Draft Individual Review Form

Proposal number: 2001-C203-2 **Short Proposal Title: Restoration of Delta Floodplain Terraces Through Bioengineering**

1a) Are the objectives and hypotheses clearly stated?
The objectives and the hypotheses are very clearly stated. The objectives are focused, practical (able to be met), and follow a logical sequence directly related to the proposal. The hypotheses are also clearly stated at least as far as expectations of the outcome. However, they are not posed in the traditional null hypothesis form, and therefore it is not clear what exactly will be tested nor how the hypotheses will be tested.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?
The narrative conceptual model clearly describes the physical processes behind the nature and causes of the problem, and also describes how the proposed work addresses the problems.

In the Statement of the Problem section is a narrative that describes previous work and research that form the underlying basis for the conceptual model. This narrative references a number of literature citations that provide a basis for underlying assumptions of the conceptual model. In most cases, the referenced literature is cited in the "Cited Literature" section. However, a number of important references germane to the underlying assumptions are missing from this section. Therefore it is not clear whether this literature has been published and to what degree it has been peer reviewed, and therefore to what degree the conceptual model itself has been reviewed. The referenced literature in question includes:
Rosen 1980; Watson 1987; Schiechtl 1994; Kondolf 1981; Knutson 1990; Gleason 1979, and very importantly, Hart and Holm 1998, and Hart and Holm 1999.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project?
The proposed methodology for establishing the energy attenuation devices and riparian plantings is thoroughly addressed in the proposal. However, the section on data management and especially follow-up monitoring is lacking in many details. In fact, a monitoring plan still has to be developed and therefore it is not possible to conclude from this proposal that the overall approach is sufficient for meeting the project objectives or addressing the hypotheses.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?
The applicant's selection appears to be justified. Some prior similar work was completed and the results of that work are being incorporated into the experimental design. However, new areas are being added to this project that have different physical variables than where the earlier work was conducted. This necessitates to some degree a change in project design and therefore qualifies this proposal as a pilot demonstration project.

1c2) Is the project likely to generate information that can be used to inform future decision making?
Yes – the project will generate valuable information related to wave/energy attenuation procedures, as well as information related to the success of different riparian planting methods. This kind of information is likely to be used in the planning and development of other restoration projects within the Delta and river courses.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?
No – the monitoring and information assessment plans are not adequate to assess the outcome of the project. Monitoring plans still need to be developed. (See para. 2 in No. 1b2, above).

2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives?
The data collection, management, analysis and reporting plans are only minimally described. Important details including handling and QC procedures, and basic descriptions addressing who, what, when, how and where questions are not included in the proposal. As such, with the information provided it is not possible to tell whether the data management techniques are sufficient to meet proposed project objectives.

3) Is the proposed work likely to be technically feasible?
Yes – the proposed work is technically feasible. Pilot projects in the Delta by the same contractor but in different areas have indicated success with the proposed work and some literature citations back up this conclusion. However, other literature that could back up the feasibility of the work is referenced, but not cited in the Literature Citation section. (See 1b1 above).

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?
Yes – the experience indicated by the project team is sufficient to help ensure efficient and effective implementation of this project.

Miscellaneous comments

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating** The work being proposed is important for successful restoration of Delta habitats. Valuable information can be learned from this work, which will help future projects. The Principal Investigators appear to be very qualified with appropriate experience to conduct he work successfully. They have presented a good conceptual model, good statements of hypotheses and clear and practical objectives. However, they still need to develop a monitoring and data management plan. Monitoring is very important because of the feedback loop it provides in helping determine the failure/success, strengths/weaknesses of a particular project. Had these and the literature citation section been properly completed, I would have rated this proposal very good to excellent.

- ☐ Excellent
- ☐ Very Good
- X Good
- ☐ Fair
- ☐ Poor