IDAHO DEPARTMENT OF FISH AND GAME
McCALL SUMMER CHINOOK HATCHERY
March 2010 Monthly Narrative

Steve Kammeyer

	Number	Fish/ Pound	Total Length (inch)	Total Mortality		Feed Conversion		Density Index	Flow Index	30-d Length (inch)
				Month	To Date	Month	To Date			
BY08 SFSR SU										
Pond 1	(519,782)	21.50	5.15	680	2.54%	0.90	0.87	0.20	1.98	0.00
Pond 2	(517,818)	20.41	5.21	886	3.15%	1.25	0.83	0.21	2.05	0.00
Released	**1,037,600**	20.94	5.18	1,566	2.85%	1.05	0.85	0.21	2.01	0.00
BY09 SFSR SU										
Vats (3-14)	1,079,417	579.1	1.80	2,592	0.79%	0.67	0.65	0.41	0.71	0.22
BY08 Johnson Creek SU										
Released	**50,400**									
On Station	49,224									
	(99,624)	29.10	4.69	155	3.07%	0.77	0.87	0.12	0.15	0.15
BY09 Johnson Creek SU										
Vats (1-2)	107,839	537.1	1.84	196	1.62%	0.65	0.67	0.39	0.41	0.24

South Fork Salmon River SU Production

Brood Year 2008

Reserve smolts numbering 1,037,600 (49,550 lbs) were transported and released into the SFSR, at Knox Bridge, during the period of March 23-25, 2010. The average size, at release, was 20.94 fpp (5.18 inch TL). Release size by pond was: Pond 1 – 21.50 fpp (5.15 inch TL) and Pond 2 – 20.41 fpp (5.21 inch TL). A total of 203,820 AD/ CWT smolts were released in this brood year. Further breakdowns for the AD-Clip only and AD/ PIT mark types released will not be available until the last of the Johnson Creek smolts are released and shed PIT can be recovered from pond up-wells. Ending hatchery density and flow indices were 0.21 and 2.01, respectively. During March, 2,279 pounds of feed was utilized resulting in an overall average feed conversion to date of 0.85. The average condition factor for BY08 smolts, data collected within 1-week of release, was 3440^{-7} and varied from 3413^{-7} in Pond 1 to 3468^{-7} in Pond 2. The bird netting installed to enclose the ponds did show a measureable increase in the amount of fat on fish when released; especially for Pond 1 which would typically have the most duck activity during the winter months.

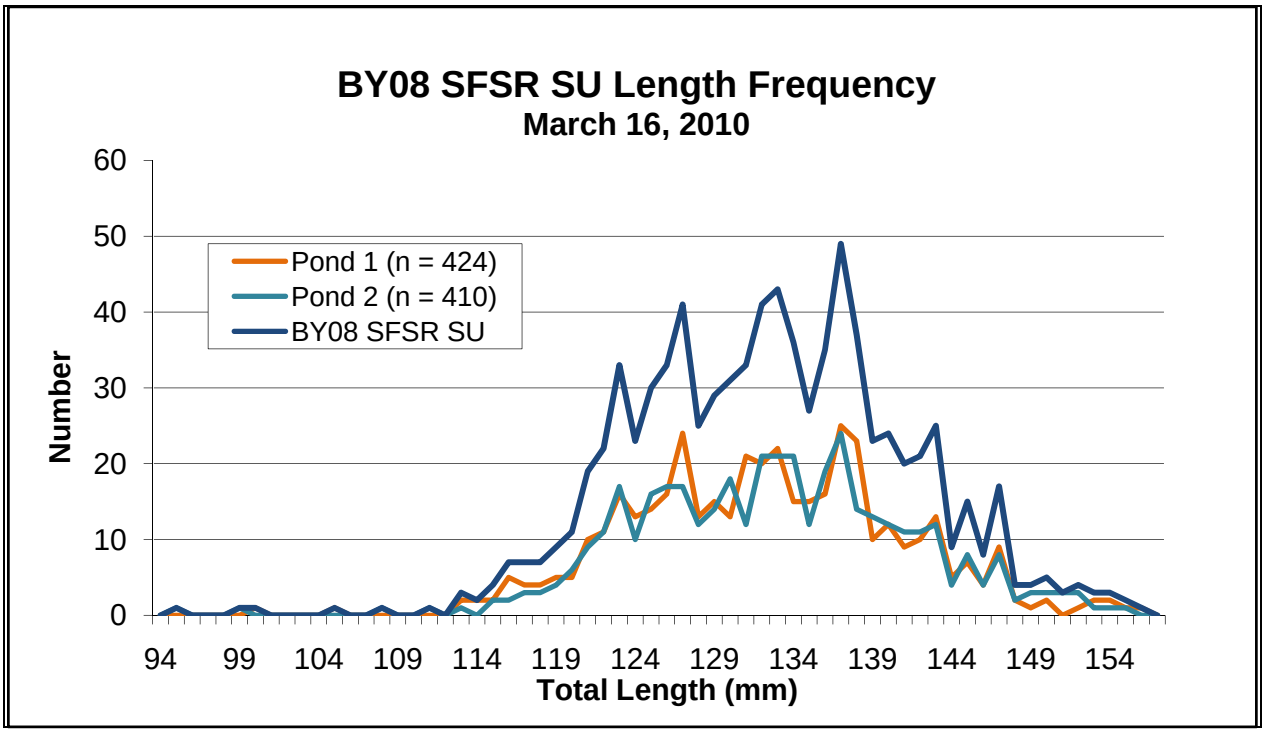
A sub-sample of 834 SFSR summer Chinook smolts (424 – Pond 1, 410 – Pond 2) were randomly collected following a seine pull in each pond to assess mark quality and condition factor on March 16, 2010. Additional samples of approximately 1,400 fish taken from each pond were also pound counted to help to provide a better estimation of average fish size for release.

BY08 SFSR SU Mark Quality/ Retention

Data Taken on March 16, 2010	Complete AD-Clip	"Flag" AD-Clip	Partial AD-Clip	Very Poor AD-Clip	No Mark Observed
Pond 1 (n=424)	401 94.58%	13 3.07%	8 1.89%	1 0.24%	1 0.24%
Pond 2 (n=410)	403 98.29%	1 0.24%	2 0.49%	0 0.00%	4[a] 0.98%
BY08 SFSR SU (n=834)	804 96.40%	14 1.68%	10 1.20%	1 0.12%	5 0.60%

[a]Did not contain a coded-wire-tag.

Mark quality for smolts in both ponds appeared to be very good with 96.40% of the smolts checked having a complete AD-clip; see Table above. The category of "flag" is used to denote the presence of a very small adipose fin/ fragment that is likely the result of regenerated tissue. Partial AD-clip is used to denote the condition where a more significant portion of the adipose fin is still present. In both of these cases it is likely that some mark would be observable on a returning adult with varying degrees of deformity (especially true for the "flag" category). It is unlikely that AD-clips rated as "very poor" (very slight adipose fin removal on close inspection) or "no mark" (no observable adipose fin tissue was removed) would allow for identification of a returning adult being of hatchery origin. Due to mixed rearing conditions, no retention checks were made for CWT's or PIT's. However, a CWT shed rate of 1.92%, or 4,000 fish, has been applied to final release numbers and is based on a 21-day post mark retention check conducted by fish marking personnel.



Brood Year 2009

There are 1,079,417 SFSR SU fry being reared in 12-indoor early rearing vats. End of month fish sample counts indicated that these fish averaged 579.1 fpp (1.80 inch TL) in size and ranged from 451 to 715 fpp. During March these fish were fed 459.3 pounds of feed resulting in an average feed conversion of 0.67 (0.66 to date). Average growth for the month was computed to be approximately 0.22 inches. Density and flow indices averaged 0.41 and 0.71, respectively. Hatchery inflow water temperatures continued to remain fairly constant throughout the month, averaging 38.5 degrees Fahrenheit.

Johnson Creek SU Production

Brood Year 2008

Nez Perce fishery personnel transported/ released 50,400 Johnson Creek origin summer Chinook salmon smolts into Johnson Creek (near Wapiti Ranch) over the period of March 15-17, 2010 at an approximate release size of 29.10 fpp (4.69 inch TL). These fish represent approximately ½ of the total production from this brood year and will be followed by a second release that is scheduled to begin on April 5th. These releases are part of a split study design which is trying to explore reason why outmigration survival to Lower Granite Dam is approximately ½ of

that being experienced for SFSR SU smolts. Besides release timing, NPT researchers are also trying to evaluate if the presence of an elastomer tag is negatively impacting survival (second part of the study design). Smolts for each release group were 100% CWT tagged, but only ½ of the fish were VIE elastomer tagged (Yellow-Left). Each of these sub-groups included slightly more than 1,000 PIT tagged fish. Breakdown of fish released by mark type is currently unavailable.

During March a total of 236.0 pounds of feed was fed to the whole Johnson Creek SU population resulting in an average feed conversion to date of 0.87. Currently there are 49,224 Johnson Creek smolts being reared in the outdoor collection basin that make up the 2nd release group.

Brood Year 2009

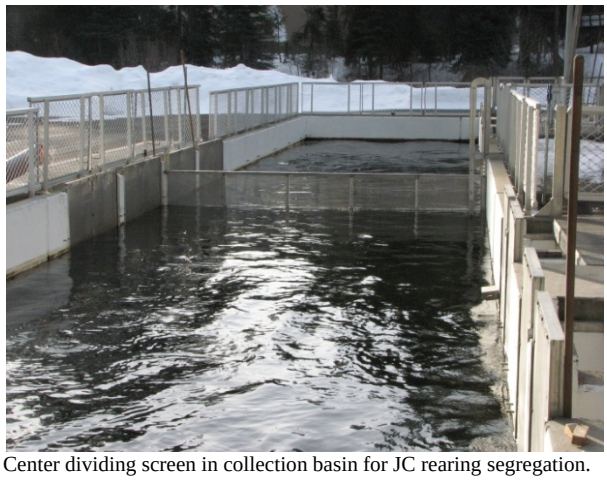
There are 107,839 Johnson Creek origin summer Chinook fry being reared in 2-indoor early rearing vats that are set at ½ vat length. At the end of the month these fish averaged 537.1 fpp (1.84 inch TL) in size. Johnson Creek SU fry were fed 48.2 pounds of feed during March resulting in an average feed conversion of 0.65 (0.67 to date). Average growth for the month was computed to be 0.24 inches for the month. Ending density and flow indices averaged 0.39 and 0.41, respectively.

Miscellaneous

PIT Tag Detection Array Control Hub.

PIT Tag Detection Arrays on Fish Tower.

The hatchery tested a PIT tag detection array when loading JC/ SFSR smolts onto trucks. Poor results obtained may be due to a combination of reasons including: interference with metal (trucks and tower), electrical interference with power supplies and too many tags moving past detectors at the same time during loading; this technology does not currently seem to be refined enough to be utilized at MCFH.



Center dividing screen in collection basin for JC rearing segregation.

Loading BY08 Johnson Creek SU Smolts.