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

Proposal number: 2001-E214 **Proposal Title: Frank Tract/ Decker Is. Wetland Habitat Restoration- Next Phase**

Note: 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:
In very general terms only. The hypotheses presented lack detail (see 1b1, below)

Panel Summary:
The primary objective and some hypotheses are not as clear as they should be because some terns are not defined; specifically, "shallow water habitat" is not defined. Project objectives are fairly well linked to ERP strategic goals; however, the linkage to ERP strategic goals 2 and 3 should be better described.

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

Summary of Reviewers comments:
No. The conceptual basis for the engineering aspects are addressed; that of the biological/ecological aspects are not. While the primary objective is to restore "ancestral" features of the Delta, no description or references detailing or describing specific aspects of "ancestral" conditions are provided, although such are readily available with minimal research effort. Instead, generic terms (e.g., "wetlands", "tule marsh") are referred. This is not sufficient. The way(s) in which specific habitat features that will be "created" are matched to "ancestral" features, or situated in a comparable(i.e, ancestral) ecological context is neither described nor justified.

Panel Summary:
No. Ecological attributes, their linkages, and linkages among ecological attributes and anthropogenic stressors (i.e., ecological effects of stressors) are not adequately described. The effects (i.e., benefits) of the proposed restoration actions are not adequately described. For example, the benefits of project actions "targeted toward priority special-status species" (a project objective) are not clearly explained. Only a list of the ecological attributes that "the project seeks to enhance" are presented.

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

Summary of Reviewers comments:

The ways in which re-engineering the project area will address recreational objectives seem clear. The rationale for assuming biological and/or /ecological benefits is fuzzy, and not sufficiently justified. Habitat structure will supposedly be restored to its "historic condition", but what that was, or will be, is not sufficiently described nor documented.

Panel Summary:

The engineering components for Franks Tract and Decker Island and the ecosystem restoration components for Decker Island are well described, well designed, and appropriate. However, the ecosystem restoration components for Franks Tract are not clearly described, and thus potentially not well designed or appropriate. The applicant proposes to restore 45 acres on Franks Tract to historic conditions, stated as tule marsh. But the only approach stated in that paragraph is to increase "self-perpetuating shallow water habitat". How does this restore tule marsh? No planting of tules is proposed in that paragraph. It is unclear if the last paragraph in the approach section regarding tule revegetation applies to Franks Tract, in addition to Decker Island.

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 is clearly a pilot/demonstration project.

Panel Summary:
The applicant states this a pilot-demonstration project. Applying adaptive management criteria, the panel believes that applicant has not justified that this will be a worthwhile pilot-demonstration project. The proposal does not discuss alternative strategies to achieve the project objectives. There is no pre-construction monitoring plan. The post-construction monitoring period is too short to fully (and thus perhaps accurately) evaluate ecosystem responses to restoration actions, and thus may not provide much useful information.

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

Summary of Reviewers comments:
Unlikely - this seems more oriented to enhancing recreational, rather than biological, benefits of the Project area.

Panel Summary:
It is unlikely that this project will generate much useful long term information with the proposed post-construction monitoring period. The proposed monitoring period of three years is too short to fully (and thus perhaps accurately) evaluate ecosystem responses (and thus benefits) to restoration actions. The project will likely generate applicable only to the first few years following construction.

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

Summary of Reviewers comments:
No. Three years is insufficient to evaluate the possible biological benefits of such a project. Many of the animal and plant assemblages that will occupy the modified sites will still be in successional transition after three years. It will not be possible "to determine whether (or not) island creation has (resulted in?) a net increase in fish abundance and terrestrial species both seasonally and annually". There is no discussion of baseline data.

Panel Summary:
No. The monitoring and assessment plan is inadequate for the following reasons:

- there is no pre-construction monitoring and assessment plan; and, no discussion of baseline data,
- the post construction monitoring period of three years is too short to fully evaluate ecosystem responses (and thus benefits) to restoration actions,
- there is no description of the water quality monitoring element (however, all other necessary monitoring elements are included),
- The BACIP approach needs to be better described, including providing references (Only a one sentence description is provided).

Other panel comments: Vegetation monitoring, described in the text, and water quality monitoring should also be listed in Table 1. A positive is the inclusion of project success indicators.

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:
No -see 2a above

Panel Summary:
Data collection: Not scientifically sound or adequate (see 2a response); not as well described as it should be (see 2a response).
Data management, data analysis, and reporting well described, sound, and adequate. One of few proposals in this topic area to discuss statistical analysis of data.

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

Summary of Reviewers comments:
The engineering aspects are.

Panel Summary:
The proposed engineering work is technically feasible. However, overall the project is not scientifically sound due to the insufficient duration of the monitoring program to evaluate ecological responses to restoration actions. Subsidence issues are not adequately addressed.

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

Summary of Reviewers comments:
There does not appear to be sufficient expertise in the biological sciences to properly conduct certain aspects of the proposed work. There is a Fisheries specialist, but no terrestrial animal biologist. Moreover, there is no bona fide ecologist on the team.

Panel Summary:
The team has sufficient expertise in engineering and project management disciplines. However, sufficient ecological expertise may be lacking, especially considering the magnitude of the project ($16.6 million). There appears to be no professional wetland or aquatic ecologist on the team. The lack of ecological expertise is reflected in the inadequacies of the monitoring plan and conceptual model.

5)Other comments

Panel Summary:
The projected cost per acre of this project greatly exceeds the average cost of wetland restoration projects in the Bay-Delta estuary. Considering the likely ecological and information benefits, this is not a cost effective project.

INDIVIDUAL REVIEWER OVERALL EVALUATION SUMMARY RATING AND COMMENTS:

POOR

The proposed work will provide "restored" habitat in a heavily-used recreational area at a cost of about $350,000/acre, with questionable biological benefit. This could hardly be considered sound or cost-effective ecological restoration.

Overall Evaluation
PANEL SUMMARY COMMENTS

The major weakness of the proposal is an inadequate monitoring and assessment plan (see comments under 2a). Other weaknesses include unclear description of the approach for marsh (tule) restoration on Franks Tract and the conceptual model. Furthermore, considering project implementation factors and the likely ecological and information benefits, the project has relatively limited restoration value and is inefficient.

OVERALL PANEL EVALUATION SUMMARY RATING: FAIR