Draft Individual Review Form

Proposal number: 2001-K220-1 **Short Proposal Title:** Reintroduction of salmonids in CV headwaters

1a) Are the objectives and hypotheses clearly stated?

The objective and hypotheses are clearly stated in the proposal. The objective – provide technical information to inform the debate over investing restoration dollars in upper watershed areas as opposed to downstream reaches of rivers, in particular instances – is tackled from a cost-benefit, risk assessment perspective, which is appropriate, although the proposal does include tasks for assessing political and social issues associated with such potential action. The applicant includes detail regarding the types of data to be analyzed in testing each of the five hypotheses and recognizes the need to look at data from outside the state as a way of broadening perspective on the issue of reintroducing salmon and steelhead into upper watershed areas above the major dams in the Central Valley watershed.

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

Yes, in a very simplistic manner. The applicant uses a graphic to show how the construction of major dams in the CA disconnected salmon and steelhead from the bulk of their spawning and rearing habitat resulting in population declines, and how fish passage at these projects would significantly increase populations. The proposal identifies the need to survey, review, and analyze biological, hydrological, physical information regarding habitat conditions upstream of the major dams, the flow characteristics, and pertinent information about the dams and diversions and existing fish passage structures. Also, they propose to review similar information and success stories and lessons learned from the northwest where passage has been used to improve sustainability of fish populations.

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

Yes, the approach is well thought out and logical, however the ERP's focus is on the restoration of habitat in the Bay-Delta watershed downstream of the major dams. The limitation to success in getting to the evaluation of the most promising systems where reintroduction would result in benefits to salmon and steelhead populations will be in the lack of sufficient or any data on upstream habitat conditions, flow data, information on diversions, etc. Overall, the proposed work would provide insight into the issue of reintroduction upstream of the major dams that would likely be very useful when evaluating potential dam removal projects in the future.

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

Yes – it is clearly appropriate for the proposed work to take the form of a research project as it entails surveying literature and data and generating reports, and convening stakeholder groups. There is a high degree of uncertainty around the success of using fish passage technologies to reintroduce fish upstream of large dam and diversion projects. Each facility is different and will require very specific hydrologic and engineering evaluations, and well as biomechanical studies to determine what if any technology is appropriate prior to application.

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

Yes, because the project will cobble together information on upstream habitat conditions which either doesn't exist or isn't current. It will also examine the potential of using fish passage technologies of various sorts at major projects in CA which is also an analysis that I don't believe has been done. Some of this information may be useful in evaluating the pros and cons of dam removal projects (on smaller dams) around the state.

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

This is a research project and as such there is no monitoring plan.

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

Yes and no: The proposal does not specifically describe how data will be collected or analyzed. It appears to make the assumption that the data needed to perform the analysis will be available. This is likely true as far as information about the dams themselves, and Harza likely has access to information about fish passage use in other regions, but the biological information is a more difficult issue. Data management will be handled by Harza and made available to the public at the request of CALFED. Several reports will be generated that will be made available to the public on the PCL website.

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

See response to comment 2b) above.

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

Yes, Harza has produced many technical reports on fisheries and water projects around the country. PCL has extensive experience in working with stakeholder groups and in assessing political sensitivities.

Miscellaneous comments

Overall Evaluation	**Provide a brief explanation of your summary rating**
Summary Rating ☐ **Good**	The proposal is well written and follows a logical approach, and the project team seems well qualified to do the work. Limitations to its success, however, may come in the form of unavailable biological and flow data, and general political resistance at the local level