Panel Scientific and Technical Review Form
(Note: Review comments will be anonymous, but public.)

Proposal number: 2001-E210 Short Proposal Title: Sun River Restoration

Notes: Only one individual review of this proposal was received. The summary of reviewer comments is that of the one review received.

1a) Are the objectives and hypotheses clearly stated?

Summary of Reviewers comments:
The objective and hypotheses are stated clearly. The proposed restoration will provide some flood management and will restore marsh and upland grassland habitat for species of concern (such as giant garter snake and greater sandhill crane). It will provide information on the management and control of non-native invasive species and contribute to public environmental education.

Panel Summary:
The hypotheses are not clearly stated. The proposal does not present hypotheses. Using each of the CALFED proposal-area headings, it describes how the proposed construction and restoration actions will accomplish certain outcomes. No explanation of 'how' is presented.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?

Summary of Reviewers comments:
The concept is to restore a site which is both large and under management control, so that its hydrology and habitat can support the species of concern.

The conceptual premises are sound: the proposed restoration will enlarge the available habitat for numerous species of wildlife. Restoration of natural floodplain seasonality will contribute to the welfare of wildlife, while control of flood regimes will serve as a useful tool for flood management. Upland areas within the restoration site will provide foraging habitat for many species of reptiles, birds and mammals and the juxtaposition of uplands and wetlands will add to local increases in biological diversity.

Panel Summary:
No central conceptual model is presented except by illustration (Fig. 7). The bulleted statements under the section labeled 'Conceptual Model' rather dogmatically presents multiple outcomes that are a result of creation of backwater floodplain 'restoration'.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project?

Summary of Reviewers comments:
Yes. The approach appears to be well designed. The proposal includes a succinct description and typical cross-sections illustrations of the restoration elements, involving considerable reinforcement/rebuilding of the infrastructure (levees, drainage systems), in addition to earthwork throughout the site.

The approach is well thought through and has a high probability of meeting the proposed objectives. Detailed plans describe engineering, water control, restoration and habitat enhancement, and species monitoring efforts that should be quite effective.

Panel Summary:
There is no basis for determining whether the project will meet the objectives. The proposal is overwhelmed with engineering diagrams and construction budgets without backup examples of prior research showing that the expected outcomes will result from the proposed restoration. Before even a pilot/demonstration project should be launched, existing related research needs to be presented. If it does not exist, a smaller research project should be conducted to test the germane hypotheses. Other similar work related to seasonal flooding is not referenced nor presented. There is no estimate actual flood protection expected and for what period, intensity, and storm qualities could be sustained given the project.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?

Summary of Reviewers comments:
Yes. This site is being used to evaluate benefits for flood control and habitat improvement. The site is appropriate because of proximity to communities that are susceptible to interior flooding. A number of species may benefit from this project, but emphasis is given to the Giant Garter Snake, Valley Elderberry Longhorn Beetle, and some rare (but not listed) waterbirds (Priority II-IV species). The site would not likely benefit Priority I species.

Designation as a full-scale implementation project is warranted. Prior research has been shown to be effective in meeting the goals of the restoration plan. Construction and monitoring as outlined in the proposal have a high likelihood of success, in addition to increasing the permanence of the restoration through levee modifications and floodwater control.

Panel Summary:

No. See 1b2), Panel Summary above.

1c2) Is the project likely to generate information that can be used to inform future decision making?

Summary of Reviewers comments:
Yes. The project will contribute information on many levels. Data on efficacy of engineering, flood control and long wind fetches (i.e., information on levee integrity), control of non-native species and promotion of habitat development for species of concern and other wildlife, and public education will all be useful in future restoration efforts.

Panel Summary:
Yes, but most if not all of the information could be obtained from one or a combination of smaller projects including research and/or pilot/demonstration projects. Little additional information would accrue because of the scale of this project. The project is presented as if almost all-possible favorable responses with occur without any risks. The panel is skeptical because so little justification is given. Just knowing that apparently bulletproof levees with overflows will be constructed is inadequate justification.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?

Summary of Reviewers comments:
The monitoring information is presented in relatively general terms, stating the categories of information that would be assessed, with reference in the text that the plan will be detailed in the future. It is assumed via the expertise of the applicants in management of the refuge that it will be properly monitored and adequate. The length of monitoring is adequate. Site hydrology and levee stability will be monitored. Vegetation community-type cover and species richness will be assessed over time, and also target wildlife species numbers will be censused. There will be assessment of possible entrapment of aquatic species on the site. Finally, public use of the restored area will be monitored.

Panel Summary:
No assessment plan of adequate detail on methodology was presented. Although no details are given on monitoring methodology, five years of monitoring is proposed which is adequate.

2b) Are data collection, data management, data analysis, and reporting plans well described, scientifically sound and adequate to meet the proposed objectives?

Summary of Reviewers comments:
The two reviewers evaluated data handling aspects of the proposal very differently. One felt that data aspects could not be evaluated because too little information was provided on the manner of data evaluation and reporting. The other reviewer felt data collection through reporting plans were thoroughly described and appears to be very sound. The second

reviewer also thought the proposed monitoring plans would generate a great deal of information and the project team had provided plans for effective data gathering and dissemination of results.

Panel Summary:
Only outline-level information was provided. Only the media for data storage is presented. Nothing concerning data analysis is presented.

3) Is the proposed work likely to be technically feasible?

Summary of Reviewers comments:
Yes. The construction conditions (mostly dry) and types of construction do not pose any particular problems. The levee construction methods appear appropriate and will be evaluated on a relatively large-enough scale to determine effectiveness. The particular conditions are not extreme in terms of depth or duration of anticipated flooding, thus the probability of success is high. The project will use restoration models that have shown an effective track record throughout the Central Valley. Engineering approaches have also been shown effective in numerous other restoration projects in the region.

Panel Summary:
The construction can certainly be accomplished but the outcomes are insufficiently justified based on previous research and pilot studies. Therefore the feasibility is unknown at this time. The panel feels a pilot/demonstration project is needed to determine feasibility.

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?

Summary of Reviewers comments:

Yes. Each participating organization has previously played effective roles in project design, administration, engineering, biological surveys and monitoring, and land management. It is probable that the combined experience of the team could do the project.

Panel Summary:
The panel agrees.

5)Other comments None

INDIVIDUAL REVIEWER OVERALL EVALUATION SUMMARY RATING AND COMMENTS:

GOOD. This proposal would accomplish a lot of restoration in terms of area and in doing so, enlarge the overall functional area of Stone Lakes. The area is at risk due to competing uses and irretrievable impacts due to conversion to grape production and residences. The proposal emphasis is on intermediate priority species (some are listed) in managed wetlands, but this management approach is likely have a high probability of success, and generate consistent year-to-year habitat benefits. These habitat types also create values similar in function to the backwater sloughs which were once much more prevalent connected areas of the Delta. There is likely to be additional benefits through increased flood control, hunting opportunity, and education, which could public support of ongoing Stone Lakes and CALFED efforts generally. I support funding this proposal.

EXCELLENT. The proposal is well thought out in every dimension, and brings many values to what is likely to be a highly successful restoration. The restored site will provide habitat for many species of wildlife, and should contribute to flood water control in the local floodplain.

Overall Evaluation
PANEL SUMMARY COMMENTS

Weaknesses: The approach description is inadequate. There is no basis for determining whether the project will meet the objectives. No assessment plan of adequate detail on methodology was presented. The conceptual model is insufficient.
Strength: The project will restore a large area, and contribute to an ecologically significant area (Stone Lakes NWR).

OVERALL PANEL EVALUATION SUMMARY RATING: FAIR