

Cowlitz Fish Technical Committee  
Decision Documentation

<b>Project Name</b>	Hatchery-origin steelhead adults into upper Cowlitz River in 2014
<b>Date Proposal Submitted</b>	4/1/2014
<b>Date of Requested Decision</b>	4/8/2014
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**FTC Decision and Justification**

The Cowlitz Fisheries Technical Committee (FTC) recognizes that the effective population size of the BY 2014 winter steelhead population in the upper Cowlitz River basin is at risk due to low adult returns this year. In order to minimize population genetic effects, the FTC supports supplementing the adult steelhead population with hatchery-origin steelhead adults from the Cowlitz Salmon Hatchery (CSH) separator facility in 2014 to achieve a total upstream steelhead transportation goal of 250.

**Proposed Decision or Consideration**

The FTC supports supplementing the adult steelhead population with up to 250 HOR steelhead adults from the CSH separator facility in 2014.

**Background**

The number of natural-origin (NOR) steelhead smolt outmigrants collected at the Cowlitz Falls Fish Facility and transported downstream in 2012 was very low – 677 smolts. This, coupled with the low number of steelhead smolts collected and transported downstream annually, has resulted in a very low NOR adult steelhead return of upper Cowlitz River basin steelhead in 2014. No HOR steelhead adults have been released above Cowlitz Falls Dam since 2010 while the whole-basin steelhead productivity experiment is underway. The FTC has previously recommended that this experiment be ended and to allow HOR steelhead adults to be transported upstream once again. That action has not been taken to date. The low return of NOR steelhead in 2014 is cause for concern and the FTC is recommending an immediate release of HOR steelhead in 2014.

HOR steelhead were re-introduced to the upper Cowlitz River basin in 1993 after a hiatus of 18 years. From 1993-2009 an average of 996 steelhead adults were released in the upper Cowlitz River prior to the beginning of the productivity test. From 2010-2013 an average of 578 NOR steelhead have been released into the upper Cowlitz River basin. Preliminary returns of the 2014 NOR steelhead return indicates a very low return, far below the recent years' average.

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**Coordination Need**

Tacoma Power and the Washington Department of Fish & Wildlife (WDFW) will work together to first meet Cowlitz hatchery broodstock needs, and then to identify surplus HOR steelhead to be transported to the upper Cowlitz River basin in 2014.

**Summary of Potential Impacts**

If the 2014 upper Cowlitz River steelhead run were not supplemented with HOR fish, and the adult return remains extremely low, the following genetic risks will occur; depressed population fitness, founder effect and genetic drift. The re-releases of HOR steelhead were ended in 2010 and only one or two generations of NOR steelhead have spawned since then. The risks from the re-introduction of HOR steelhead are low and outweigh the population level impacts of low number of spawners.

The release of HOR steelhead adults in the upper Cowlitz River basin in 2014 will result in a high pHOS ratio and be the *de facto* end to the upper Cowlitz River basin steelhead productivity experiment.