

SOA 2009-3

**Priest Rapids Coordinating Committee Hatchery Subcommittee  
Statement of Agreement on  
First Generation Captive Broodstock Retention - Brood Year 2007**

Submitted to PRCC Hatchery Subcommittee: March 16, 2009  
Approved by PRCC Hatchery Subcommittee: March 19, 2009

**Statement**

The Hatchery Subcommittee of the Priest Rapids Coordinating Committee (HSC) collectively agrees that 243 progeny with parents of natural origin will be retained as brood year 2007 first generation captive broodstock. An additional 203 progeny with natural origin female parents but missing male parents will be retained but the decision to use them as broodstock will be made at a later date. All the remaining fish have at least one parent of hatchery or unknown origin and will be acclimated and released with the second generation yearlings during spring 2009.

**Background**

During 2007, a total of 1,166 eggs (1,153 were live) were collected from 13 redds for first generation broodstock. Historically, eggs were only retained for broodstock from redds where both parents were visually identified as natural origin. However, there were no redds where both parents could be visually identified as natural origin so a DNA pedigree approach was used. Eggs were not collected from any redds where one or more parents were visually identified as hatchery origin.

Historical survival rates and performance were used to develop the range of juveniles required to meet broodstock requirements (Tonseth 2008). The most optimistic values suggest 366 juveniles are required to meet production goals. The most conservative approach would require 694 juveniles and the most likely scenario would require 542 juveniles to meet production goals (Tonseth 2008). Thus, even under the most optimistic scenario, there may not be enough brood year 2007 juveniles with known natural origin parents to meet future production goals. Differential maturation rates for brood years 2006 and 2008 could help increase or decrease production shortfalls. Options to address future production shortfalls will be discussed by the HSC prior to collection of brood years 2009 eggs.

During 2007, eggs were not collected from seven redds because at least one of the parents was of hatchery origin. The pedigree analysis identified another seven redds where at least one of the parents was of hatchery origin. Thus, only six of the twenty redds constructed during 2007 had two natural origin parents. Because most redds had at least one hatchery parent, it is anticipated that the proportion juveniles in the natural environment with two natural origin parents is low. The low proportion of juveniles with two natural origin parents, difficulties collecting additional juveniles, and time required to perform pedigree analysis limit our ability to collect additional juveniles in the natural environment to make up broodstock shortfalls.