



FISH PASSAGE CENTER

847 NE 19th Avenue, #250, Portland, OR 97232

Phone: (503) 833-3900 Fax: (503) 232-1259

www.fpc.org/

e-mail us at fpcstaff@fpc.org

MEMORANDUM

TO: FPAC

FROM: Michele DeHart

DATE: June 9, 2016

RE: AFEP Proposals for 2017

At your request, we have reviewed some of the proposals presented to AFEP on May 26, 2016. These proposals are for research that will be conducted during 2017. Overall, the lack of detail in the provided Preliminary Scope of Work regarding study design and methodology preclude an actual evaluation of the proposed work. Two proposals for work in 2017, however, require further consideration before approval by fisheries managers. Our comments on these proposals are provided below.

Bypass Selectivity Evaluation (BPS-W-13-1)

This study proposes to use “historic data” to evaluate the presence of bypass selectivity and its potential contribution to the lower SARs observed in bypassed individuals. On June 27, 2013, researchers and fisheries managers attended a one-day workshop in Portland, Oregon, to discuss the issue of bypass selectivity. A number of concerns were raised regarding the applicability of bypass selectivity studies. None of these are addressed in this proposal, which is especially vague and limits the description of analysis to “analyze pertinent data.” Consequently, previously stated concerns remain appropriate and include:

- Changes in the construction and operation of bypass systems make older studies and data inapplicable to the current hydrosystem configuration.
- The effects of migration through the hydrosystem will mean that the fish condition at the point of bypass (or avoidance of bypass) will not necessarily be the same as the size and condition of the fish at the point of tagging or sampling, confounding results.

- The type of data to be used for the analysis will significantly impact the conclusions. Attempts have been made to use JSATS-tagged smolts originally tagged as part of performance testing or other monitoring projects in the basin, but the minimum size limit of 95 mm means that a portion of the run-at-large is not included in the analysis. A large number of smolts are PIT-tagged at Lower Granite, but managers have expressed concerns about using fish collected in a bypass to evaluate bypass effects. None of these concerns are addressed in the proposal.
- The management applications of this study are unclear, and no consideration has been given for what will be considered biologically significant results. The proposal is too vague to evaluate what it will contribute to our understanding of the effects of bypass systems.

Post-Construction Evaluation of Adult Ladder Temperature Differential Reduction (ADS-W-17-01)

This study proposes to radio-tag adult Chinook and sockeye at Ice Harbor Dam, release them into the Little Goose tailrace, and observe their behavior through the Lower Granite ladder and reservoir. We have significant concerns regarding the tagging at Ice Harbor, including:

- The proposal is unclear about the use of PIT-tagged adults in the study group. The collection, handling, and radio tagging of previously PIT-tagged fish from other studies could compromise the ability of those studies to estimate adult survival or Smolt-to-Adult Return rates (SARs) above Ice Harbor Dam. For example, sockeye adults returning in 2017 are most likely to be from out-migration years 2015 and 2016. Over these two migration years, approximately 160,000 Snake River sockeye juveniles were PIT-tagged and released above Lower Granite Dam. Of these, approximately 150,000 (94%) were released as part of the Comparative Survival Study (CSS) with the objectives of estimating SARs from Lower Granite Dam (as juveniles) to Lower Granite Dam (as adults) and adult survival from Bonneville Dam to Lower Granite Dam. The proposal should explicitly state that the ability to detect PIT-tagged adults at the Ice Harbor trap will be used to exclude previously PIT-tagged fish from the Ice Harbor trap in order to avoid impacts to other studies like the CSS.
- Trap protocols should clearly show how, when targeting sockeye and Chinook for tagging, bycatch of other species and PIT-tagged fish will be excluded from the trap. As stated above, any collection, handling, and radio tagging of previously PIT-tagged fish could impact the objectives of these studies.
- Given 10% mortality between Ice Harbor and Lower Granite Dams for radio-tagged sockeye in 2013, it is unlikely that tagging 100 sockeye will provide a sufficient sample size for the analyses proposed. Without confidence that the study will produce data usable for management, the large amount of handling required of a limited stock, and impacts to other species are cause for reservation about approving this study.
- This study is designed specifically to understand the effectiveness of temperature modifications made at the Lower Granite Dam ladder. Tagging is proposed to take place between June 1 and August 31. This time period will cover a large range of

temperatures, and how tags will be distributed across that temperature range will affect the applicability of the study. Managers have expressed concerns about trapping sockeye at high temperatures due to increased stress and handling mortality. However, if tagging only occurs at low temperatures, results from this study are unlikely to provide relevant information on these Lower Granite Ladder modifications at high temperatures, particularly those temperatures that these modifications were designed to address.