

Southern Boundary Restoration and Enhancement Fund

Final Report

June 1, 2013 through May 31, 2014



*Washington
Department of*
**FISH and
WILDLIFE**

Submitted by
Fish Program
Washington Department of Fish and Wildlife

June 1, 2013 through May 31, 2014
Report for the South Fork Nooksack Chinook Captive Broodstock Implementation

TECHNICAL IMPLEMENTATION DETAILS

Approach: Continue to develop, culture, and implement a Captive Adult Broodstock program using juvenile Chinook recruited from the South Fork of the Nooksack River, This is accomplished by receiving up to 1,000 juvenile fish from the Skookum Creek facility, identifying them as either yearling or sub yearling and placing them in discrete vessels for rearing. Additional work includes passive integrated transponder (PIT) tagging and subsequent transfer of half of the fish to the NOAA facility at Manchester for extended rearing in saltwater, while the other half remains at Kendall Creek Hatchery. During the summer months developing adults are identified for maturation and then transferred to the Skookum Hatchery for spawning. The resultant eggs and fry are then incubated, reared, and released into the South Fork of the Nooksack River in the spring of the following year.

The 12 months of staff funding is to support the increasing burden and complexity of fish culture, DNA sampling, PIT tagging, fish health monitoring, data entry, tracking and enumeration and technical reports associated with the program.

Schedule:

July 2013 – Evaluate developing fish for maturation and transfer candidate adults to Skookum Hatchery. Assist with Manchester facility mature adult transfer to Skookum Hatchery for spawning.

June 1, 2013 – May 31, 2014 – Use of funding to staff Fish Hatchery Specialist 2 position that will support all aspects of fish culture, monitoring and reporting associated with the program.

Accomplishments:

The focus of the work associated with this grant is on the culturing and development of the multiple year classes of juvenile fish from the south fork of the Nooksack River. A total of 5 different brood years of fish are currently rearing in the program as depicted in the chart below.

Provisional Data
South Fork Nooksack Chinook Summary
Captive Brood Program
Juvenile Brood Record
 05/31/2014

Group	Kendall	Manchester	Brood Total
Juveniles BY'07	52	29	81
Juveniles BY'08	209	177	386
Juveniles BY'09	121	200	321
Juveniles BY'10	250	233	483
Juveniles BY'11	531	245	776
Totals =	1,163	884	2,047

The progeny of the South Fork Spring Chinook adults spawned in 2012 were released into the South Fork of the Nooksack in June of 2013. There were a total of 173,421 fish in the group, all of which were coded-wire tagged.

In August 2013, a total of 542 mature fish, 83 males and 179 females from Kendall Creek Hatchery, 129 males and 151 females from the NOAA Manchester Research Facility were transferred to Skookum Creek Hatchery for spawning.

The total 2013 South Fork Nooksack Spring Chinook egg count was estimated to be 1,089,000 using the 2012 average fecundity of 3,300 eggs per female. Final data for 2013 spawn to be provided by Lummi Tribe,

The progeny of the South Fork Nooksack Spring Chinook spawned in 2013 were reared at Skookum Creek Hatchery. Release data for 2014 to be provided by the Lummi Tribe. As before, the goal planting up to 1,000,000 fry per year still remains in place and with the continued support of the PSC grant we should continue to exceed a release of over 1,000,000 fish in 2014.