U.S. Fish & Wildlife Service - Pacific Region

Fish Capture and Transport at the Condit Dam

FREQUENTLY ASKED QUESTIONS

1) **Why did the White Salmon Working Group (PacifiCorp, U.S. Fish and Wildlife Service, Yakama Nation, Washington Department of Fish and Wildlife, NOAA-Fisheries, U.S. Geological Survey-Biological Resources Division and U.S. Forest Service) decide to capture returning adult tule fall Chinook salmon and transport them upstream of the Condit Dam?**

   Originally, returning tule fall Chinook salmon were going to be collected for spawning, reared in a hatchery setting and released in the White Salmon River in spring 2012. Recent studies and monitoring conducted by agencies within the White Salmon Working Group indicate there is natural production of these fish downstream of Condit Dam. A large sediment event will occur during the breach of Condit and draining of Northwestern Reservoir in late October 2011, immediately after tule fall Chinook spawning, and periodically throughout the winter during weather events. These events would likely cause mortality for Chinook salmon eggs deposited in the lower White Salmon River. "Seeding" the river upstream of the dam with spawning fish will ensure that tule fall Chinook salmon will avoid sediment impacts from dam removal, allowing them to rear naturally and migrate in late spring 2012.

2) **What fish are you targeting for transport upstream of the dam?**

   We will be transporting tule fall Chinook salmon and potentially some steelhead (anadromous form of rainbow trout) if they are genetically related to rainbow trout, upstream of Condit Dam. The tule fall Chinook salmon and steelhead in the White Salmon River are listed as *Threatened* under the Endangered Species Act.

3) **Why are the tule fall Chinook of particular interest?**

   Genetic analyses of Chinook salmon populations from throughout the species' range have revealed that the populations in this area are distinct from all others. The trees or "phenograms" used to show genetic data invariably place the Lower Columbia River populations on their own branch. Further, the population of tule fall Chinook salmon spawning in the White Salmon River and propagated at Spring Creek National Fish Hatchery is genetically distinct from all other known tule populations.

   The U.S. Fish and Wildlife Service collected adult tule fall Chinook in the White Salmon River for artificial propagation starting 1901 and continued those collections through the 1970's. The stock remains unique in artificial propagation programs in the Columbia River gorge for being an "in-kind, in-place" stock reared for mitigation of the Columbia River hydrosystem.

4) How do you capture the fish?

We are using long nets to encircle the fish so we can physically remove them as we retrieve the nets. We are also using an historical adult collection facility owned by Spring Creek National Fish Hatchery. With expertise and assistance from Washington Department of Fish and Wildlife, we were able to install a resistance board weir on the river to block passage and funnel returning adult salmon and steelhead into the collection facility. Staff biologists from the U.S. Fish and Wildlife Service, Yakama Nation, as well as other White Salmon Working Group agencies have partnered for this effort.

5) How do you transport the fish?

We are transporting fish with vehicles that have small (600 gallon or 300 gallon) transport tanks with oxygen aeration. We release fish from three upstream locations; at the tip of what was northwestern reservoir (RM 5.0), a private residence (RM 6.7) and at a rafting takeout in the town of Husum (RM 7.8).

6) How much habitat will become accessible as a result of the dam's removal?

It is estimated that the removal of the Condit Dam will lead to approximately 33 miles of "new" habitat for ESA-listed steelhead in the White Salmon River basin, 21 miles for ESA-listed coho salmon, 13 miles for extirpated spring Chinook salmon, 8 miles for ESA-listed fall Chinook salmon, and a significant amount of habitat for Pacific Lamprey. In reality fish passage and distribution may cover greater areas than these estimates.

The differences in habitat acquired for each species are related to flows at the time of adult return, accessibility to tributaries or jumping abilities.

7) How many fish could live in the White Salmon River if fully populated?

Estimates vary, dependent on what habitat restorations occur. The following table is from the White Salmon Subbasin Plan published in 2004 and was modeled by the U.S. Geological Survey Biological Resources Division.

	Dam Removal Without Properly Functioning Conditions		Dam Removal with Properly Functioning Conditions (i.e. restoration)	
Population	Capacity	Abundance	Capacity	Abundance
Coho salmon	1898	952	1828	1227
Fall Chinook salmon (tule)	1086	792	1210	995
Steelhead	429	301	633	544
Spring Chinook salmon	835	570	1013	814

Prior production potential estimates are 739-739 steelhead, 1,600 -5,489 coho, 823 tule fall chinook and 183 spring Chinook (1995 Joint Agency/Tribal Plan for Ecosystem Restoration of the White Salmon River.

8) What about Pacific lamprey restoration?

While there are no estimates for Pacific lamprey numbers, adult and juvenile lamprey already exist at the mouth of the White Salmon and are expected to reseed the upper basin after Condit Dam is removed. The upper White Salmon contains large areas of sediment that lamprey will likely utilize. Restoring lamprey to the White Salmon will provide additional ecological services to the upper basin and increase Columbia River lamprey population abundance that has been decimated by mainstem and tributary passage barriers, among other limiting factors.

9) Where are the fish that you will be capturing?

The tule fall Chinook and steelhead we are targeting are in the lower White Salmon River between river mile 0.5 and 1.1. Fish will not be allowed to advance beyond river mile 1.1 due to the resistance board weir. We have also captured upriver bright fall Chinook salmon and coho salmon that are likely destined for the upper Columbia or Snake Rivers.

10) How do you know the fish will spawn above the dam after you put them there?

The White Salmon Working Group has discussed, planned and coordinated fish restoration efforts related to the White Salmon River and Condit Dam removal for over 5 years. Two pilot studies were conducted in 2008 and 2009 that used the methods for capture employed this year. In one of the years, hatchery tule fall Chinook salmon were released upstream of Condit Dam and construction of redds (placement of salmon eggs in a nest) were documented. Multiple studies also have been conducted to assess the existing populations of salmon, steelhead, bull trout and lamprey in the White Salmon basin.