

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

Proposal number: E-200

Proposal title: Ph II- In channel islands

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 hypothesis clearly stated?

Summary of Reviewers comments:

Hypothesis is to test various structures to reduce wave energy; however, wind waves might be more important than boat wakes in causing erosion of these islands and the structures have not been evaluated for both wind and boat wakes.

Panel Summary:

Yes, the project proposes to use biotechnical means to determine if shoreline erosion at the in-channel islands can be reduced. This hypothesis clearly meets one of the ERP goals to protect mid-channel island habitat. Related hypotheses to monitoring methods and the use of the tables provided good documentation of this process.

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

Summary of Reviewer comments:

Reviewer questioned the placement of the wave protection offshore rather than on the island edge itself. Offshore protection may alter hydrology and have an effect on the island itself.

Panel Summary:

Proposal provides good information on the causes for in-channel island disappearance and long-term trends. Proposal outlines the stressors to the system and considers biotechnical solutions to address the symptom. The underlying causes of loss, however, remain. Not enough information was provided on the ecological values of these islands to demonstrate why these particular protection methods would be beneficial.

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

Summary of Reviewer Comments:

There is an potential issue on public safety due to the submerged or near surface shoreline protection structures that may not be visible to boaters.

Panel Summary:

The proposal is investigating unique solutions to slow island loss. These techniques have been used elsewhere, but have not been demonstrated in this situation. It is testing a variety of methods to determine relative effectiveness. The concern with public safety should be addressed in the permitting process for these structures with the Department of Boating and Waterways and/or the Coast Guard.

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

Summary of Reviewer's Comments

No specific information is provided on why these sites were selected. No information was provided on whether the sites encompassed a sufficient size, shoreline length, and range of wave energies. A concern was expressed that the project only addresses wave dampening solutions and does not address ecological issues. Changes in wave climate may have both beneficial as well as detrimental affects on the ecology of these islands. Therefore, the monitoring program needs to be robust enough to examine these more subtle changes in the ecology of these islands.

The project does not address other solutions such as adding more material to the island from dredging activity. The feasibility of undertaking this alternative needs to be addressed as another potential solution.

Panel summary

The panel recognizes that the sites represent willing participants and believes that the sites represent suitable test areas given these constraints. These sites have undergone severe erosion in the past and are typical of in-channel islands in the Delta. There remains a question as to whether or not these areas can be protected given the significant degradation that has already occurred. The panel also understands that this proposal represents one possible solution which may represent a suite of technical approaches to the project.

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

Summary of Reviewer Comments

This project does provide the opportunity to test these particular shoreline protection measures and will result in either acceptance or rejection of this approach. This project represents a natural progression in the analysis of this approach.

Panel summary

Yes, the purpose of the pilot program is to provide information on how best to undertake erosion control at these islands. Proposal did identify uncertainties associated with the project design.

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

Summary of Reviewers comments

Physical and hydrology are better described than biological monitoring. Reference sites have not been determined.

Panel summary

Panel agreed with the reviewer's comment.

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

Plans for data collection, management, and data analysis are not described in this proposal.

Panel summary

Assuming that the monitoring program can be implemented as proposed, the data collection and analysis is adequate. Discussion of statistical analysis is contained in the proposal. However, less information is provided on the biology data collection. Given the interest of this work to a wide variety of participants, the distribution of this information appears adequate.

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

Summary of Reviewer's comments

Expressed concern over some potential problems in shallow waters and with the stability of some features.

Panel summary

The major problem will be maintenance of these structures during the pilot program and the frequency of site visits to assure that the structures are in place and functioning. The work itself can be implemented as the technology is fairly "primitive". The proposers have provided references as the use of these structures elsewhere to support the technical feasibility. However, actual implementation on a larger scale will have to be evaluated after this pilot project.

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

Summary of Reviewer's comments:

Recommended firms are qualified for this work.

Panel summary

Very qualified and much initial work in terms of environmental documentation and permits have already been acquired.

INDIVIDUAL REVIEWER OVERALL EVALUATION SUMMARY RATING AND COMMENTS:

GOOD

The scope is appropriate and the engineering seems sound. The approaches are not completely biotechnical – they also involve booms and rock that affect energies away from the island interface, features which have safety, aesthetic, and possible ecological process considerations. The proposal provides thorough information on construction features, but only outlines of biological monitoring, no baseline information, and no reference site information. Little justification is given as to the recent losses of this habitat, how fast it is occurring, how widespread it is, what may have resulted from chronic boat

wake exposure versus very large events versus effects of the ship channels etc., and why the structural approach is superior to island creation/nourishment with dredged material. Much of this may be known, but not presented or properly referenced by citation in the proposal. Despite these deficiencies, my personal opinion is that the need for preservation of such habitat is a high priority -- know that the ideas are laid out -- a pilot field study is warranted. I support funding of this proposal.

Overall Evaluation
PANEL SUMMARY COMMENTS

Saving these islands by these methods is likely to be expensive in the long-term and not long-lasting. These methods may be stop-gap in approach, but could be effective in certain situations. In addition, the amount of protection that may be needed could be quite extensive in terms of shoreline distance. However, without such pilot testing, knowledge of this approach cannot be evaluated. Additional biological information would be helpful to determine if there are any long-term ecological effects of these techniques. There is an insufficient description of the reference sites.

OVERALL PANEL EVALUATION SUMMARY RATING: VERY GOOD