

## **YAKIMA RIVER COHO RE-INTRODUCTION FEASIBILITY STUDY**

TODD NEWSOME; *Yakama Nation Fisheries*

Smolts were released volitionally on April 21, 2008. Approximately 904,714 coho smolts were released from the four acclimation sites Easton and Holmes in the Upper Yakima River and Lost Creek and Stiles in the Naches River. Approximately, 20,000 coho were pit tagged to monitor survival. Summer Parr released in Big Creek, Reecer Creek, Wilson Creek, South Fork Cowiche Creek, Nile Creek, and North Fork Little Naches also migrated out in 2008.

The 2008 migration showed average success. The Yakima Coho (In-Basin Brood) showed higher survival rates to McNary Dam than the Eagle Creek Coho (Out-of Basin), but had higher pre release mortality. This is presumably due to the pit tagging time difference. Eagle Creek coho are generally pit tagged in the late winter and Yakima Coho are tagged as early summer parr, therefore they have a whole year to carry the tag before release. Survival Comparison among sites ranged from 17% at Easton to only 12% at Holmes. In the Naches system, Stiles and Lost Creek showed nearly 38% survivals for both in basin and out of basin coho. Summer Parr survival was significant with South Fork Cowiche and Reecer Creeks posting the highest survival at nearly 30%

Approximately, 300 adult coho were placed in Taneum Creek to spawn. Nile, Wilson and South Fork Cowiche Creeks had 40 adults placed into each tributary. There were 75 redds found in Taneum Creek, and only a handful in each of the other 3 tributaries. Low water condition during planting hindered coho movement and subjected the fish to high predation. Because of the high success rate in Taneum Creek, WDFW and YN personnel were able to pit tag approximately 1300, wild rearing coho. These fish will be leaving the system in 2009.

In 2008, the Yakima River Coho escapement was increased remained relatively constant with 4,590 adults being observed into Prosser Hatchery and over Prosser Dam. The smolt to adult (SAR) rates for the Hatchery Origin Returns (HOR) was 1% and the Natural Origin Returns (NOR) was 7.4%. Hatchery SAR's were reduced from the previous year, however, the difference in survival between wild and hatchery remains constant.

The Naches River was again a significant producer of coho redds (60) and the Upper Yakima River maintsem continued to climb from 0 in 2003, 33 in 2004 to 57 in 2005 to 49 in 2008. In addition, the tributary coho redd counts were high the mainstem.