



## IDAHO FISH AND GAME

FISHERIES RESEARCH  
1414 East Locust Lane  
Nampa, Idaho 83686-8451  
(208) 465-8404  
(208) 465-8434 (Fax)

Dirk Kempthorne / Governor  
Steve Huffaker / Director

January 18, 2008

To: LSRCP Boise Office  
From: Larry Barrett, Jon Hansen, Brian Leth, and Chris Sullivan  
Subject: 2007 LSRCP Quarterly Narrative (October - December)

### **Hatchery Evaluation Studies (HES – Kline, Harrington, Leth) –**

#### ***Reports***

- The 2002 Chinook annual report is available for distribution (Leth)
- The 2003 Chinook report is through the review process and is awaiting printing (Leth)
- The 2004 Chinook report is in the review process (Leth).
- The 2002, 2003, and 2004 steelhead annual reports are available for distribution (Harrington).

#### ***Meetings and Coordination***

On November 8, Brian attended the annual Squaw pond coordination meeting at the Sawtooth hatchery. The meeting was attended by staff of Sawtooth Hatchery, the IDFG fish bureau, and the IDFG regional office in Salmon. Discussion focused on past activities at the Pond and coordination of activities for 2008.

On November 28-29, Brian, and David L. traveled to McCall for the annual South Fork Salmon River Coordination Meeting. This meeting is intended to increase the information exchange between research, hatchery, and marking personnel, and has proven to be very useful. This year, the major topics of discussion included a summary of the 2007 Chinook salmon fishery season, and expectations for the 2008 salmon season and coordination of research activities. Brian presented a summary of data from 2007 including estimated smolt survival and age composition of adults that returned in 2006.

#### ***Hatchery Database Development***

During the reporting period, we continued to enter and validate historic trapping and spawning data into the new database format. John Haines continued with developing the “spawning” and “final disposition” entry modules of the adult database. The entry screens have been built and the most recent changes have come from user feedback. The spawning module will be ready for beta testing during the steelhead spawning in 2008.

In December, John and Brian met with staff at Dworshak National Fish Hatchery to show them the Hatchery Database program. John will be headed back up there in January to help them install and use the program. Brian and Jon also met with staff from the Nez Perce Tribe Fisheries research program to demonstrate the program during their annual research meeting. They intend to incorporate the database into their program in 2008.

Brian participated in an IDFG working group to develop a "Protocol" database as a way record data collection and analysis protocols in a format that can be queried as apposed to a typical metadata structure. This protocol database is being modeled after the "Protocol Manager" that was developed by NOAA staff involved with the Integrated Status and Effectiveness Monitoring Program (ISEMP). The following is a link to the website that describes the ISEMP project:  
<http://www.nwfsc.noaa.gov/research/divisions/cbd/mathbio/isemp/index.cfm>

### ***CWT Lab Activities***

Chris Sullivan will be leaving for Nebraska in February to pursue a Masters Degree in Fisheries. Chris did an outstanding job running the CWT lab in 2007 and will be missed. During the October through December period, Chris spent the majority of his time extracting and verifying CWTs collected during 2007 at IDFG trap facilities, and by creel and spawning ground surveys. All of the 2007 steelhead snouts from the adult trapping have been received and processed at the lab, and the data have been entered. All 2007 Chinook samples have been received at the lab and nearly all snouts, wire, and data have been processed, verified, and entered. Steelhead snouts from the 2007 fall fisheries will be sent to the lab in January.

During this quarter, the last of the steelhead snouts received in 2007 were processed. Of those, 94 fish were recovered at the Hells Canyon Dam trap, 50 from the Little Salmon River creel survey, 97 from the Clearwater River creel survey, and 69 from the South Fork Clearwater creel survey. Additionally, wire which was recovered by other agencies during the 2006 and 2007 seasons was verified in the lab. Of these tags, 222 were recovered by ODFW, 48 by the USFW, and 5 by CDFO. All 1,285 Chinook snouts collected in 2007 at hatchery traps, creel surveys, and spawning ground surveys have been processed at this time. Lab staff did not participate in any field activities this quarter.

Recoveries of Chinook salmon CWTs at IDFG hatchery racks/weirs in 2007 are displayed in Table 1. Of the 1,285 snouts recovered at the hatchery facilities, 13 were strays from other releases and are highlighted in yellow.

Table1. Coded wire tag recoveries from Chinook salmon trapped at IDFG weirs in 2007. Counts in "other" field represent snouts without wire (false positives) or tags that were lost between tag extraction and data entry or were unreadable.

RECOVERY SITE	RELEASE SITE	AGE			Other	Total
		3	4	5		
PAHSIMEROI RACK	PAHSIMEROI HATCHERY	8	35	20		63
	LOSTINE RIVER	1				1
	LOOKINGGLASS CR.	1				1
<b>PAHSIMEROI RACK Total</b>		<b>10</b>	<b>35</b>	<b>20</b>		<b>65</b>
POWELL RACK	SELWAY RIVER NEAR MEADOW CRK	8				8
	POWELL POND	52	174			226
	CLEAR CR.		1			1
	NO TAG				3	3
<b>POWELL RACK Total</b>		<b>60</b>	<b>175</b>		<b>3</b>	<b>238</b>
RAPID RIVER RACK	RAPID RIVER HATCHERY	76	49	53		178
	LOSTINE RIVER	2	2			4
	NO TAG				30	30
	LOST TAG				1	1
<b>RAPID RIVER RACK Total</b>		<b>78</b>	<b>51</b>	<b>53</b>	<b>31</b>	<b>213</b>
S FK CLWTR R FACILITIES	CROOKED R PONDS		13			13
	CROOKED RIVER TRAP	8				8
	RED RIVER REARING PONDS	2	37			39
	CLEAR CR.	2				2
<b>S FK CLWTR R FACILITIES Total</b>		<b>12</b>	<b>50</b>			<b>62</b>
S FK SALMON R TRAP	RAPID RIVER HATCHERY		1			1
	S FK SALMON R@ KNOX BRIDGE	245	247	59		551
	LOSTINE RIVER	2				2
	NO TAG				46	46
	LOST TAG				5	5
<b>S FK SALMON R TRAP Total</b>		<b>247</b>	<b>248</b>	<b>59</b>	<b>51</b>	<b>605</b>
SAWTOOTH RACK	PAHSIMEROI HATCHERY		2			2
	SAWTOOTH HATCHERY	88		11		99
	NO TAGS				4	4
<b>SAWTOOTH RACK Total</b>		<b>88</b>	<b>2</b>	<b>11</b>	<b>4</b>	<b>105</b>
<b>GRAND TOTAL</b>		<b>495</b>	<b>561</b>	<b>143</b>	<b>89</b>	<b>1285</b>

Formatted: Font: Bold

### General

The steelhead hatchery evaluation biologist position remained vacant through the October-December period. In December, Brian Leth was promoted from the Chinook hatchery evaluation biologist to fill the position vacated by Paul Kline and will now oversee the LSRCP hatchery evaluation section for IDFG.

Interviews were conducted in the latter part of December to fill both hatchery evaluation positions. John Cassinelli who has been working for IDFG as a temporary employee for several years and recently finished his Master's Degree at the University of Idaho was selected to fill the Chinook evaluation position. Carl Steifel who has also worked for IDFG for several years as a temporary employee and who also just finished a Master's program through Boise State University was selected to fill the steelhead evaluation position. Both John and Carl will begin their new jobs in

mid-January.

Also in December, interviews were conducted to fill the Data Coordinator position that was vacated in September. Beth Mullenbach recently accepted the position and will start during the third week of January. Most recently, Beth was an Associate Professor at Texas A&M University conducting oceanographic research. She will pick up where Terry Whitlow left off entering and reconciling all of the historic trapping and spawning data from the IDFG anadromous hatcheries.

With all of the vacant positions during the October-December period, Brian focused on completing the 2003 and 2004 Chinook evaluation annual reports. Also during this period, a plan to expand the steelhead PIT tagging effort to 86,000 at Clearwater, Hagerman National, and Magic Valley fish hatcheries was developed. The main objective of the tagging is to develop estimates of adult returns to Lower Granite Dam from each hatchery. Secondary objectives include keying in on survival of specific groups such as the Dworshak B steelhead that are reared at Hagerman National and Magic Valley Fish Hatcheries. Approximately 30% of these PIT tags were made available through the cooperative effort with Comparative Survival Study (CSS).

### **Harvest Monitoring Program (HMP Salmon Office- Hansen)**

Confidence intervals for harvest estimates associated with individual coded-wire tags were developed by the Harvest Management Program (HMP) and a biometrician associated with the University of Idaho. An automated bootstrap confidence interval program can be developed by the HMP via contract if approved by Headquarters staff.

A program overview was conducted by HMP staff to IDFG fishery managers in Boise. Sample rates, CWT recoveries, river sections, and harvest estimates were discussed by attendees.

Data requests regarding upper Salmon River B-stock adult returns and upper Salmon River versus lower Salmon River steelhead harvest were answered by HMP staff for the Boise LSRCP Office and the IDFG Directors Office, respectively. Sample rates for the Spring 2007 steelhead fishery were provided to the Nampa Hatchery Evaluation Program by HMP staff for incorporation into RMIS.

Harvest estimates by CWT group, tables, and appendices for the 2004 through 2007 combined annual report were completed by HMP staff. A draft of the 2004 through 2007 combined annual report is scheduled for completion by HMP staff by the end of February 2008.

Creel data was collected by roving census instead of check station in the upper Salmon River this past fall after sample rate goals were obtained. The method of using roving census and volunteer snout returns to collect data in the upper Salmon River will be tested this spring by the HMP program in an effort to improve sample rates in certain river sections.

The efficiency of jet boat versus boat ramp creel and an alternative check station site at Riggins were explored by HMP staff from the Lewiston Region and Salmon Region offices. Creel methods will continuously be reviewed by HMP staff to identify the most cost efficient and productive way to check fish for marks. The current check station site at Riggins may be closed in the near future because of development. New sites may become available because of road

construction and those potential sites were scouted by HMP staff.

Annual evaluations for year-around temporary personnel were conducted by HMP staff. Creel program goals and objectives for temporary staff for 2008 were discussed by Salmon Region personnel.

B-stock adult return harvest and rack values for Squaw Pond and the East Fork Salmon River were summarized and presented by HMP staff at the annual IDFG Squaw Pond meeting in Stanley.

A total of 12,014 anglers who kept 3,331 fish and caught a total of 5,766 fish were interviewed by creel personnel during the Fall 2007 season (Table 1). The hours of effort per fish caught and kept by anglers for the fall season was 14 and 24, respectively. A total of 1,544 “volunteer” snouts were collected by Lewiston creel personnel.

Table 1. IDFG unexpanded steelhead creel, summarized by river section, October through December, 2007.

SECTION	ANGLERS	HOURS	KEPT	HATCHERY RELEASED	WILD <sup>a</sup> RELEASED	TOTAL	VOLUNTEER SNOUTS	HOURS/ CAUGHT	HOURS/ KEPT
01	992	6,377	442	26	203	671	711	10	14
02	60	314	21	0	10	31	239	10	15
03	3,044	14,167	637	108	344	1,089	148	13	22
04	180	623	46	5	23	74	262	8	14
05	693	2,701	155	63	38	256	0	11	17
07	8	29	2	1	1	4	0	7	15
10	254	1,358	61	5	23	89	37	15	22
11	425	1,853	77	8	25	110	61	17	24
12	1,812	10,032	299	34	143	476	16	21	34
13	271	2,764	78	10	59	147	70	19	35
14	776	9,391	274	94	339	707		13	34
15	2,265	23,955	996	293	434	1,723		14	24
16	994	4,950	205	45	77	327		15	24
17	168	522	33	4	9	46		11	16
20	72	200	5	2	9	16	0	13	40
<b>TOTAL</b>	<b>12,014</b>	<b>79,236</b>	<b>3,331</b>	<b>698</b>	<b>1,737</b>	<b>5,766</b>	<b>1,544</b>	<b>14</b>	<b>24</b>

<sup>a</sup> Includes wild, naturally produced, and hatchery fish without an adipose fin clip.

**Harvest Monitoring Program-(HMP Lewiston Office-Barrett)**

Another excellent fall steelhead season came and went for Clearwater Regional anglers in 2007. Steelhead counts at Lower Granite Dam passed the 146,000 fish mark by early December. That total beats the ten year average by about 7,000 fish. However, the number of the larger B-run steelhead, bound mostly for the Clearwater River drainage was down somewhat this year. By early December, an estimated 19,000 hatchery B's had crossed Lower Granite; last year at this time we estimated over 27,000 of these big fish had crossed the dam.

Fishing conditions were generally good throughout the region, however, a drier than normal fall kept the flows low in the Clearwater River. Higher flows generally keep fish moving into the river and make better fishing conditions. We also lost a couple of weeks of prime fishing time on the lower Salmon River in late October when some local heavy rain fell in recently burned areas in the South Fork Salmon River drainage, which muddied the river all the way to the confluence with the Snake River.

Overall for the fall 2007 season, our monitoring program in the region contacted 9,278 anglers who fished 46,457 hours to catch 3,560 steelhead on the Clearwater, Snake, and lower Salmon Rivers. Of those fish caught, 2,185 were harvested. Of the fish released, 351 were clipped and 1,024 were unclipped. The overall catch rate for the season was 10 hrs/fish on the Snake River, 11 hrs/fish on the lower Clearwater, and 18 hrs/fish on the lower Salmon River.

We saw a large increase in our outfitter snout collection program this fall as we increased the price paid for snouts from \$1 last year to \$3 this fall. This allowed us to sign up 12 outfitters for the fall season. Overall, from these outfitters we collected 1,923 snouts in 8 river sections and effectively doubled our sample rate for the season. We are optimistic that this program will continue to grow, and our priority in the near future will be to sign up more outfitters fishing the lower Salmon River and the Snake River from Hell's Canyon Dam to the Salmon River.