

MCCALL SUMMER CHINOOK HATCHERY

**OPERATION AND MAINTENANCE
ANNUAL REPORT**

OCTOBER 1, 2011 TO SEPT. 30, 2012

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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 2011 pre-smolts on station are in good condition at this time. Both outside production ponds are in use, pond 1 is loaded with 548,900 fish, and pond 2 is loaded with 526,754 fish for a total of 1,075,654 fish outside. There are 254,020 Integrated Brood Program (IBS) fish included in the total on station. The hatchery fish are marked with ad-clips and ad-clips/coded wire tags (CWT), the IBS fish are marked CWT only. There are 130,604 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 were approximately 2,000 fish PIT tagged into pond 2 with the remainder of the fish to be PIT tagged in the spring of 2013, just prior to release. This is the second year of this experiment.

The 2012 summer Chinook spawning run at the South Fork Salmon trap was another successful adult summer Chinook return. The trap and weir were operational on June 14, 2012. The operation concluded on September 12, 2012, with a total of 2,713 fish trapped over a period 91 days.

There was a total of 1,798,826 green eggs taken from 393 females with an average fecundity of 4,440 eggs per female, and an average eye-up of 92.3% for the hatchery eggs and 75.8 for the IBS eggs. There were 301,604 eyed eggs transferred to the Sho-Bans for their egg box program this year, and an additional 603,840 eggs from 136 females were shipped to green to the Clearwater Hatchery for their Summer Chinook program. There were 2 females culled on site this year during spawning. The eggs from 26 females were culled, (2 high positive BKD, the rest due to mixing in the incubation trays and culling low positives back to a full hatchery). The integrated broodstock program was continued this year at the South Fork Trap. There were eggs from 78 hatchery or reserve females fertilized with milt pre-collected from 49 natural males. The subsequent offspring will be held separately and marked with 100% CWT and no ad-clip. There will be a brood year 2012 smolt release of 250,000 integrated fish in the spring of 2014.

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 30 females were spawned, producing 123,176 green eggs. The fecundity for these fish was 4,577 eggs per female, eye-up was 89.7%. There were no Johnson Creek females culled due to BKD.

Personnel

There was a change in permanent personnel at the McCall hatchery this past year. Joel Patterson is the new assistant manager, starting to work mid-January, and Anthony Folsom transferred from Sawtooth Hatchery into the Fish Culturist position. There were 8 temporary employees employed during the spring and summer months.

Gene McPherson	FHM II
Joel Patterson	Assistant HM
Anthony Folsom	Fish Culturist

Miscellaneous

There was one maintenance project bid this year at McCall hatchery. The furnaces in the three residences are scheduled to be replaced. The bid was to be awarded in early October with installation shortly thereafter. The forklift was to be replaced also but has not been finalized. High early runoff at the South Fork trap site caused approximately 30 logs to become lodged on the bridge structure resulting in severe erosion of the east river bank around the abutment. This issue was to be addressed early fall but will be revisited in the spring of 2013.

- 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 12)

Where Trapped:	South Fork Salmon River trap
Dates Trapped:	6/14/12 through 9/12/12
No. Females Trapped:	1,346
No. Males Trapped:	1,047
No. Males and Females Released to Spawn Naturally:	454
No. of Jacks Trapped:	320
Mortality of Adult Returns:	197

C. Spawning Record

South Fork Summer Chinook (BY 12)

Dates Spawned	No. of Egg/spawn Day	No. Females & Males used/day	
		Females	Males
8/14	6,310	2	2
8/18	86,808	21	21
8/21	454,031	94	112
8/25	576,282	136	131
8/28	706,776	154	154
8/31	443,812	96	89
9/04	92,101	16	15
Totals	2,366,120	519	524

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 mesh bags were used for segregation purposes.

Total Number of Eyed Eggs:	1,602,685
Number of Eggs Retained for Rearing:	1,100,549
Number of Eggs Shipped:	905,524
Number of Eggs Culled (BKD):	200,452
Date of Last Spawning:	9/04/12
Date Weir Removed:	9/12/12

D. Rearing to Fry Stage

	<u>Summer Chinook (BY 11)</u>
Hatched from Eyed Eggs:	1,103,000
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 11)</u>
No. of Fingerling Produced:	1,075,654
Weight of Fingerling Produced:	41,112
Total No. of Fingerling Stocked:	0
Total Weight of Fingerling Stocked:	0
Percent of Mortality to Stocking:	N/A
Conversion:	0.80

F. Smolts Reared

	<u>Summer Chinook (BY 10)</u>
No. Smolts Produced:	1,028,353
Weight of Smolts Produced:	49,920
Average No./Lb. of Smolts:	20.60
Percent Mortality to Stocking:	7.3*
Conversion Rate:	0.94
*mortality from sac fry.	

G. Food Fed and Weight Gain

Total pounds Food Fed:	50,136
Conversion Rate - All Sizes:	0.87
Total Weight Gain - All Sizes:	57,370

H. Stocking

	<u>Summer Chinook (BY 10)</u>	
Total No. of Distribution Trips:	23	
No. and Wt. of Fry Stocked BY 10	0	0
No. and Wt. of Fing. Stocked BY 10	0	0
No. and Wt. of Smolts Stocked BY 10	1,028,353	49,920

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Date	Location	Weight	#/Lb	# Released
3/19/12	S.Fk. Salmon R.	18,200	20.6	374,920
3/20/12	S.Fk. Salmon R.	18,200	20.6	374,920
3/21/12	S.Fk. Salmon R.	13,520	20.6	278,513
Total Released		49,920		1,028,353

In addition to the normal production of the South Fork Summer Chinook program, the hatchery crew also reared 93,456 broodyear 2010 summer Chinook smolts for the Johnson Creek program in cooperation with the Nez Perce tribal fishery program.

These fish averaged 24.7 fish per pound for 3,784 pounds. The Nez Perce fishery personnel transported and released these fish into Johnson Creek during the period of March 12 - 13, 2012, for the first group and April 2 - 3, 2012, for the second group. This was the third year for the Nez Perce Fishery's split-release study providing for approximate equal releases of elastomer and non-elastomer marked fish. Each sub-population was PIT tagged to allow for tracking out migration survival to Lower Granite Dam.