species in California.**

External Technical Review #2

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

Amount Requested: $493,033

Goals

Rating	**excellent**
Comments	**The first goal of this proposed work is an important one, as many conservation initiatives may go for years and decades without adequate evaluation of success. In this case, this proposal will only evaluate how land acquisitions, easements and habitat enhancements can contribute to recovery of Greater Sandhill Cranes. If indeed efforts and resources are to be focused on species of concern then a better understanding of how cranes use lands in the Delta region would be very important information to have in planning and developing actions in the field. Overwintering populations of sandhill cranes require adequate areas for roosting, as they appear to be limited by water, and sufficient areas for foraging. Clearly the first step in developing adequate conservation plans is to determine where these habitats are and determining their characteristics in different wintering areas. The proposed work intends to focus on these issues. Within the crane world we have began to increase our focus on better understanding wintering ecology as it appears to be more dynamic than previously thought. This project will evaluate home ranges and movements of two subspecies wintering in the Delta region which should provide valuable data in regards to crane wintering ecology overall. In addition that**

	information can be used to better design and plan actions for land protection and enhancement to benefit this species.

Justification And Conceptual Model

Rating	**very good**
Comments	**The proposed conceptual model appears sufficient to describe the potential factors involved in a study of wintering cranes. Our current assumptions regarding crane wintering areas is that there are two factors of importance, 1) roost sites, and 2) foraging areas. These two elements are well contemplated in the conceptual model. In the area the roost sites and foraging areas are likely to equate to agricultural fields and other components of the systems. At a landscape level, evaluating location and distances between roost sites and foraging areas may be sufficient if what is desired to learn is how the cranes move among the landscape features and characteristics of different fields. It is not clear to me from reading the proposal why it is hypothesized that lesser sandhill cranes will move more frequently and move longer distances than greater sandhill cranes. Seems that both subspecies would prefer to travel the least distance possible, in order to maximize energy reserves. The only reason to assume different movements in the same landscape is if the two subspecies have different diets or are concentrating on different foods or specific habitats. Perhaps some of the authors have some empirical data that is not made explicit in the proposal.**

Approach

Rating	**good**
Comments	**The approaches described for each task appears to be appropriate for the objectives stated. General ground and air surveys to locate and count cranes are standard methodologies used with these species. The**

	trapping proposed have also been used in the past for these species and are considered adequate and safe. One factor that is mentioned under task 2, but not clearly defined as to how it will be evaluated, is human disturbance. It is stated that disturbance effects on crane use will be evaluated; however it is not clear how this will be done. It appears that it will be based on a simple association; if cranes are not present and there is X activities then X activities affects crane use? I believe this element of the proposal needs to be clarified as to really evaluate effects of human disturbance on crane use you might need to do some intensive behavioral studies which are not contemplated in proposal. For example, how far does a human activity need to be from cranes to cease being a disturbance? One other element that appears as significant in the conceptual model but receives no attention in tasks, or anywhere else in the proposal, is predation risk. If it is identified in the conceptual model with equal significance as the other factors that will be evaluated some space needs to be devoted as to why it will not be evaluated or considered in tasks. In general we assume that adult cranes roosting in water suffer very little predation however, perceived predation risk (eagle roosts, hunter activity, dense shrubs at edge of roosting ponds etc.) may influence roost site selection and crane behavior.

Feasibility

Rating	**very good**
Comments	**Considering the objectives proposed, and the methods to be used being well established and common in other areas to study cranes and their habitat use, the proposed study appears to be very feasible. The proposed tasks do require considerable manpower, time, and movement throughout the area but considering the amount of people involved in this project these elements appear to be covered. Federal and State permits which are required for trapping and banding**

	appear to be already available. The only questions I have in regards to being able to accomplish are the issues sated in Approach section; human disturbance and predation risk. Human disturbance is cited but it is not clear how it will be evaluated. Predation risk is cited in conceptual model but is no considered in any of the tasks.

Performance Evalutation

Rating	very good
Comments	Considering the objectives, the performance measures proposed are adequate to determine the accomplishments of the work. Maps, habitat models, and several other scientific and public presentations should summarize the data collected in way that it can be available for multiple audiences. The only question remaining for the non-scientific literature is how it will be distributed to the appropriate audience so that it is useful. For example will the farmer-oriented glossy publication be given only to farmers that participated in the project, or will they be distributed delta-wide? How and who will make distributions? While collecting the information described in this proposal is an important first step, how it is applied in the field and leads to actual improvements for crane wintering habitat is a different matter. While this is not the goal of the current proposal, CALFED and State and Federal Agencies need to be prepared to use this information to better define projects and actions on the ground that translate the information gathered to actual conservation actions.

Proposed Outcomes

Rating	very good
Comments	If all objectives stated in this proposal are accomplished that data should be very useful for activities that are intended to restore the ecosystem

	and in particular the protection and enhancement of areas for sandhill cranes. The issue of winter ecology dynamics of sandhill cranes in general is an interesting one and the data gathered in the proposed project would do much to increase our understanding of that subject. It should increase our understanding of how and which crop fields get used for foraging, whether anything can be done in the area to change agricultural practices to improve conditions for cranes will depend, I assume on many other factors intertwined with agricultural markets and programs. How useful this information may be to farmers may be debatable but it will be useful for planning and evaluating possible effects of agricultural activities on crane wintering ecology.

Capabilities

Rating	**very good**
Comments	**The research team appears to be well suited to accomplish the proposed work. Even though the primary staff does not seem to have worked previously on cranes they are being supported by an experienced crane biologist as a secondary staff. Considering their previous accomplishments with other projects and publication record they seem to have the capabilities and experience to conduct the proposed work. The staff's agencies should provide sufficient infrastructure and other types of support to reach the goals proposed here.**

Cost−Benefits

Rating	**good**
Comments	**The budget appears to be adequate overall for proposed activities. It seems a large portion of the grant will be going to Oregon State University which I assume will manage most of the field expenses etc. Since, it is not possible for me to determine what costs have been associated with different elements of the budget,**

	for example flights or graduate student salary, I can not easily say if costs associated with those elements are reasonable or not. Considering the activities proposed, personnel and resources required to accomplish the work in the time defined the budget as proposed may be appropriate.

Overall Evaluation Summary Rating

Rating	**very good**
Comments	**Overall this proposal outlines an interesting and important work. Better understanding sandhill crane winter ecology in the Delta area of California will improve our overall understanding of crane wintering ecology. More importantly the knowledge gathered will serve to apply specific management and conservation actions to the area of study to better protect or enhance ecosystem features to benefit cranes. Obviously this study will only provide the information upon which other agencies and organizations must work with to translate the information gathered into true measures of protection and habitat enhancement on the ground. The only possible problem that I have with this proposal is the uncertainty of how hunting and predation pressures, which are mentioned in conceptual model and in the text, will be considered in the overall system under study. They are elements that may impact cranes to a significant extent as acknowledged by authors, but are not considered explicitely in methods.**

External Technical Review #3

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

Amount Requested: $493,033

Goals

Rating	**good**
Comments	**The goal of this project is to provide critical, though currently unknown, information on winter habitat use by a threatened subspecies, the Greater Sandhill Crane, and to use the information to provide a sound conservation strategy for this sub−species in the Delta region. Each of their objectives is related to obtaining information on winter habitat use, but this proposal does not develop details of how the information will be used to develop sound conservation strategies or how the data will really assist farmers in integrating agricultural activities with ecosystem restoration. The goals are generally in line with the goals of the ERP.**

Justification And Conceptual Model

Rating	**good**
Comments	**The investigators discuss some of the issues that may influence foraging sites and the spatial extent of habitat use by cranes in Figures 3 and 4. These figures provide the conceptual framework for their objectives. These figures generally make sense and are useful. However, if the larger goal is for increasing**

Greater Sandhill Crane populations (as depicted in Figure 2), it is unclear how useful this conceptual model really is to understanding population regulation in this species.

As the investigators note, a big assumption is that foraging and roosting habitat are limiting factors for cranes. Therefore, if we increase the amount of foraging or roosting habitat, it will increase survival rates of cranes during the winter. It would be useful if instead of assuming that habitat was limiting, the investigators directly estimated if and how habitat limits populations through survival or other demographic analyses. For example, is foraging habitat more limiting than roosting habitat? One might intuitively think so, because many individuals can use a single roost, and resources might not be depleted in roosting sites (other than simply physical space), whereas foraging can indeed deplete resources.

Some of the hypotheses mentioned under their conceptual model are vague and it is unclear how the investigators will really test them. For example, an alternative hypothesis is, "suitable roost sites are lacking". If birds are roosting in the area, then aren't suitable roosts present? If no birds are in the area, then you have nothing to compare. I assume the investigators really mean to test whether there are no other similar unused sites in the area that cranes could occupy for roosting, which could suggest that roost sites may limit further increases in population size. Other hypotheses show similar vagueness.

Finally, the closing paragraph of the conceptual model is also vague, based on what the information they will be collecting. For example, how will this information really be used to, "for assessing the value of CALFED purchased lands to wintering cranes and for guiding conservation planning for cranes.", and "help define best management practices for cranes…and provide guidance for how agricultural practices could be used

	to benefit cranes and contribute to their recovery”? It is not clear to me how the investigators will rigorously address these issues, nor do they justify why the information they are collecting will be best for attaining the overarching goal of crane recovery.

Approach

Rating	fair
Comments	It is difficult to interpret if the approach is appropriate for the objectives, because many details were absent or unclear. In fact, their entire approach section is only two pages in length. For some details, the investigators simply cite an unpublished report. For others, not enough information is provided. Some big, unanswered questions are: How will cranes be counted weekly? Will this be standardized within and among fields? How many fields for each management condition will be surveyed? Are these management conditions typical of the greater landscape/region? How will preference be assessed? How will agricultural practices be evaluated? What does “relative value to cranes” (p.5) mean? If only 5 roost sites typically occur, will there be enough replication to understand roost habitats, and will logistic regression even be possible? How will sites that are suitable for roosts, but not being used be determined? Why are the traditional roosts the first to be available to cranes in the fall? Just because roosts are close, does it really mean that they are connected? How will you estimate connectivity? How will you use information on radio−telemetry and estimated home ranges? For web dissemination, how will you determine the effectiveness of the restoration in providing critical habitat to cranes? The approach will provide information regarding the influence of agricultural activities on crane habitat use. However, it is unclear how the results will inform farmers or decision makers. For example, in Task 4, the investigators mention that information

	from field work will be incorporated into a predictive model of habitat use by cranes, but there is no mention of how this will be accomplished. This is a critical component, because this is the only part of the information, as written, that will be directly used in, "Wildlife Friendly Agriculture programs for private lands that may benefit cranes as well as help guide management of fee title lands purchased through CALFED".

Feasibility

Rating	**very good**
Comments	**Much of what the investigators propose is generally very feasible. The investigators have already performed similar work in the region, and the investigators already have most of the permits required to carry out the study. My only concern is their ability to infer roost site use, because sample size may be small for that aspect of the study.**

Performance Evalutation

Rating	**fair**
Comments	**The proposal includes a brief description of performance-related metrics the investigators will use for their study in Table 1. However, it is not clear how each of these metrics will be used for evaluation purposes. For example, the metrics used for estimating satisfactory progress on field research include "capture, marking a sample of cranes summarized in annual reports". How many marked cranes will constitute satisfactory progress? Furthermore, some of these metrics are fairly vague (e.g., "1 roost site map") and appear to be more like "deliverables" than performance evaluation. More useful performance measures in a project like this should include some measure of model performance (e.g., validation) and some measure whether this information is actually useful to managers or farmers (e.g., a landowner**

	survey on whether results are useful). **The proposal does not explain criteria it will use to test hypotheses, and it is not likely to rigorously demonstrate the efficacy of agricultural management or restoration actions.**

Proposed Outcomes

Rating	**fair**
Comments	**The product most likely to be valuable from the project is the predictive model the investigators will develop. However, the proposal does not describe how this model will be developed or implemented, so it is difficult to know how useful the model will be. Results should provide useful information on how agricultural practices are correlated with crane habitat use, but do not seem to directly assess ecosystem restoration or integrate other issues involved in farming practices. This information might be able to be applied to other systems, but the investigators do not detail how this information could really be applied to other systems. Furthermore, some proposed outcomes, such as a "conservation strategy" (p.9) are not developed at all, so it is impossible to know how useful some outcomes will be.** **The data will be stored and archive at Oregon State University. Data will be made available over the web, but the format or amount of detail of such information is not described.**

Capabilities

Rating	**excellent**
Comments	**The principal investigators have strong backgrounds in wetlands and waterbirds and have published much on these general issues. Being part of the USGS, they should have the capacity to complete the project.**

Cost−Benefits

Rating	very good
Comments	The budget is approximately $500,000. This is reasonable (perhaps just a bit high, but not exceptionally so) for the proposed field work.

Overall Evaluation Summary Rating

Rating	fair
Comments	The proposed work will provide important information regarding winter habitat use by a threatened species, the Greater Sandhill Crane. However, details in approach, performance measures, and proposed outcomes were scarce. This is not due to space limitations, because the proposal was only 11 pages (with the limit being 20). Most importantly, the proposal did not develop how this information would be interpreted or integrated to provide useful tools for conservation and land management strategies.

Delta Regional Panel Review

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

1. Applicability to ERP goals and regional priorities.

Seeks to collect and analyze data that will provide for the development of good land acquisition and management decisions of CalFed lands in order to aid the preservation and recovery of greater sandhill cranes, a species of concern under CalFeds MSCS.

notes:

2. Links with other restoration actions.

Yes, the project seeks to build on existing information to clarify species' land use and thus CalFed's current and future acquisition and management actions.

notes:

The proposal would expand upon previous piecemeal efforts by organizations such as TNC to examine crane distributions in the Delta.

3. Local circumstances.

Work seems feasible.

notes:

Certain goals in the proposal are problematic based on proposed methodologies. The feasibility of differentiating between the lesser and greater sandhill cranes as well as the third subspecies was questioned. The panel also questioned the amount of ground−truthing needed to support using aerial photography data, and was concerned that not enough consideration was directed toward private land use by the species.

4. Local involvement.

Appears to have sufficient landowner/stakeholder support, and lists sufficient outreach activities to increase education and improve study support.

notes:

Greater pre− and post−outreach activities should be included to meet PSP objectives, especially in terms of improving farming practices to benefit sandhill crane populations. The proposal did not include sufficient groundwork to get willing private partners. However, the panel acknowledged this is difficult to achive prior to an understanding of crane roosting and foraging distributions on private land.

5. Local value.

The study, as planned, would result in high value information relative to acquisition and management of CalFed and other preserves, and aid in the preservation of a MSMC species. Could have valuable implications for private land management, but applicant needs to add to that component.

notes:

The project provides a relevant and important look at large−scale habitat use by sandhill cranes.

6. Applicant history.

Cannot make a determination based on work on other CalFed−funded projects, but at least one responsible party has an excellent record on related studies. Unfortunately, it is unclear whether other field personnel have the appropriate experience and qualifications to adequately identify the crane subspecies, thus leading to question regarding the ability to accomplish stated tasks and objectives.

notes:

This proposal was submitted and approved for a previous CALFED PSP, but was not funded.

7. Summary of Overall Panel Discussion and Review

The proposal was viewed favorably because this type of large−scale study is required in order to understand specific regional land use patterns by sandhill cranes. The panel was concerned that the proposal was overly focused on acquisition and management of preserve habitat, rather than management practices with applicability for growers in the Delta. Some panelists felt that this PSP may not be the most appropriate funding source for this type of monitoring project.

8. Panel Quality Ranking

Good

notes:

9. Regional Priority Ranking

High
notes:

San Joaquin Regional Panel Review

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

1. Applicability to ERP goals and regional priorities.

Yes, proposal is directly connected to at risk species identified in the Multi−Species Conservation Strategy (MSCS). The project proposal is a priority for regional restoration goals and could significantly contribute to guiding future accomplishments. Identifing habitat characteristics that influence Greater Sandhill Crane use and expanding knowledge regarding seasonal movements of both Lessor and Greater Sandhill Cranes will assist future land management activities.

notes:

2. Links with other restoration actions.

Yes, relates to previous monitoring work conducted on Staten Island. Results of this study "will directly assist with developing objectives and strategies for habitat management on Stone Lakes National Wildlife Refuge", according to Project Leader, Tom Harvey. May relate to restoration work funded by CalFed on San Joaquin River NWR. Ability to model crane habitat as it relates to future restoration actions or conservation strategies is suggested by project proponents.

notes:

3. Local circumstances.

Yes. No constraints likely.

notes:

The proposers have letters of support from a large number of stakeholders. These include wildlife refuges, private land owners, and other organizations including Ducks Unlimited.

4. Local involvement.

Definite local support documented. Outreach efforts are described and specific venues identified. Sharing information with private and public land managers is a beneficial product of supporting this proposal.

notes:

Outreach efforts include public tours and presentations as well as specific crop planting and management guidelines for farmers to enhance Sandhill Crane habitat.

5. Local value.

There will be regional benefits to gathering the data and analysis that is proposed. The proposed project appears to extend and build upon previous studies in the same geographic area. Compare to project proposal #0084, note task 2 cost savings in that project.

notes:

This proposal is very focused on a single "r" MSCS species, but an important one.

6. Applicant history.

USGS – Western Ecological Research center and it's predecessor have an excellant reputation for field work conducted. Reviewer has no first hand knowledge of M. Casazza. Dr. J. Fleskes is a professional acquaintance, I am also aware of most of the other staff by reputation as well as by their previous work. This distinguished group of research personnel is well qualified to perform the tasks described.

notes:

7. Summary of Overall Panel Discussion and Review

The proposed project would generate useful and applicable data on Sandhill Crane habitat use in the Bay–Delta. One of the few negative attributes in a regional context is that a substantial portion of the research would take place outside of the San Joaquin Region. However, one of the three wildlife refuge study sites would be located in the SJR. The review panel supports that the proposed research is directly tied with on–the–ground management decisions and farming practices. The research would provide information on many important issues including crop planting regimes and the connectivity of crane roosting sites with foraging habitat.

The proposal will result in a useful management “product” for the region toward the goal of supporting Sandhill Crane populations.

8. Panel Quality Ranking

Excellent

notes:

9. Regional Priority Ranking

Very High
notes:

Environmental Compliance Review

Proposal Number: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

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?
Yes.

3. Does this project qualify for an Exemption or Exclusion under CEQA and NEPA, respectively?
Yes.

Comments

This is a research project and my qualify for an exclusion.

4. Did the applicant correctly identify if CEQA/NEPA compliance was required?
No.

Comments

It is highly likely that the applicant has all documents and permits needed to conduct the project. It is confusing the way the proposal is written. The applicant has obtained the federal and state permits but do not check them off in the environmental checklist. A federal agency would need to comply with NEPA to obtain the permit but the applicant states they did not comply with NEPA.

5. Did the applicant correctly identify the correct CEQA/NEPA document required for the project?
No.

Comments:

See above for comment #4

6. Has the CEQA/NEPA document been completed?
No.

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

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

Comments:

I assume they have the proper permits/documents in place to conduct the project and that the applicant failed to write it in the proposal. The applicant states they have the required permits but no NEPA doc. is required. They may have already completed the NEPA doc. when they received their permits.

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.

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:

The applicant states permission will be gained from the landowner before the project starts.

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: 0073

Proposal Name: SANDHILL CRANE USE OF AGRICULTURAL LANDS IN THE SACRAMENTO−SAN JOAQUIN DELTA REGION

Applicant Organization: US Geological Survey

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:

No, 33% &42% = 77% markup of USGS labor, is high. 6% on subcontractors is also a little high.

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.
If no, please explain:

Can't evaluate the subcontractor work there is not enough detail provided.

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

Yes.

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

No.
If no, please explain:

Used Federal rates.

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

Yes.
If yes, what is the exact percentage to be performed by subcontractors?

71%

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:

No list of expenses was provided for the indirect or the overhead rates.

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:

No major expenses were identified, assumed there were none planned.

12. For equipment >=$5,000, was a separate worksheet filled out?
Please note: No overhead or indirect rate charges are allowed on the equipment purchases

No.

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:

$ 95,000 – USGS

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 exception to the std T's &C's.

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

No.

19. Provide revised amount requested based upon your review:
$