



# Hatchery Update

## *Spring Creek National Fish Hatchery*

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### Introduction

The U.S. Fish and Wildlife Service (USFWS) operates 12 National Fish Hatcheries (NFH), one Fish Health Center, and one Fish Technology Center in the Columbia River basin. The Columbia River Fisheries Program Office (CRFPO) works with 6 of these facilities to help evaluate release programs and conduct special studies. The CRFPO maintains the Service's hatchery database as well.

### About Spring Creek NFH

The hatchery is located on the Columbia River in Underwood, Washington, 167 river miles from the ocean. Spring Creek has raised tule fall Chinook salmon since 1901. These fish are native to the White Salmon River, located less than one mile from the hatchery. The hatchery is funded by the U.S. Army Corps of Engineers and the Mitchell Act, which is administered by the National Oceanic and Atmospheric Administration - Fisheries Division.

Recent production at Spring Creek NFH was 15.1 million fish annually but was changed to 10.5 million subyearling fish for 2009-2011. For almost 35 years, production at the hatchery has been to have three releases in the spring during March (7.5 million), April (4.3 million) and May (3.3 million).

### Reprogramming of Spring Creek NFH

In October 2008, a Memorandum of Agreement was signed by the Service, Bonneville Power

Administration, U.S. Army Corps of Engineers, and the National Marine Fisheries Service to implement changes in fish production at Federally-funded mitigation hatcheries in the Columbia River Gorge. The Agreement eliminated the need to request spill at Bonneville Dam for fish passage during the March release of Spring Creek NFH tule fall Chinook salmon smolts. The Agreement moved a portion of Spring Creek National Fish Hatchery production to Bonneville Hatchery and moved additional production of upriver bright fall Chinook salmon above Bonneville Dam. Spring Creek NFH has several responsibilities in the newly signed Agreement. Annual releases at the hatchery will be 6.0 million subyearling Chinook salmon during April and 4.5 million during May. Additionally, the hatchery will transfer 1.7 million tule fall Chinook salmon in March to Little White Salmon NFH for acclimation and release and 2.8 million tule fall Chinook salmon eggs to Bonneville Hatchery, operated by Oregon Department of Fish and Wildlife, for eventual release below Bonneville Dam.

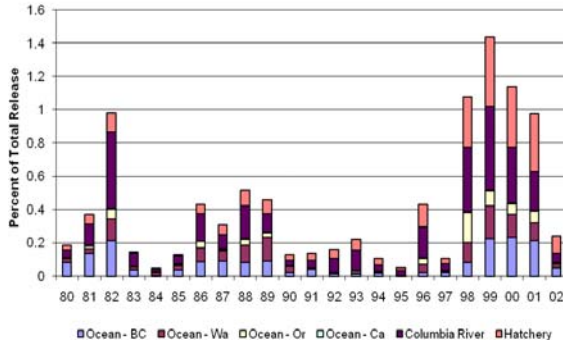
### Adult Escapement Goal

A return of 10,000 adult salmon is necessary to achieve our collection goal of 19 million eggs for an on-station release of 10.5 million smolts and transfers of 1.7 million juveniles to Little White Salmon NFH and 2.8 million eggs to Bonneville Hatchery, operated by Oregon Department of Fish and Wildlife.

### Hatchery Goal

Spring Creek NFH was first established to supplement commercial fisheries harvest. Today the USFWS operates this hatchery to mitigate for lost habitat, provide for commercial and sport harvest, meet tribal treaty and trust responsibilities, and to conserve this unique stock of salmon for future reintroduction to its native habitat. One of Spring Creek's most important goals is to maintain the genetic integrity of this stock to ensure that it will remain unique among all other populations of tule fall Chinook, maximizing the potential for successful reintroduction efforts.

Spring Creek Tule Fall Chinook Salmon  
Percent Survival

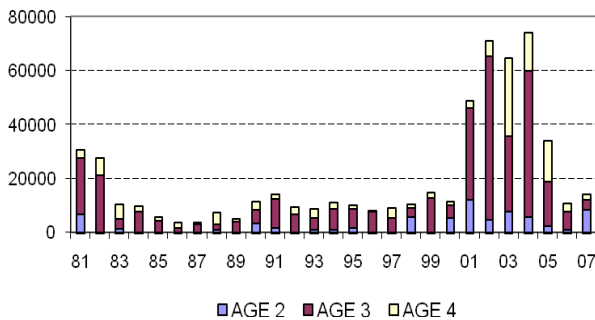


### Sampling of Returning Fish

A proportion of returning adults are sampled at the hatchery. Sex and length are recorded and scales are collected so that age can be determined. By using sample information and the number of returning fish, it is possible to calculate the number of returning fish for each age group and, consequently, the number of fish returning from each brood year or release year. On average, since 1981, 13% of Spring Creek's adults return as two year olds, 64% return as three year olds, 22% are four years old, and less than 1% return as five year olds. In 2007, over 14,200 adults returned to the hatchery.

The number of fish returning from a hatchery release is influenced by early rearing at the hatchery, downstream migration, ocean conditions, and the harvest rate in the various fisheries.

Number and Age Composition of Returning Adults

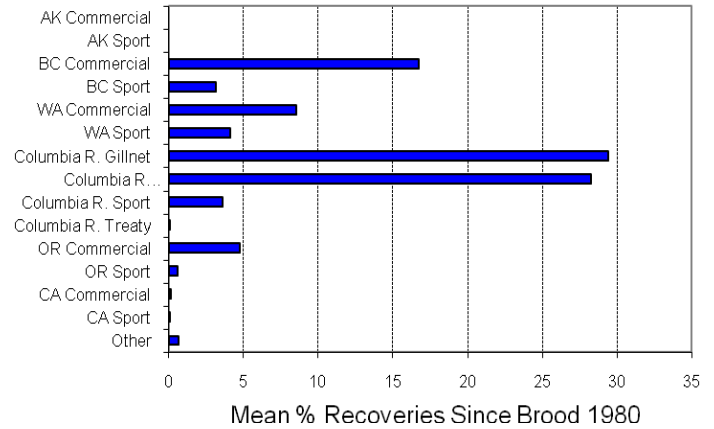


### Contribution

A coded-wire tag marking program has made it possible to determine survival rates and Spring Creek NFH's contribution to commercial, sport and tribal fisheries. About 75% of the adult recoveries

are from ocean or Columbia River fisheries. Spring Creek tule fall Chinook serve as an index stock for estimating ocean exploitation rates for the Pacific Salmon Commission's treaty between Canada and the United States. Information recovered from the tules marked each year with coded wire tags provides harvest managers with information about the condition of the tules and other stocks of salmon that migrate in the same area of the Pacific Ocean.

Tule Fall Chinook Salmon



### Mitchell Act

Congress passed the Mitchell Act (52 Stat. 345) in 1938 to help remedy the decline of Pacific salmon due to effects from the construction of hydroelectric projects on the Columbia River. The Mitchell Act is administered by NOAA Fisheries which provides funding to the Service for operation of Spring Creek NFH and the other gorge national fish hatcheries. For the past 13 years, NOAA Fisheries has not requested funding increases for the Mitchell Act program, resulting in negative impacts to the hatcheries. A concerted effort was initiated to increase public awareness of the Mitchell Act and the negative implications that flat-lined funding has resulted in over the years. A display and fact sheets were created for special events. Further planning for Mitchell Act Outreach is in process and will continue in the coming year.



## **Condit Dam on the White Salmon River**

The White Salmon River is located 0.5 miles from Spring Creek National Fish Hatchery. Condit Dam, a barrier to fish passage, is located 3.3 miles upstream in the White Salmon River and is scheduled for removal by PacifiCorp as part of a settlement agreement. With the scheduled removal of Condit Dam in 2009, nearly 16 miles of spawning habitat will become available for steelhead and some salmon species. The Service has been working with co-managers and fisheries agencies to develop restoration strategies for species that historically utilized the White Salmon River. This has been in addition to juvenile salmon population estimation and genetic projects coordinated by the Service with the U.S. Geological Survey-Biological Resources Division and Abernathy Fish Technology Center.

## **Outlook for the Future**

Spring Creek NFH's substation located on the White Salmon River has been identified as a component of fish restoration plans in the White Salmon River and will play a role in rebuilding and restoring salmonid stocks to self-sustaining levels.

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