

## **Yakima River Fall Chinook Supplementation 2008-09**

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The goal for the YKFP Fall Chinook program is to supplement and enhance the Yakima River Fall Chinook populations. Since 1998, rearing strategy for our in-basin hatchery fish has been the focal point for our supplementation program. From BY1998-BY2004, two treatment methods (accelerated vs. conventional) were compared to determine which treatment would yield the best smolt survival to McNary Dam. The accelerated treatment dominated in all release years except one. In BY2005, the in-basin program was shifted to an accelerated rearing program.

In BY2006 to further investigate optimal rearing strategies, two new experiments were implemented: 1) Using our in-basin stock, we compared a group of the accelerated sub-yearlings (BY2007) versus a group held to a yearling release (BY2006) and 2) Using our out-basin Little White Salmon (LWS) stock, we compared a group of 500,000 brought in as eyed eggs and reared under accelerated conditions versus the remainder of the group, 1.2 million, that comes in as pre-smolts reared conventionally with final acclimation at Prosser Hatchery. Both experimental groups were monitored using PIT tags. The 2008 release of yearlings out-performed the accelerated sub-yearling releases. The LWS accelerated fish also out-performed their conventionally reared cohorts in the 2008 release. The 2009 results of both experiments are pending releases.

Redd surveys of fall Chinook adults returning to the Yakima River were conducted above Prosser Dam between mid-September and early November. A total of 201 redds were found in the Yakima River mainstem and 46 redds were also located in the Marion Drain.

In the fall of 2008, the Yakama Nation obtained early-run (summer) Chinook green eggs/milt from Wells Hatchery (Washington State Department of Fish and Wildlife). The objective for this project is to initiate investigation of the feasibility of establishing an early-run fall Chinook population in the Yakima River, with the goals being to:

- 1) Develop a naturally spawning adult population in the Yakima River between Sunnyside Dam and Roza Dam, and in the lower Naches River from the mouth to the Tieton River, and,
- 2) Increase the number of natural-origin returning summer-run adults in the lower Columbia, Zone 6, and the lower Yakima River contributing to harvest augmentation for both the tribal and sports fishery.

Approximately 200,000 eggs were fertilized, incubated and reared at the Yakama Nation Prosser Hatchery. Final acclimation is at the Stiles acclimation pond, located in the lower Naches River. Upon release, these fish will be monitored using a combination of either a PIT tag or coded wire tag only.