

MCCALL SUMMER CHINOOK HATCHERY

OPERATION AND MAINTENANCE  
ANNUAL REPORT

OCTOBER 1, 2005 TO SEPT. 30, 2006

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FISH HATCHERY MANAGER II

## INTRODUCTION

### Operations

McCall Summer Chinook Hatchery was the first hatchery to be built for Idaho under the Lower Snake River Compensation Plan and has been in operation since the fall of 1979. Production goals for the hatchery are 1,000,000 Summer Chinook Salmon smolts to be reared and released into the South Fork of the Salmon River. The mitigation goal is to return 8,000 adult Summer Chinook Salmon above Lower Granite Dam.

The brood year 2005 pre-smolts on station are in good condition at this time. Both outside production ponds are in use, pond 1 is loaded with 544,178 fish, and pond 2 is loaded with 544,431 fish for a total of 1,088,609 fish outside. There are no supplementation fish on station. The reserve fish are marked with ad-clips and ad-clips/coded wire tags (CWT). The fish were from pond 1 and were ad-clipped only. There are 120,698 Johnson Creek fish to be released by the Nez Perce tribal fishery into Johnson Creek. The eggs from the high BKD tested females were culled. There will be a portion of the fish PIT tagged in the spring of 2007, just prior to release.

The 2006 summer chinook spawning run at the South Fork Salmon trap was another good adult summer chinook run, lower than the past years run. The trap and weir were installed on June 30, a little later than the normal time period due to high run-off. The operation concluded on September 13, 2006, with a total of 2,151 fish trapped over a period 74 days.

There was a total of 1,885,963 green eggs taken from 432 females with an average fecundity of 4,366 eggs per female, and an average eye-up of 86.9%. An additional 86 females were spawned beyond the hatchery needs to accommodate the Sho-Ban request for 300,000 eyed eggs for their egg box program for the South Fork drainage. There were 2 females culled on site due to visual inspection, eggs from an additional 64 females were culled (9 high positive BKD, but the rest due to mixing in the incubation trays, and culling low positives back to a full hatchery). Nez Perce fisheries staff held Johnson creek adult salmon on site at the South Fork trap facility. These fish were held with the South Fork fish until first sort when the males were placed in the circular tank to be held through spawning. All of the Johnson creek fish were uniquely marked to distinguish them from the South Fork stock. There were 26 females were spawned, producing 101,085 eyed eggs. The fecundity for these fish was 3,888 eggs per female, eye-up was 90.5%. There was 2 Johnson Creek females culled due to BKD.

## Personnel

There were no changes in permanent personnel at the McCall hatchery this past year. There were 6 temporary employees employed during the spring and summer months.

Gene McPherson	FHM II
Steve Kammeyer	AHM

**Miscellaneous**

There were some major improvements conducted at the McCall Hatchery or the South Fork Trap this past year. Gravel bags were again placed against the upstream side of the weir pickets to prevent upstream escapement. The gabion baskets placed in the riverbed for stabilization of the weir have been destroyed due to high flows during spring run-off, leaving exposed metal bars.

Construction of the permanent weir structure started on September 11. A temporary river crossing, diversion channel, river diverted and abutments and sill were completed. The crossing and diversion channel have been reclaimed, and we are waiting for the bridge. It is to be set in place in December of 2006. Residing of the hatchery residences was started. Rotten railroad ties were replaced with landscape blocks next to the hatchery building. The facility had a condition assessment inspection followed by an ADA inspection followed by an environment inspection. Came through in pretty good shape. The sump pumps have been replaced in the residences and installed under the office. The hatchery building roof is to be replaced next summer. The rest of the items will be completed as time and budget permits.

- A. Adult Returns to Hatchery - Species  
No adults return directly to McCall Hatchery.

B. Adults Trapped off Hatchery, Spawned and Eggs Returned to Hatchery

Summer Chinook (BY 06)

Where Trapped:	South Fork Salmon River trap
Dates Trapped:	6/30/06 through 9/13/06
No. Females Trapped:	958
No. Males Trapped:	898
No. Males and Females Released to Spawn Naturally:	504
No. of Jacks Trapped:	295
Mortality of Adult Returns:	103

C. Spawning Record

South Fork Summer Chinook (BY 06)

Dates Spawned	No. of Egg/spawn Day	No. Females & Males used/day	
		Females	Males
8/15	0	0	0
8/18	204,058	47	94
8/22	400,017	94	188
8/25	623,752	141	282
8/29	335,491	78	156
9/01	213,966	48	96
9/05	108,679	24	48
Totals	1,885,963	432*	864**

\*Eggs were culled from 2 females on site.

\*\* Some males were used more than once.

All of the eggs taken were water hardened for an hour in a 100 ppm iodophor treatment prior to being transported to McCall Hatchery. Individual shipping tubes were used for segregation purposes.

Total Number of Eyed Eggs:	1,638,159
Number of Eggs Retained for Rearing:	1,063,816
Number of Eggs Shipped:	334,550
Number of Eggs Culled (BKD):	239,793
Date of Last Spawning:	9/05/06
Date Weir Removed:	9/13/06

D. Rearing to Fry Stage

Summer Chinook (BY 05)

Hatched from Eyed Eggs:	1,109,948
Percent Hatched:	N/A
Percent Mortality to Stocking:	N/A

Total No. of Fry Stocked:	0
Total Weight of Fry Stocked:	0
Average No./Lb. of Fry Stocked:	0
Conversion Rate:	

E. Rearing to Fingerling Stage

	<u>Summer Chinook (BY 05)</u>
No. of Fingerling Produced:	1,089,357
Weight of Fingerling Produced:	12,437
Percent of Mortality to Stocking:	N/A
Conversion:	1.01

F. Smolts Reared

	<u>Summer Chinook (BY 04)</u>
No. Smolts Produced:	1,096,130
Weight of Smolts Produced:	60,450
Average No./Lb. of Smolts:	18.13
Percent Mortality to Stocking:	2.5*
Conversion Rate:	1.19

\*mortality from sac fry.

G. Food Fed and Weight Gain

Total pounds Food Fed:	70,474
Conversion Rate - All Sizes:	1.19
Total Weight Gain - All Sizes:	59,222

H. Stocking

	<u>Summer Chinook (BY 04)</u>
Total No. of Distribution Trips:	28
No. and Wt. of Fry Stocked BY 04	0      0
No. and Wt. of Fing. Stocked BY 05	0      0
No. and Wt. of Smolts Stocked BY 04	1,096,130    60,450

Date	Location	Weight	#/Lb	# Released
3/20	S. FK. Salmon R.	16,800	18.13	304,600
3/21	S. Fk. Salmon R.	16,800	18.13	304,600
3/22	S. FK. Salmon R.	16,800	18.13	304,600
3/23	S. FK. Salmon R.	10,050	18.13	182,330
Total Released		60,450		1,096,130

We added the new adult transport truck to the smolt hauling fleet this year, it worked exceptionally well. Chains were required on a couple of trips, but no other problems.

In addition to the normal production of the South Fork Summer Chinook program, the hatchery crew also reared 90,4500 brood year 2004 summer chinook smolts for the Johnson Creek program in cooperation with the Nez Perce tribal fishery program. These fish averaged 25.8 fish per pound for 3,506 pounds. The Nez Perce fishery personnel transported and released these fish into Johnson Creek during the period of March 13 - 15, 2006.