

Individual Review Form

Proposal number: 2001-H210-1

Science-Based Adaptive Management of the Lower American River

1a) Are the objectives and hypotheses clearly stated?

The hypotheses are clearly stated as “that improved temperature, flow, and physical habitat conditions ...will result in increased populations of target species”. The objectives (e.g., protect and restore channel-floodplain connectivity) are also stated clearly. These are both easy to state, and are clearly “Mom and apple pie” to a river system habitat improvement effort.

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

The conceptual models in the proposal are made up of a series of diagrams that again are simplistic statements of well known principles in any habitat restoration efforts. There are some apparent biases in these diagrams in regards to identifying “inadequate harvest management” as the only stressor to “surviving environmental and human disturbances”. Missing is the proposal’s acknowledgement that the continual stressor of permanent blockage of the historic habitat, and constant hydrologic alteration, are large contributors to reduced population productivity. Additionally, floodplain development is not adequately considered as a stressor to recovery of population productivity. The opportunity to address all stressors is limited by the scope of the proposed work.

The proposed work is primarily monitoring by CDF&G of habitat improvement projects. These projects consist of limited adjustments in flow, temperature, and the size and complexity of floodplain habitat conditions. The monitoring will probably be necessary to document any improvement in productivity of the target fish species. The rest of the proposed work is an elaborate dissemination of information by the project proponent to decision-makers and the public.

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

The actual monitoring work is not well defined in the proposal, and seems to take a back seat to all the superlative descriptions of how the information will be used at some point in the future. Lots of inference to adaptive management, refining hypotheses, educational objectives, and analyses by a “Technical Subcommittee” all gloss over the lack of well described monitoring methodologies and peer review of the results.

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

The selection of Watershed Planning as the project type seems to be an error. The project clearly should be classified as a Research/Monitoring Project. The primary task is to conduct monitoring of projects and actions intended to benefit the referenced fish species. There is no clear explanation how the monitoring results would be used to manage the watershed any differently than is currently done in the limited geographic area defined by the proposal. Watershed stewardship is not the term normally used when the project is restricted to the active channel, within relatively confining levees, below a major dam.

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

The project is likely to generate information useful to informing decision-making entities. The elaborate system of interpreting and refining the results of the information generated by the monitoring by CDF&G may greatly reduce its usefulness.

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

The monitoring and assessment plans are not adequately defined to enable an assessment of the project outcome. The preponderance of statements like “to develop projects based on a solid foundation of knowledge..., hypotheses will be refined from the concepts of ecosystem processes and stressors..., and Specific sampling, analytical, planning and construction procedures for each project will be developed at project definition...” do not provide a clear definition of the methodology.

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

Data collection, data management and data analysis are not well-described in the proposal and a decision on their adequacy is impossible to make by simply reviewing the proposal. CDF&G and the Technical Subcommittee “will collaborate on a final report summarizing and analyzing the results of the monitoring” How a decision will be made and who has the final say in the report are not stated. The reports to be produced are clearly defined.

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

Conducting an adequate monitoring program to develop a firm understanding of the population productivity influences of habitat manipulations is technically challenging. It is possible that by reducing the scope of the monitoring to test some very specific hypotheses, it could answer those specific technical questions. There is always going to be uncertainty in the understanding of causal relationships in complex biological systems such as the Lower American River.

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

The project team of the Water Forum is qualified to effectively implement the proposed project. Looking at the budget the term efficiently does not come to mind.

Miscellaneous comments

The \$¼ million for the service contract for Fisheries Technical Consulting each year appears excessive. The monitoring portion by CDF&G has acceptable costs, but the overall project is heavy with additional expenses for an elaborate and unnecessary reporting process. The roles of the CDF&G and the Technical

Subcommittee in developing final reporting of results of the monitoring is not acceptably defined. Without clear definition of the process by which “collaboration” will result in analysis of monitoring and the presentation of results in final reports the project is suspect.

| Overall Evaluation Summary Rating | Provide a brief explanation of your summary rating |
|--|--|
| X Fair | The monitoring is clearly needed to assist in developing a better understanding of the results of habitat manipulations intended to benefit aquatic species. A number of other aspects of the project have the possibility of compromising the usefulness of the project and add greatly to the costs. |