



# U.S. FISH AND WILDLIFE SERVICE

## QUILCENE NATIONAL FISH HATCHERY

### Hood Canal Steelhead Project



Adult Steelhead

#### Study

In 2007 a large scale, long-term study was undertaken within Washington's Hood Canal, the narrow westernmost waterway in the Puget Sound Basin that comprises the eastern border of the Olympic Peninsula.

#### Goal

The goal is to determine whether a conservation hatchery program will provide long-term benefits to the natural productivity of Puget Sound winter steelhead which are listed as threatened under the Endangered Species Act.



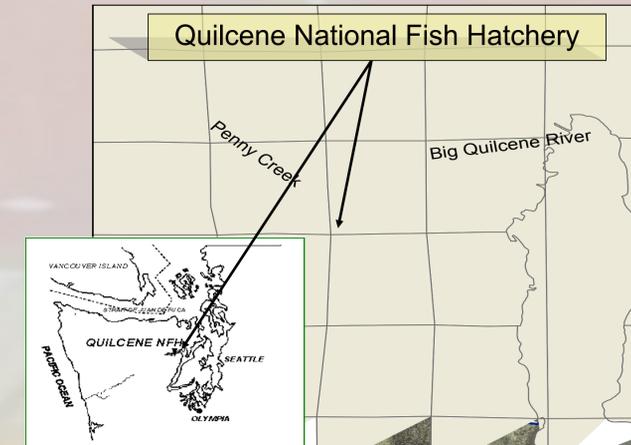
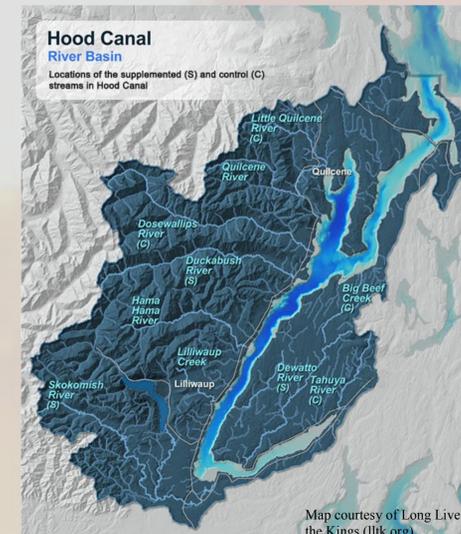
Steelhead Fry (~4 weeks old)

#### Why

Steelhead are Washington's State Fish. For over 100 years steelhead have been declining to alarming numbers. It has been estimated that between 300,000 to 800,000 steelhead returned to the Puget Sound region annually just a century ago. Unfortunately, only a fraction of steelhead are returning today.

#### Where...

The Skokomish, Dewatto and Duckabush Rivers receive hatchery-reared natural origin steelhead. The Hamma Hamma, Dosewallips and Tahuya Rivers and Big Beef Creek serve as non-planted control streams. Naturally spawned eggs are removed from each of the test streams and taken to either Quilcene National Fish Hatchery or to McKernan State Fish Hatchery for incubation and short-term rearing.



#### Nursery

Using a unique incubation facility, the Quilcene NFH incubates up to 18,000 embryos collected from natural spawning winter steelhead (redds). Quilcene NFHs "Isolation Building" plays a critical role in ensuring that no fish disease organisms are spread between the streams. The fish are inspected by fish health specialists then transferred to the Long Live the Kings Lilliwaup Hatchery for long-term rearing. Ultimately the fish are planted back to their native streams as juveniles or adults as part of the study. Using this incubating facility an estimated 80% of the embryos are expected to survive to adulthood versus the estimated survivorship of only 0.05% if left in the natural environment.



Steelhead Eggs



Hood Canal Salmon Enhancement Group staff delicately hands over steelhead eggs to Quilcene NFH staff

#### Partnerships

NOAA Fisheries is the lead agency with collaborating efforts from Long Live the Kings, Hood Canal Salmon Enhancement Group, Port Gamble S'Klallam Tribe, Jamestown S'Klallam Tribe, Skokomish Tribe, Washington State Department of Fish and Wildlife, U.S. Forest Service, and U.S. Fish and Wildlife Service.



Rearing tank at Quilcene NFH

