

Priest Rapids Coordinating Committee Hatchery Subcommittee
Statement of Agreement

**Geochemical Analysis of Scales and Fin Rays to Identify Chinook Salmon Populations in the
Wenatchee Basin Using Inductively Coupled-Mass Spectrometry**

Submitted to PRCC Hatchery Subcommittee: July 2, 2012

Approved by PRCC Hatchery Subcommittee: July 6, 2012

Statement

The HSC agrees that a study to evaluate the effects of pelvic fin sampling on survival and maturation of spring Chinook salmon from the Chiwawa River supplementation program is consistent with ESA permits and recovery objectives and should be conducted in 2012 provided that funding is available. The study details can be found in the Addendum to the scope of work for the above titled project, which was discussed during the PRCC Hatchery Subcommittee meeting on June 21, 2012. The project will involve the capture of 80 surplus hatchery origin Chiwawa River adult spring-run Chinook at the Chiwawa Trap, with subsequent transfer to the Chiwawa Ponds. The fish will be divided into two equal number groups, and one group will be fin clipped at the base of the left pelvic fin. The fish will be held in the Ponds until early August at which time they will be checked on a weekly basis to determine maturation status and examined for the presence of saprolegnia at the site of the fin clip and from other injuries arising from capture, handling and holding. Mature fish will be live spawned and released back into the holding ponds for an additional 1-2 weeks (females and males, respectively) to evaluate post-spawning survival. A second fin ray sample will be collected from each fish at or near the end of the study to determine if there has been change in the geochemical signature.

Background

Spring Chinook salmon in the White River, Chiwawa River and Nason Creek are within the UCR spring Chinook ESU and listed as endangered under the ESA. To assist managers in the recovery of this ESU, Battelle is conducting geochemical analyses of tissues from juvenile and adult salmon with the goal of developing tributary-specific signatures that can be used to identify the natal stream(s) of natural origin salmon for monitoring and management purposes. Although non-lethal methods of sampling (e.g. fin rays) have been used successfully in adults of other salmonid species, information on the effects of such sampling for spawning Chinook salmon is lacking. This has raised concern about potential effects of fin ray sampling on survival, maturation and gamete deposition of natural origin (NO) adults returning to the Wenatchee Basin, and has prompted a recommendation to conduct a preliminary study to evaluate the potential impacts. The original study was modified to determine whether and the extent to which these potential effects are manifest in response to fin ray sampling. Sampling and holding surplus hatchery fish in the Chiwawa Ponds will ensure sufficient data are collected to complete the geochemical analyses and provide for evaluation of sampling effects in a controlled environment.