

Southern Boundary Restoration and Enhancement Fund

Final Report

June 1, 2012 through May 31, 2013



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

Submitted by
Fish Program
Washington Department of Fish and Wildlife

June 1, 2012 through May 31, 2013
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: June 2012 – Receive BY11 juveniles from Skookum Hatchery.

August 2012 – Evaluate developing fish for maturation and transfer candidate adults to Skookum Hatchery, transfer up to half of the BY11 juveniles to Manchester.

June 1, 2012 – May 31, 2013 – 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
 05/31/13

Group	Kendall	Manchester	Brood Total
Juveniles BY'07	87	90	177
Juveniles BY'08	379	315	694
Juveniles BY'09	164	318	482
Juveniles BY'10	286	251	537
Juveniles BY'11	531	416	947
Totals =	1,447	1,390	2,837

During this reporting period, a total of 355 brood year 2011 South Fork Nooksack Spring Chinook juveniles were transferred from Skookum Creek Hatchery to Kendall Creek Hatchery. This brings the total number of brood year 2011 South Fork Nooksack Spring Chinook captured to 984. There will be no additional collection efforts for the 2011 brood year.

The progeny of the South Fork Spring Chinook adults spawned in 2011 were released into the South Fork of the Nooksack on June 4-5, 2012. There were a total of 32,677 fish in the group, all of which were coded-wire tagged.

In August 2012, a total of 440 brood year 2011 juveniles were transferred from Kendall Creek Hatchery to NOAA's Manchester Research Facility. Also during this time, a total of 123 fish, 72 males and 51 females, were transferred to Skookum Creek Hatchery as mature fish.

As of the end of this reporting period, a total of 91 pairs were spawned. The total 2012 South Fork Nooksack Spring Chinook egg count was just over 360,000.

The progeny of the South Fork Nooksack Spring Chinook spawned in 2012 were reared at Skookum Creek Hatchery. There was a significant loss during the early rearing of these fish and the projected sub-yearling release in 2013 is 170,000 fish. 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 100,000 fish in 2013 with increasing numbers in the following years.