

SOA 2009-2

**Priest Rapids Coordinating Committee Hatchery Subcommittee
Statement of Agreement on
Mass Marking Type for Grant PUD's Hatchery Programs**

Submitted to PRCC Hatchery Subcommittee: January 22, 2009

Approved by PRCC Hatchery Subcommittee: Not Approved - March 19, 2009

Statement

The Hatchery Subcommittee of the Priest Rapids Coordinating Committee (PRCC) collectively agrees that the mark applied to all (100% marking) Priest Rapids Hatchery produced fall Chinook for the purposes of making them identifiable as hatchery fish should be the adipose fin clip (see SOA 2009-1). This document is intended to be a living document and subject to change as new information becomes available; consequently a review of this policy is suggested after data are available from four years of adult returns.

Background

Two alternatives have been considered for full (100%) marking of the fall Chinook production at PRH: clipping their adipose fin or thermal marking of their otolith. There are several reasons for 100% marking of fish in order to identify them as hatchery origin, including:

- estimation of the proportion of hatchery fish in the natural spawning population,
- selection of appropriate broodstock for the hatchery, and
- identification of juvenile fish as hatchery origin for study of the interaction between juvenile hatchery and natural origin fish in the Hanford Reach as well as areas further downstream and in the ocean.

While either mark can be applied with little or no error and would appear to satisfy these requirements, there are several important distinctions between the two marks. The adipose clip is a visible mark, allowing biologists/hatchery staff to rapidly determine the mark status of either juvenile or adult fish without killing the fish and dissecting the mark. In addition, the adipose clip allows for real-time (daily) adjustments to hatchery broodstock management (key to implementation of the Hatchery Scientific Review Groups broodstock management recommendations for achieving PNI as describe in the PRH M&E Plan). The otolith mark is not a visible mark, consequently the HSRG did not recommend its use. Retrieving the mark requires dissection to retrieve the otolith, followed by preparation and analysis of the otolith under a microscope. This process must be carried out on all fish in question, in order to determine whether they carry the mark and are hatchery fish, or lack the mark and are therefore of natural origin. The need to kill and dissect fish to determine origin (hatchery /natural) prevents its use as a hatchery broodstock management tool. The adipose clip can also support mark selective fishing techniques, when state and tribal harvest managers agree on their suitability. Mark selective fishing on fall chinook in the Hanford Reach is a tool for managing the proportion of hatchery fish in the natural spawning population, as well as harvesting surplus hatchery fish while protecting the natural spawning escapement in low productivity years.