

Draft Individual Review Form

Proposal number: 2001-K213-1

Short Proposal Title: Battle Crk. Monitoring

1a) Are the objectives and hypotheses clearly stated?

The proposal provides considerable background on the Battle Creek Restoration Plan, which is valuable to know, but is confusing as to what the specific objectives of the proposed monitoring program are compared to those of the larger Battle Creek Salmon and Steelhead Restoration Program.

The linkage relationships of the proposed monitoring tasks to the stated list of hypotheses is not always clear. For instance, brief descriptions of approaches, timelines, and assessment responses follow only three of the nine hypotheses presented as being addressed by this proposal.

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

The conceptual model establishes the need and general relationship for the proposed monitoring program relative to an adaptive management plan for the Battle Creek Restoration Program and the expectation that responses of fish populations should reflect habitat restoration. A list of generalized uncertainties associated with the Restoration Program is provided, but the list of hypotheses to be tested is not clearly linked to the listed uncertainties as would be the convention of adaptive management as currently practiced in natural resource management.

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

In as much as the approach is described under the proposed scope of work, the raw data gathered from adult spawning immigrant censuses, spawning grounds surveys, and juvenile emigrant estimations will provide necessary information for generating analyses useful to assessing fish population responses to habitat modification (provided sufficient information is available prior to the implementation of restoration measures - not fully described in the proposal). However, no descriptions of the type of analyses that will be performed are provided in the proposal. So, I have to assume that this proposal will only provide the most basic raw data with little analysis of the potential fish population responses.

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

The applicant has generally justified the value of monitoring the abundance of adult and juvenile salmonids in Battle Creek, however, explanation of specific analyses to be conducted now or in the future is lacking,

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

In general, the types of data to be collected by this proposed monitoring program will be useful for analyses of fish population responses that may be related to habitat modifications resulting from restoration in the Battle Creek watershed. However, the analyses that would be required for decision-making to support adaptive management within the Battle Creek Restoration Program will not be provided by the proposed scope of work as described. Stock-recruit and time series intervention

analyses, population viability analysis (PVA), and other analyses and population modeling that would be required for adaptive management decisions are not included in this proposal. Although, the proposal would provide the basic raw data for such analyses.

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

The basic mechanics of censusing adult and juvenile salmonids and spawning grounds surveys for population assessments are adequate, but the hypotheses and analytic frameworks are not sufficiently constructed for generating the actual statistical assessments to evaluate the Battle Creek restoration projects' performance (see previous comments).

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

Data collection and management plans described are appropriate for obtaining useful information on adult and juvenile salmonid populations. The applicant has the technical capability, facilities, and qualifications to gather and report the basic population information described.

However, the specific analytic framework and types of analyses required to assess Battle Creek Restoration projects is not sufficiently described by this proposal. The trigger criteria and event thresholds are not adequately linked with specific analytic results. While such analytical linkages may be described in the draft Battle Creek Restoration Plan Adaptive Management Plan (AMP), that document was not available for review concurrent with this proposal review. Regardless, no reference to the draft AMP document is provided where it would be expected if it contained the aforementioned linkage descriptions.

The levels of statistical certainty, or the approach to establish them, required to assess when population thresholds have been achieved are not described by the proposal. Accordingly, it is not possible to determine if the expected time frames of 5 to 10 years for fall chinook and steelhead or 20 to 30 years for winter and spring chinook are realistic for determining effects of restoration on these populations.

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

The basic collection of salmonid population data and abundance estimation is technically feasible using the proposal's approach. Contingencies are not adequately described, (i.e., operations during extreme storm and turbidity events - and analytic approach to such events). Nor are the analytical descriptions adequate to determine if the proposed work will yield information immediately useful for adaptive management decision-making.

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

The proposed project team has the professional qualifications, facilities, and demonstrated experience to gather the proposed data on salmonid populations as described.

Miscellaneous comments

This proposal is extremely difficult to “wade through” to determine the specific objectives and hypotheses addressed. The requested 1 - 3 years’ funding from CALFED is not sufficient to generate the quantity and quality of data or analysis needed to evaluate the described restoration in Battle Creek *in total*. This will require a very long term commitment of funding and effort as proposed. Some modification of overall approach and experimental implementation and evaluation of various habitat restoration measures may allow better resolution of the large number of uncertainties associated with this effort. Should CALFED fund such a program, overall annual cost efficiencies should be expected and demonstrated by the grantee.

**Overall Evaluation
Summary Rating**

Provide a brief explanation of your summary rating

Excellent
Very Good
Good

Data would be useful but, the proposal lacks sufficient detail on analysis and linkages to hypotheses are ambiguous. Specific elements of restoration that would be tested and how the data would be analyzed to achieve such tests (experimental implementation) would raise the value of this proposal. Demonstration of annual improvement of efficiency of monitoring accruing cost effectiveness also would raise value.

Fair
Poor