SOA 2014–03

Priest Rapids Coordinating Committee's Hatchery Subcommittee
Statement of Agreement

Regarding NTTOC Objective Finalization

Submitted to PRCC Hatchery Subcommittee: September 11, 2014
Approved by PRCC Hatchery Subcommittee: September 17, 2014

Statement

The Priest Rapids Hatchery Sub-committee (HSC) agree that that evaluation of Objective 12, included in the Monitoring and Evaluation Plan for PUD Hatchery Programs 2013 Update, has been completed based on the results and identified limitations described in the *Ecological Risk Assessment of Upper-Columbia Hatchery Programs on Non-Target Taxa of Concern* June, 2014. Should new information become available, the HSC agree to assess the suitability of the data as it relates to conducting future NTTOC evaluations as a regional objective including Douglas, Chelan, and Grant PUDs; WDFW; USFWS; CCT; NMFS; and YN.

Background

The NTTOC ecological risk assessment was developed as a regional objective that would be addressed by collaboration between the Chelan County PUD, Douglas County PUD, Grant County PUD, Washington Department of Fish and Wildlife (WDFW), United States Fish and Wildlife Service (USFWS), Confederated Tribes and Bands of the Yakama Nation (YN), and Confederated Tribes of the Colville Reservation (CCT). In 2008 the Wells HCP, Rocky Reach HCP, Rock Island HCP Hatchery Committees, and the Priest Rapids Hatchery Sub-Committee agreed to an approach to evaluate the potential effects of hatchery programs on non-target taxa of concern (NTTOC). The committees originally planned to convene a panel of experts to conduct a preliminary evaluation of the potential effects of Plan supplemented species on NTTOC. At the October 15, 2008 Hatchery Committees meeting, the members agreed to convene an expert panel to conduct a preliminary evaluation of potential effects of supplemented Plan Species on non-target taxa using an approach similar to that used in the Yakima Basin (Pearsons and Hopley 1999; Ham and Pearsons, 2001). The Committees agreed to convene the panel in spring or early summer 2009, and focus this initial effort on HCP Plan Species and the two non-Plan Species, westslope cutthroat trout and lamprey. The Committees identified species interactions, containment objectives for non-target species, and fisheries professionals who possessed the expertise to contribute as panel members. However, this expert panel was never assembled, and instead the Committees directed the Hatchery Evaluation Technical Team (HETT; a work group composed of PUD, agency, tribal, and consultant biologists) to pursue assessment of the hatchery programs potential effects on NTTOC.

The HETT evaluated methods to conduct a risk assessment on NTTOC, and proposed using a combined modeling and a Delphi panel approach, whereby the modeling results would be compared and correlated with the Delphi panel results. The HETT identified the PCD Risk 1 model (Busack et al., 2005;

Pearsons and Busack, 2012) to conduct the modeling evaluation. The PCD Risk 1 model is a data intensive, individual-based stochastic model. The HETT determined that the assembled data to be used as inputs for the PCD Risk 1 model would also serve to provide expert panelists the necessary data for them to conduct risk assessments. Hence, the HETT embarked on an extensive effort to gather, organize, and extract the required data from existing datasets, literature, and biologists familiar with the programs and/or particular NTTOC. Ultimately the input data were assembled in a relational database that allowed the data to be output in user-friendly formats for modeling or Delphi panel use. The database also served to hold the modeling results, which could be extracted and summarized as needed.

A report titled *Ecological Risk Assessment of Upper-Columbia Hatchery Programs on Non-Target Taxa of Concern* was drafted in 2013 and finalized in 2014, which included the modeling results to date. The results in the report represent a very extensive effort to model the risk of all the upper Columbia hatchery programs for the identified NTTOC for which data and model runs were available.

References

Busack, C. A., K. P. Currens, T. N. Pearsons, and L. M. Mobrand. 2005. Tools for evaluating ecological and genetic risks in hatchery programs. Final report to Bonneville Power Administration (project 2003-058-00, contract BPA00016399).

Ham, K. D., and T. N. Pearsons. 2001. A practical approach for containing ecological risks associated with fish stocking programs. Fisheries 25(4):15-23.

Mackey, et al. 2014. Ecological Risk Assessment of Upper-Columbia Hatchery Programs on Non-Target Taxa of Concern. Final Report to HCP Hatchery Committees.

Pearsons, T. N. and C. A. Busack. 2012. PCD Risk 1: A tool for assessing and reducing ecological risks of hatchery operations in freshwater. Environmental Biology of Fishes 94:45-65. DOI:10.1007/s10641-011-9926-8.

Pearsons, T. N., and C. W. Hopley. 1999. A practical approach for assessing ecological risks associated with fish stocking programs. Fisheries 24(9):16-23.