

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

Proposal number: E-206

Proposal title: Peytonia Slough Restoration

1a) Are the objectives and hypothesis clearly stated?

Summary of Reviewer's comments:

One reviewed stated that there was a lack of discussion of overall ecosystem objectives and the recovery of listed species is not well addressed. Inclusion of seasonal wetlands in the plan is not explained well given the high dominance of this habitat type in Suisun Marsh. The other reviewer felt that the project objectives and hypotheses were well described.

Panel Summary:

Project expects to restore tidal marsh function at a specific site and is based on a previous smaller scale restoration effort. Final restoration effort will create approximately 11 acres of tidal wetland of various habitat types. The stated hypothesis is really an objective, not a testable statement.

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

Summary of Reviewer's comments:

One reviewer stated that the conceptual model was sound and that the project will result in suitable wetland habitat.

Panel Summary:

The conceptual model is based on empirical evidence from a smaller scale project. The applicant provides information on the benefits of tidal marsh restoration in this region. However, the ecological responses resulting from the 2.5 acre restoration is lacking. The only ecological attribute described is habitat; no other benefits are elucidated.

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

Summary of Reviewer's comments:

One reviewer stated that the project is very small given the cost involved in completing the restoration. The use of a mitigation bank as part of the overall plan is potentially difficult to implement and may be considered controversial. Emphasis of the project is directed towards relatively generic vegetation and fishery/habitat and not towards listed or rare species. No

mention of Suisun thistle, a potential plant that could be restored in this region. Concerned that the potential credits for a mitigation bank concept may override concern about other types of habitat benefits unrelated to the market.

The second reviewer was satisfied that the project was well designed.

Panel Summary:

The panel is concerned that the project is relatively small in size and whether the project will have regional benefits to species of special concern. The baseline studies are not sufficiently described to understand what type of restoration is appropriate for this site. The design itself is vague in relation to the stated objectives. The actual amount of habitat to be created is still undefined and could lead to significant differences in ecological benefit and cost. The mitigation bank component is innovative; however, no documentation is provided that there will be a demand for this type of mitigation. No guarantee that the repayment will occur.

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

Summary of Reviewer's comments:

One reviewer was concerned that the condition of the underlying substrate has not been evaluated in terms of suitability for tidal marsh restoration. The other reviewer felt that given the small size of the project and the reported success at the adjoining site meant that the project had a high likelihood of success.

Panel Summary:

The site selection has been based on the results from a previous site analysis. It is the only piece of property that they own and will be entirely restored. The plan at this time does not have sufficient detail on how the restoration will be done.

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

Summary of Reviewer's comments:

One reviewer commented that the project will likely provide information for future restoration projects.

Panel Summary:

The panel agreed that information on restoration techniques would be developed. However, there were significant problems with the monitoring program. See below on monitoring.

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

Summary of Reviewer's comments:

One reviewer stated that the budget for monitoring indicated that perhaps only limited monitoring would be conducted. Another reviewer stated that the monitoring will be conducted for five years on various functional components.

Panel Summary:

The proposers have not provided sufficient information on monitoring to determine if the project will meet its any performance criteria. The applicant has provided objectives, but will rely on the Corps monitoring requirements. These may be inadequate to test whether specific stressors have been eliminated or reduced. Concern that 5 year monitoring may not be enough time if the project relies on natural colonization. In the case of fish monitoring, the amount and type of sampling may be greater than required given the limited habitat area. On the other hand, the vegetation monitoring program is not adequately described in sufficient detail to determine if the habitat types being proposed are created.

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

Summary of Reviewer's comments:

One reviewer stated that the proposers do not provide sufficient information on contingency and remedial actions that may be required to deal with soil compaction, undetected contaminants, or unsuitable substrate. A second reviewer felt the data handling methods appear to be sound and reports will be issued annually.

Panel Summary:

No information has been provided on monitoring or reporting plans other than reliance on the standard Corps reporting forms.

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

Summary of Reviewer's comments:

One reviewer stated that since the removal of fill is one component of the restoration, no information is provided on the nature of the underlying substrate and that is suitable for tidal marsh restoration. This could present a significant feasibility problem. The second reviewer had no problems with the proposed approach.

Panel Summary:

Yes; however, specifics remain to be worked out. The cost of restoration construction is estimated, but no information is provided on how that cost was determined and if it is sufficient if the project changes due to environmental review and consideration. No details on how that cost was determined and if it is sufficient to accomplish the restoration effort. Therefore, there is a risk that the project may not be implemented as described.

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

Summary of Reviewer's comments:

The team is well qualified.

Panel Summary:

Team selected is qualified to conduct this work.

INDIVIDUAL REVIEWER OVERALL EVALUATION SUMMARY RATING AND COMMENTS:

POOR. Project is of limited scope and cannot be considered an ecosystem level project. Weaknesses: cost: scale of ecological benefits, regulatory planning deficiencies. Strength: restoration potential.

EXCELLENT. Reviewer had no negative comments on the proposal and considered all elements of the proposal as excellent.

**Overall Evaluation
PANEL SUMMARY COMMENTS**

The baseline studies have not been adequately described and the conceptual model is lacking. There is an assumption that the previous restoration was successful and therefore it can be applied to this additional work. However, there is no demonstration in this proposal that the objectives expected in the earlier restoration have been met and are appropriate to the future restoration effort. In addition, there is no conceptual design to judge the habitat creation for the proposed activity. There is no discussion of environmental review or permits required to undertake the work. This may become a serious constraint and may become a problem in accomplishing the overall project objectives especially since the construction budget appears to be fixed. If less habitat is created than proposed, this might lead to a different result in terms of ecological benefits.

OVERALL PANEL EVALUATION SUMMARY RATING: FAIR