

Draft Individual Review Form

Proposal number: 2001-K209-2

Short Proposal Title: Estimating abundance of juvenile winter-run Chinook w/comparisons to adult escapement

1a) Are the objectives and hypotheses clearly stated?

Yes. The primary objective is clearly stated: to obtain juvenile production indices for winter-run Chinook above Red Bluff Diversion Dam and to correlate those indices with estimated escapement from adult counts of passage at RBDD and carcass counts. This information is used to determine the juvenile production estimate (JPE) for winter run from which is calculated the allowable take at the SWP and CVP facilities, and therefore these methods fall under a great deal of scrutiny.

The hypotheses to be tested are also clearly stated and are very specific. There are six hypotheses and they appear in pairs. The first two relate to whether or not the RBDD JPE correlates with in-river estimates of juvenile abundance based on rotary screw trap data. The second set relate to whether or not the carcass JPE correlates to in-river estimates of juvenile abundance based on rotary screw trap data. It should be extremely easy to determine whether these are proved or disproved. The last pair, on the other hand, relates to whether in-river estimates of juvenile abundance have increased over time (3 yrs) as a result of the implementation of restoration actions by CVPIA, AFRP, and CALFED. This will be much more difficult to prove given that there is a cumulative effect of the many restoration actions that have been implemented upstream of RBDD and little development of cause/effect relationship between specific projects and population abundance.

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

The conceptual model is excellent. The model identifies the desired outcome of decreasing scientific uncertainty relative to JPE and setting 2% incidental take limits which should lead to better informed resource decisions.

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

Yes, the approach appears to be well-designed and well-thought out and should meet the project objective. However, my only reservation is that trap efficiency during high flow periods will be low thereby introducing error. Biological statisticians have reviewed the statistical methodology.

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

Yes, this is a monitoring, assessment and research project. The field monitoring described in the proposal should further inform the decision-making process and should provide information useful for evaluating the cumulative effects of restoration actions targeted at winter-run upstream of RBDD.

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

I would think that this project would produce very useful information due largely to the fact that JPE are highly scrutinized due to the fact that they form the basis for take at the facilities. It is important that JPE's be as accurate as possible so decisions can be made based more on sound science and less on judgement. Annual escapement is currently estimated by expanding/extrapolating an abbreviated count of adults passing RBDD and developing an in-river estimate using carcass information, and several assumptions related to mortality associated with physical and biological factors. This has lead to large errors in developing JPE which is what the project aims to correct.

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

NA

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

Yes, data collection will consist of RST data for captured emigrating winter-run juveniles, as well as on-going efforts to collect adult passage data at RBDD and carcass counts. It is assumed in the proposal that these latter two are understood, as the methods are not described. Data management, etc. will be via the IEP website real-time program and the data will be entered electronically on a daily basis with certain QA/QC procedures.

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

Yes, the project builds on data collected and knowledge gained by the FWS staff since 1981 looking at juvenile salmon. They have been monitoring winter-run juveniles with RSTs since 1994 at RBDD and know the physical and hydrologic characteristics of the river at RBDD and can fish multiple traps within a transect across the river. They have also developed a sub-sampling design that allows them to fish the river under high flow conditions (excess of 60,000 cfs).

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

Yes, Jim Smith and the FWS staff in Red Bluff have extensive experience conducting these types of studies and analyses in the Sac River and tributaries.

Miscellaneous comments

Overall Evaluation	Provide a brief explanation of your summary rating
Summary Rating	The proposal is well written and scientifically sound. If the approach is successful, the information generated should improve the decision-making process relative to developing the take limit for winter-run in the Delta.
X Excellent	
