



Independent Scientific Review Panel
for the Northwest Power & Conservation Council
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Memorandum (ISRP 2010-37)

November 12, 2010

To: Bruce Measure, Chair, Northwest Power and Conservation Council
From: Eric Loudenslager, ISRP Chair
Subject: Follow-up Review for the Columbia River Estuary Study Taskforce's proposal Estuary Habitat Restoration proposal (#2010-004-00)

Background

This is a follow-up review of the Columbia River Estuary Study Taskforce (CREST) Estuary Habitat Restoration proposal (#2010-004-00). The intent of this proposal is to continue CREST's effort in developing, designing, and constructing on-the-ground habitat restoration actions to benefit threatened and endangered salmonid species in the Lower Columbia and Estuary, specifically addressing the 2008 BiOp RPA 37, *Achieving Habitat Quality and Survival Improvement Targets*.

The ISRP previously issued a final report ([ISRP 2010-23](#)) and a response request ([ISRP 2010-9](#)) for this proposal. The ISRP found that the proposal augmented with the response did not meet scientific review criteria. On July 26, the Bonneville Power Administration convened a teleconference between CREST and the ISRP. On August 27, 2010, the Council forwarded CREST's follow-up material to us and requested our review. CREST's submittal included a cover letter, a BPA estuary program overview, and a CREST monitoring overview. We did not begin this review until mid-October because we were fully scheduled conducting the Artificial Production and Research, Monitoring, and Evaluation Category Review.

Recommendation

Does Not Meet Scientific Review Criteria

Comments

No substantial new information was provided in the follow-up response. Most of the material provided was in fact provided by BPA in various documents which give an overview of estuary work. Very little narrative was provided by CREST.

CREST is one example of an umbrella-type organization involved with estuary activities and used by BPA as facilitators to find restoration sites, prescribe restoration actions, and subcontract

the work to environmental engineering firms and partners. There is often insufficient scientific content in such proposals for a science-based review.

Under this particular proposal, CREST may do some limited monitoring (at sites selected by LCREP/BPA as mentioned in the response). However, there does not seem to be any substantial application of the scientific method to their activities. Efforts by the ISRP to obtain sufficient details from them regarding methods and reporting have been unsuccessful thus far.

Specifically, the proponent provided a brief summary of their habitat restoration effectiveness monitoring work in the Columbia River estuary instead of the response that the ISRP requested in the form of (1) a revised proposal and (2) a point-by-point response to the ISRP concerns. In their brief response, the proponents made only general statements about their effectiveness monitoring methods, e.g., “Ecological benefits are quantified by monitoring biological and physical parameters. Pre-and post project fish community, fish prey utilization and availability, vegetation, water quality, sediment accretion and channel morphology monitoring...” The methods used to quantify these parameters were not adequately explained. Positive statements about the results of their habitat restoration activities were not supported by data, except for two bar charts showing relative abundance and seasonal distribution of salmonids observed at Fort Clatsop South Slough before and after restoration. The sampling design is inadequate for a statistically defensible BACI monitoring program.

The scant evidence provided is insufficient to convince the ISRP that the restoration is successful since the number of salmonids observed at the site is very low in both pre- and post- restoration years and the time scales of observations differ. The information presented is insufficient for the ISRP to scientifically evaluate whether the apparent one-year increase in relative abundance of salmonids is related to restoration activities, differences in methodologies between years, or some other factors not related to habitat restoration. The appearance of non-native, invasive pumpkinseed sunfish in the post-restoration fish community raises concern. Pumpkinseeds are widespread throughout the Columbia River Basin and can undoubtedly move into standing water areas with ease. Do the risks of increasing habitat for invasive species outweigh the benefits to salmonids for particular sites?