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

Proposal number: 2001-E215 **Short Proposal Title: Biological Restoration Improvements and Monitoring: Phase II**

1a) Are the objectives and hypotheses clearly stated?

Summary of Reviewers comments:
There were differences in reviewer ratings: one reviewer stated that objectives were clearly stated but were confused and inconsistent throughout the proposal; the other reviewer thought that the objectives and hypothesis were scientifically valid and testable but also thought the hypothesis was too closely tied to the proposal's research elements.

Panel Summary:
Yes, but the proposal objectives and hypothesis are poorly articulated and hard to read/understand The comparative basis of the hypothesis (i.e. conditions of reference and restoration marshes) serves as a valid foundation. The hypotheses are helpfully broken down into separate assertions related to water depth, the dynamic nature of habitat values over time, but, again, the writing is too compressed, arcane, and difficult to follow.

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

Summary of Reviewers comments:
One reviewer did not comment of the conceptual model; the other reviewer felt the model was not adequate because it was based on Phase I work in progress which has not been peer reviewed; assertions made in the model, therefore, should not be considered valid.

Panel Summary:
The proposal does an adequate job in presenting the basis for the proposed work and effectively draws on data obtained during phase I. The model provides a substantive basis for formulating the hypothesis that a positive correlation exists between increased population densities of most aquatic animals and the presence of "ponds" adjacent to constructed channels. The model benefits from a diagrammatic model which helps substantiate the basis for the model. The proposal adequately explains the basis for the model and clearly and fairly outlines relevant uncertainties. The panel thought that reviewer's criticism about lack of peer review was not valid, but that the model could have been strengthened by literature citation.

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

Summary of Reviewers comments:
One reviewer did not comment on this specific question, but did offer general comments stating that the project is essentially a research project of high quality that would contribute to long-term monitoring of restored/enhanced tidal marshes. The other reviewer thought the approach was adequate for only some objectives. For other objectives, there was little certainty that the approaches are appropriate.

Panel Summary:
In general the approach is adequately designed in regards to the biological/data aspects of the proposal; however, it could be strengthened in terms of the engineering components of the projects; that is, drawings and maps, as well as specifications, related to levee breaching and pond creation, should be clearer and described in more detail; the maps showing proposed physical modifications, were poor and reflected an overall weakness in this aspect of the approach description. It was difficult to ascertain, for example, how many acres of new "ponds' will be created, etc...In addition, the panel thought that once again, the presentation was confusing, too compressed, and very difficult to follow.

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

Summary of Reviewers comments:
Reviewers thought this was addressed obscurely since the applicant noted that the project is both pilot and full-scale implementation. Could be considered both a research and demonstration project.

Panel Summary:
No. (the panel agreed with reviewers). The level of actual restoration/implementation is articulated rather loosely; page 5 states this proposal could be considered both "pilot" and "large scale," and yet it would be hard to consider this project anything other than a full scale implementation project. The proposal, therefore, could have done a better job in identify project scale. Since it seems to be heavily weighted in research, clearly stating how much actual physical restoration would occur to achieve project goals would have been helpful.

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

Summary of Reviewers comments:
Yes. But a critical review of Phase I would be necessary to ascertain if other types of useful information are likely generated.

Panel Summary:
Yes –given that this project is research based and is being implemented with sound methodologies related to data management and reporting..

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

Summary of Reviewers comments:
Different views expressed by reviewers: One reviewer thought the proposal presented an outstanding level of monitoring and information assessment. The other reviewer answerer "no" to this question, stating that there was not sufficient information and inconsistencies in the proposed sampling design. The reviewer provided examples of this insufficiencies.

Panel Summary:
No. Since monitoring is a focus of this project, more detail –stated in clear and understandable language –was needed.

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:
Reviewers disagreed here. One reviewer felt the plans were more than adequate, while the other considered the statistical analysis not well described and unable to address success of proposed objectives. This reviewer thought that the data management and reporting plans were adequate, however.

Panel Summary:
No, panel agreed with reviewer that suggested data collection was inadequate. Again, language/writing style made review very difficult.

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

Summary of Reviewers comments:
Both reviewers agreed that the proposal was technically feasible, but one reviewer questioned the quality of sampling design.

Panel Summary:
Probably, since some level of success seems to have been shown during the implementation of Phase I. The proposal would have benefited, as already stated, from more detail when describing and illustrating the required engineering components of the project (i.e. creation of ponds, levee breaching).Some panel members questioned feasibility because of the absence of engineering specifics.

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

Summary of Reviewers comments:
One reviewer questioned the qualifications of the team because of the inconsistencies and errors included in the proposal; the other reviewer considered the qualifications of the team as "outstanding."

Panel Summary:
The team is qualified, but the poorly written aspects of the proposal caused some panelist to question applicant qualifications related to reporting and data summarization.

5)Other comments

Panel Summary:
This proposal was poorly written from an editorial perspective. Sentence and paragraph structure made the proposal extremely difficult to review (progress report included was obtuse and hard to follow).

INDIVIDUAL REVIEWER OVERALL EVALUATION SUMMARY RATING AND COMMENTS:

POOR. The conceptual model and sampling design are weak, and the proposed work will not likely meet the stated objectives.

VERY GOOD. Outstanding for scientific quality and scope, but very high cost:benefit ratio for

ecosystem restoration values, particularly in view of previous funding for research on previously established restored marsh/creek systems. The degree to which the selected marsh/creek systems are in need of enhancement or rehabilitation is not clear in the proposal, however. The scope of the research effort appears to have escalated in reaction to the previous phase of funding, rather than in response to essential research questions generated by the first phase. Most of the project cost is due to salary and university overhead costs.

Overall Evaluation
PANEL SUMMARY COMMENTS

Weaknesses: The approach regarding restoration actions is not adequately described (e.g., how will ponds will be built, how many acres will be restored). The monitoring and assessment plans are inadequate; there is insufficient information and inconsistencies in the proposed sampling design.
Strength: Data from research and monitoring will contribute to future similar restoration efforts.

OVERALL PANEL EVALUATION SUMMARY RATING: FAIR TO POOR.