

Sawtooth Fish Hatchery

Operation and Maintenance Annual Report

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INTRODUCTION

Sawtooth Fish Hatchery (FH) has been operating since 1985 as part of the Lower Snake River Compensation Plan. The mitigation goal is for 19,445 adult spring chinook salmon *Oncorhynchus tshawytscha* above Lower Granite Dam. The production goal is 1,300,000 spring chinook salmon smolts. In addition, Sawtooth collects up to 2,500,000 steelhead *O. mykiss* eggs that are shipped to Hagerman National Fish Hatchery and Magic Valley Fish Hatchery. A satellite fish station on the East Fork of the Salmon River provides additional trapping, holding, and spawning facilities for adult spring chinook salmon and steelhead from the Squaw Creek trap.

CHINOOK SALMON

Sawtooth Spring Chinook

BY08

In 2008, the Sawtooth Fish Hatchery (SFH), adult spring chinook salmon *Oncorhynchus tshawytscha*, weir on the Main Salmon River was installed on June 11 as a velocity barrier through June 29. The trap and weir were fully in place June 30 and operated through September 18. A total of 5,620 adult chinook were trapped in 2008, of which 5,228 (1,740 jacks / 1,780 adult males / 1,708 females) including 1 jill were hatchery-produced (marked) fish and 392 (52 jacks / 254 adult males / 86 females) were unmarked. All of the unmarked fish were released above the hatchery weir for volitional spawning. The remaining 1,340 chinook salmon were retained for 2008 hatchery spawn crosses. Of the 1,340 chinook retained for hatchery spawn crosses, 36 (16 males including jacks and 20 females) died prior to spawning. Pre-spawning mortality was 2.68%. A total of 114 fish were killed and not used (KNU) for spawning. Of the 114 KNU, there were 108 males, and 6 females. Fish used for hatchery spawn crosses included; 596 marked males (45 jacks, 551 adult males) and 594 marked females. (For SFH chinook trapped, spawned, and fish disposition, see Table 1). Marked Chinook were ponded at SFH according to broodstock needs or surplus, with a total of 1,340 chinook held for broodstock (720 males, 620 females) and 3,852 held as surplus. The 594 females used for spawning produced 2,894,444 green eggs (4,873 eggs per female). Eggs surviving to the eyed stage of development totaled 2,701,418 for a percent survival of 93.3%. (Table 1)

In 2008, the velocity barrier on the East Fork of the Salmon River (EFSR) was put into operation on June 4, with trapping operations continuing through September 27. This was the third consecutive year of operation of the East Fork trap since trapping ceased in 1998. A total of 207 chinook were trapped in 2008, 205 of which were natural (unmarked) fish and two marked fish. All fish trapped at the facility were released above the weir for volitional spawning except the marked fish which was released back into the main Salmon River.

BY07

The BY07 Sawtooth spring Chinook salmon number 275,307 pre-smolts at 18 fpp and 146 mm fork length. This group of fish will over-winter in three large outside

raceways. These fish were administered 14-day OTC medicated feed treatment at 10 grams per 100 pounds in July. Four one-hour 167 ppm formalin treatments were also administered due to external mycosis in 2007. These fish were exposed to two very, poor river water quality conditions just prior to the outbreak and during the feed treatment. In August a 28-day medicated feeding was administered.

BY06

Brood year 2006 chinook smolts were released in the afternoon on April 23. Releases totaled 174,132 smolts and fish size averaged 19.1 fish per pound and 5.4 inches in length at release. All fish were released at the SFH weir. Fish rearing is summarized in Table 2 and fish marking and releases are summarized in Table 3.

Pahsimeroi Summer Chinook

Sawtooth Spring Chinook Fish Hatchery (SFH) reared Pahsimeroi Summer Chinook Hatchery's (PFH) brood year 2007 summer Chinook due to lack of rearing space and available specific pathogen free (SPF) water at PFH. SFH received ten lots of 977,737 eyed eggs between the dates of September 27, 2007 and October 19, 2007. During incubation 22,939 dead eggs were picked off resulting in 954,798 eggs surviving to swim-up fry (97.6%). All fry were ponded into eight inside vats supplied entirely with SPF well water with an average of 119,350 fry entering each vat.

The outside ponding of brood year 2007 Pahsimeroi summer Chinook began on March 18, 2008 and concluded on April 2, 2008. Outside ponding into river water was due to fish growth exceeding acceptable rearing densities and available SPF. Juveniles were ponded into large raceways 5, 6 and 7 and as the outside ponding concluded 945,534 fingerlings had been ponded as follows: 361,063 fingerlings into large raceway 5; 294,955 into large 6 and 289,516 fingerlings into large raceway 7.

Marking of the Pahsimeroi fingerlings began on May 12, 2007 and ran through May 16, 2008. All fish were adipose fin clipped with 53,538 also having CWT tags implanted. At the time of marking the fingerlings were marked from the A section of each raceway then returned the B section of each large raceways (5-7) with the CWT tagged fish being combined with AD only fish into large raceway 7. After marking was finished the fish were diagnosed with some post marking fungus and were administered a three day formalin flow through treatment at 170ppm for 1 hour (1 barrel).

The Pahsimeroi fingerlings were not given a metaphylactic 28 day erythromycin medicated feed treatment. All medicated feed treatments will be administered by PFH.

Brood year 2007 Pahsimeroi summer Chinook were transferred to PFH by Niel Ring Trucking May 28 and 29, 2008. One Idaho Power tanker hauled 934,489 fish (10,961lbs) making four trips. Of these fish, 53,538 were marked AD/CWT, and 880,951 were marked AD only. All fish averaged 85 fish per pound and were fed a total of 7,302 lbs of food at a conversion of .76. There were 68 bags of Bio-Oregon 1.2 mm surplus transferred to PFH.

STEELHEAD

Sawtooth Hatchery Returns

The Sawtooth Fish Hatchery weir was installed on March 19, 2008 in preparation for the 2008 Salmon River Steelhead (*Oncorhynchus mykiss*) run. The adult Steelhead trap operated from March 21 to May 6. During that time, a total of 4,187 adult "A- run" steelhead were trapped. Of these fish, 4,164 (2,256 male /1,908 female) were marked (hatchery produced) while 23 (16 male/7 female) were unmarked fish of natural or unmarked hatchery origin).

The 4,164 marked steelhead that were trapped at Sawtooth in 2008 were disposed of in one of three ways. The 1,134 steelhead that were used for spawning were either given away to the public on a first come, first serve basis or they were distributed to charitable organizations on spawn days. A total of 1,397 steelhead were donated to tribes and/or other organizations as subsistence food shown in Table 4. The remaining 1,633 steelhead were kept frozen on station and will be processed and used in a stream nutrient enhancement program. Fish disposition data is provided in Table 4..

A total of 23 unmarked adult steelhead returned to the upper Salmon River in 2008. A genetic sample was taken from each fish. After data collection, unmarked fish were released upstream of the hatchery weir to spawn naturally.

Of the 4,164 total marked steelhead trapped by the Sawtooth Hatchery, 2,309 were measured. Measured fish included the 23 unmarked fish as well as 2,286 spawned and/or CWT recovery fish. Measurements were taken from fish throughout the run to acquire a representative length frequency.

Sawtooth Hatchery Spawning

Sawtooth Fish Hatchery spawning operations for 2008 occurred from March 31 to May 5. A total of 567 male steelhead were spawn-crossed with 567 female steelhead over 10 spawning days to produce and estimated 2,823,300 green eggs. Due to lack of demand only 529 females' eggs were enumerated to yield a total of 2,614,775 green eggs with a mean fecundity of 4,943 eggs per female. Total green egg take yielded 2,333,978 eyed-eggs for a percent survival to the eyed-stage of development average of 89.3 percent (Table 7). Genetic samples taken from 100 percent of the broodstock fish were sent to the Idaho Fish and Game Eagle Genetics Laboratory.

Eyed-egg transfers to Hagerman National Fish Hatchery totaled 1,161,100 eyed-eggs, including 260,200 eyed-eggs for the Shoshone-Bannock Tribes' Yankee Fork Smolt Release (SBTYF Smolts) program. These genotyped eggs will be reared to smolts at Hagerman National Fish Hatchery and released into the Yankee Fork Salmon River. Magic Valley Fish Hatchery received a total of 513,550 eyed-eggs, including 118,600 eyed-eggs for the SBTYF Smolts program. A total of 260,200 genotyped eyed-eggs from Sawtooth A-run steelhead were provided for the Shoshone-Bannock Tribes' DNA Parentage Exclusion Analysis Program that began in 2005. Another total of 624,654 genotyped eyed-eggs were provided for the Shoshone-Bannock Tribes' Egg

Box Program. These eggs are placed in streamside incubators on river water to mimic natural hatch timing in the Yankee Fork and Basin Creek systems. In both of these programs, genotyped eggs from Sawtooth stock can be differentiated as F1 juveniles and F1 adults from naturally produced steelhead in these systems. The Sawtooth-stock eyed-egg transfer totaled 2,289,304 (Table 8).

East Fork Salmon River Returns

In 2008, the velocity barrier on the East Fork of the Salmon River (EFSR) was in operation from March 24 through May 14. In continuing with the East Fork Natural Steelhead Program that began in 2001, the program goal for the 2008 season was to proceed in building and maintaining a locally-adapted broodstock in the EFSR. To create this locally-adapted broodstock, production targets were set to collect 75,000 green eggs to produce 50,000 non-adipose-fin-clipped smolts to be released into the system above the weir, while still allowing for natural spawning above the weir. The long term goal is to manage this program in a way that allows local adaptation to target production levels. In accordance with this goal, collection targets were set at 25 females and 25 males, taken randomly from across the run, representing the entire range of size, age, and run-timing. Natural-Origin steelhead (designated as N-O by lack of tag present and unmarked or undamaged fins) were to be favored and incorporated over Hatchery-Origin steelhead (designated as H-O by presence of a Coded Wire Tag or obviously frayed fins from hatchery rearing) if given the choice, to achieve the collection target of 25 fish of each sex. Non-East Fork adults (ad-clipped hatchery strays) were neither to be spawned nor returned to the river.

A total of 119 adult steelhead were trapped, five of these were ad-clipped males (strays) that were killed and not used for spawning (KNU). Of the remaining 114 non-adipose-fin-clipped fish trapped for the Natural Steelhead Program, 103 were H-O (72 males/31 females) and 11 were N-O steelhead (6 males/5 females; Table 5).

East Fork Spawning

A total of 51 East Fork males (46 H-O, 5 N-O) and 26 East Fork females (22 H-O, 4 N-O) were retained for natural-production spawn crosses in 2008 (Table 5.) Of the 46 H-O males used for spawning, one male was used twice. One N-O female was released above the weir and not used for spawning because she was still green on the last spawn day. One N-O male was released above and not used for spawning due to poor quality milt. Twenty-five H-O males and 9 H-O females were released above the weir for natural spawning. Spawning operations occurred from April 15 through May 14 (8 spawn dates). On May 14, the program goal of 25 females was exceeded (26 females spawned to incorporate N-O females trapped at the end of the run) and trapping and spawning was discontinued. Spawning activities from 26 East Fork female steelhead yielded a total of 124,031 green eggs for a mean fecundity of 4,770 eggs per female. A total of 100,263 eyed eggs were obtained from natural-production crosses, for a percent survival to the eyed-stage of development average of 80.84 percent (Table

7). All 100,263 eyed eggs produced from EFSR natural crosses were transferred to the Magic Valley Steelhead Hatchery for final incubation and rearing (Table 8).

Squaw Creek Returns

On March 25, 2008, a weir and trap were installed on Squaw Creek, 200 meters upstream of the confluence of the Salmon River to trap adult Squaw Creek “B-run” (SCB) steelhead. The first fish of the season was trapped on April 7, the last fish was trapped on April 30. On April 27, fifty percent of the pickets were pulled from the weir to allow downstream smolt outmigration. Trapping continued through May 3, at which time weir pickets were pulled and the trap was taken out of operation. A total of 22 adult steelhead were trapped, 5 were marked “B-run” males, 8 were marked “B-run” females, 4 undersized ad-clipped females without coded wire tags (CWTs), and 4 undersized ad-clipped males without CWTs. One unmarked female was trapped and released above the weir (Table 6). The 13 “B-run” broodstock adults were transferred to the East Fork trapping facility for pre-spawn holding. The 4 undersized females and one of the undersized males that did not have CWTs were killed and not used for spawning. The other three undersized males without CWTs were released below the weir. Due to a shortage of fish trapped, a procedure was implemented to acquire Squaw Creek “B-run” steelhead angled by fishermen from the general public, as well as by IDFG employees. Angled fish were then transferred to the East Fork spawning facility to be incorporated into the Squaw Creek broodstock. Between April 16 and April 27, a total of 10 SCB adult steelhead were caught and transferred to the East Fork spawning facility (3 males/7 females) and held for spawning. On April 30, an ad-clipped male that was angled near Salmon, Idaho, was transferred to the East Fork facility; however, on May 2, the fish died before it could be spawned. Two adult male SCB’s were also netted between the mouth of Squaw Creek and the trap by IDFG employees and transferred to the East Fork to be held for spawning.

Squaw Creek Spawning

A total of 14 marked SCB females and 10 marked SCB males were retained for hatchery-production spawn crosses in 2008, with spawning operations occurring from April 15 through May 6 (7 spawn dates). All spawning was conducted at the East Fork Salmon River trap/spawn facility, with spawn activities from the 14 females yielding a total of 103,746 green eggs for a mean fecundity of 7,410 eggs per female. A total of 68,988 eyed-eggs were obtained from hatchery-production crosses, for a percent survival to the eyed-stage of development average of 66.5 percent (Table 7). Of the 10 marked males used in hatchery-production crosses, 5 were trapped fish, 3 were angled, and 2 were netted. Five males were undersized marked males that by real-time CWT reading were determined to be “B-run” origin fish and were used for spawning. Of the 14 females used for spawning, 8 females were trapped fish and 6 females were angled. One angled female was killed and not used for spawning (KNU) due to damaged skeins. To achieve spawn-crosses of two males per female, multiple males were spawned multiple times. Four males were used once, two males were used twice, two males were used three times, one male was used four times, and one male was used

five times. All eyed eggs (68,988) produced from Squaw Creek “B-run” hatchery crosses were transferred to the Magic Valley Steelhead Hatchery for final incubation and rearing (Table 8).

Pahsimeroi Stock Steelhead Egg Incubation

As in past years, Sawtooth Fish Hatchery incubated a portion of the Pahsimeroi Fish Hatchery egg take for LSRCP Steelhead Programs. All egg shipments were transferred as “green” eggs in insulated coolers.

In 2008, an estimated 1,103,000 green eggs were transferred to Sawtooth from a total of 213 Pahsimeroi females. Total egg transfers yielded 871,700 eyed-eggs, for a percent survival to the eyed-stage of development average of 87.3 percent and an average fecundity of 5,175 eggs per female (Table 7). Eyed-egg transfers to Hagerman National Fish Hatchery (HNFH) and Magic Valley Fish Hatchery (MVFH) totaled 215,000 and 435,000 eyed-eggs, respectively. An additional 221,700 eyed-eggs were transferred to Hagerman State Fish Hatchery (HSFH) to be stocked into Cascade Lake as fry. All females spawned for HNFH were viral tested. Due to lack of demand, 12,000 enumerated eggs and an estimated 90,000 eggs were culled.

Sawtooth Fish Hatchery Egg Shipments

In 2008, a total of 3,330,255 eyed steelhead eggs were shipped from Sawtooth Fish Hatchery to various hatcheries or off-site locations for continued rearing. A summary of egg shipments, by stock, is provided in Table 8.

Steelhead Smolt Acclimation At Sawtooth Hatchery

Due to increased production levels and a corresponding lack of available raceway space, no steelhead smolts were acclimated at Sawtooth FH in 2008.

SOCKEYE SALMON

BY 2008

The Sawtooth FH crew monitored an adult sockeye salmon *O. nerka* weir on Redfish Lake Creek in the summer and fall of 2008. The Redfish Lake Creek adult trap was in operation from July 8 through October 24. The Sawtooth FH weir and trap were operated for chinook and sockeye as well from June 11 to June 29 as a velocity barrier and fully in place June 30 to September 18. A total of 598 fish were trapped, 218 at the SFH weir and 380 at the Redfish Lake Creek trap. The adult sockeye were immediately transferred to Eagle Fish Hatchery for hatchery spawning purposes.

BY 2007

Eagle Fish Hatchery and Burley Fish Hatchery shipped an estimated total of 231,786 eyed eggs to Sawtooth Fish Hatchery. A total of 184,134 fish were marked September 23-25. This is a difference of 47,652 eggs after pickoff and mortalities while at Sawtooth Fish Hatchery. This summary is based on the marking inventory and mortality records.

The eggs arrived in three separate shipments between November 20 and December 7. The eggs arrived with 698 to 1094 FTU's. Ponding began on January 29 and ended March 18 with an average of 1892 FTU's at ponding.

Eggs were hand picked every three to seven days from eyed egg to ponding. A total of 17,538 dead eggs were removed before ponding. Total eyed egg to ponding survival was 92.5%. A total of 214,248 swim up fry were ponded. All lots of swim up fry were ponded into one of four 92 cubic foot green tanks. Initial water flows were set at 20 gallons per minute.

As target rearing densities were approached, the fry were transferred from four green tanks into two cement vats with water flows near 50 gpm specific pathogen free well water. These transfers occurred on two dates, March 25 and April 17. By August 15, the fish were thinned into eight vats, with water flows at 75 gpm.

Ad clipping and Coded Wire Tagging (CWT) marking began September 23. The Mass Automated Tagging System (MATS) with its automated marking machines marked most of the fish with no significant mortality due to marking. The Sawtooth Overwinter Group was ad-clipped and CWT tagged, while the pre-smolts release groups were ad-clipped only. Passive Integrated Transponders (PIT) were injected by Sockeye Research into 1,000 fish from each of the three pre-smolt release groups (Redfish, Alturas, and Pettit Lakes) on September 25 and 26. At the time of pre-smolt release on October 6 and 7, the fish averaged 66 fish per pound and 3.82 inches in total length. Mortality was recorded daily from ponding to release. A total of 30,114 fish were lost to mortality for a 12.9% loss.

BY 07 Sockeye October 2 and 3, 2008 Pre-Smolt Releases

	<u>Ad-clip</u>	<u>Ad-PIT</u>	<u>Total</u>
Redfish	56,093	1,000	56,093
Alturas	15,864	1,000	16,864
Pettit	<u>10,048</u>	<u>1,000</u>	<u>10,048</u>
Totals	84,005	3,000	83,002

Sockeye released in Redfish Lake were placed into a barge and released into the pelagic zone of the lake. Sockeye released into Alturas and Pettit Lakes were loaded into three 300 gallon tank trucks and transported to each lake. Alturas fish were

released directly from the boat dock and Pettit fish were loaded in coolers onto a boat and released into the pelagic zone of the lake.

The remaining 99,530 Ad/CWT marked fish were moved outside in buckets to small raceways 3, 4, 5, and 6. On October 7 the fish were 54 to the pound. The river was 52.1F and clear, and vat water was 47.9F. Their release is scheduled for Spring 2009.

BY 06 sockeye that remained overwinter at SFH, were released as smolts into Redfish Lake Creek below the trap. A total of 73,808 smolts were released on May 7, 2008. Smolts averaged 25.8 fpp and 5.18 inches in length. All of the fish were AD/CWT including 984 PIT.

All sockeye salmon fish feed, fish marking and personnel costs are covered by Sockeye Recovery Project funds.

RAINBOW TROUT

Sawtooth FH personnel were involved in stocking triploid catchable rainbow trout *O. mykiss* that were reared at Nampa Fish Hatchery and transferred to Sawtooth for redistribution. This project was funded by IDFG dollars (license-funded) with cooperation from the United States Fish and Wildlife Service (USFWS). Through this program, Sawtooth FH stocked 46,129 catchable-sized rainbow trout in 2008 (Table 9). This is a very popular program among area visitors and businesses.

MOUNTAIN LAKE STOCKING

SFH personnel continued high mountain lake stocking of westslope cutthroat trout by fixed wing aircraft in the Salmon Region. On September 24, 29, 30 and October 1, Sawtooth Flying Service using a Cessna 185 flew five flights to complete stocking of lakes in rotations "C" and "A". Forty four lakes were stocked in rotation "A" for a total of 23,950 fry. In addition to "A" lakes, 29 lakes that were not stocked last year in rotation "C" were stocked. A total of 22,375 were stocked into these lakes. Another 3 lakes located in Region 4 were stocked with 3,500 fry. Sixteen lakes in Region 3B were stocked with 14,050 fry. Excess fry totaling 11,000 were stocked into Yellowbelly Lake.

Approximately 75,000 Westslope cutthroat eggs were received on July 15, 2008. Unfortunately, all of the eggs died. A second group of 75,000 eggs were received July 30, 2008. Size of the fish at stocking was between 8 and 9 fish per gram or about 4000 per pound. Cost of the seven flights was \$5,624.00. Based on stocking numbers and mortality counts, the second group totaled 76,000 fry.

HATCHERY IMPROVEMENTS

There were many improvements made to the hatchery and corresponding infrastructure as follows: Repairs were made to the broken pipelines leading to control box 5. After the pipeline repair was complete, SFH had the dug up area and adjacent

area re-surfaced with asphalt. Several other small areas around the hatchery had asphalt applied. While the pipeline repairs were being made, the sedimentation pond had to be de-watered and a break in the dike between two of the pond cells was repaired with the use of a track hoe. Beetle killed trees were removed from the grounds. SFH personnel placed verbenone pouches on lodgepole pine trees to prevent beetle kill.

Test pumping on the new well #6 replacing well # 2, provided about 800 gpm of water. During test pumping, it was discovered that the well was 9 feet shorter than it should have been and had it been deeper there was a likelihood of obtaining more water. While the de-gassing towers for wells #1 and #2 were not in use, the old degassing Koch rings were replaced. The towers were pressure washed, cleaned, leaks fixed, and painted. Well #7 pumps approximately 440 gpm as measured over a weir, well #6 about 860 gpm. Wells #6 and #7 together pump about 1,235 gpm. Well #1 measures 500 gpm. SFH staff built an addition onto well house #2 covering the piping system brought into the well house from the addition of wells #6 and #7.

The dormitory cabinets were refinished and resealed. The kitchen countertops were replaced in all residences. A new hot water heater for the dorm and dish washer was installed in residence 4. The interiors of residences 2 and 4 were painted this year.

Crew members from Eagle Fish Hatchery brought supplies and expertise to Sawtooth to mix and pour concrete to provide a smooth surface to a drain channel that been previously cut in the vat room floor. The drain channel will be used in conjunction with rearing troughs for sockeye and Westslope cutthroat.

The hatchery intake building had new lighting installed and the interior of the building was painted. New light fixtures were installed in the spawn shed. The base station radio antenna was repaired.

PERSONNEL

Hatchery personnel were involved in several projects during the 2007/2008 reporting period and include: helping IDFG Fisheries Research personnel with Idaho Supplementation Studies (ISS), redd count monitoring on tributaries to the Salmon River, conducting educational presentations, conducting a Free Fishing Day clinic, providing spawning assistance to other IDFG hatchery programs, assisting in IDFG research projects, and staff assisted with check stations monitoring the upper Salmon River Chinook salmon fishery. Brent Snider attended the annual anadromous fish meeting and the annual LSRCP meeting. Brent attended management training seminars and database training. Lars Alsager attended the Northwest Fish Culture Conference, the Applied Leadership Course in Boise and the Coldwater Fish Course in Bozeman. Mel Hughes attended OSHA Awareness training in Boise, health and safety seminar at St. Lukes Hospital and promotional interviews.

Roger Elmore took a promotion to manager at Lookingglass Fish Hatchery in Oregon. Fish Culturist, Mel Hughes was promoted to assistant manager at Sawtooth Fish Hatchery. Lars Alsager was promoted to assistant manager and is working at the

Pahsimeroi Fish Hatchery. Danielle Dorsch and Chris Jeszke are the new Fish Culturists.

Table 1. Sawtooth FH spring chinook salmon trapped, spawned, and fish disposition - 2008.

Total Fish Trapped: 5,620		Run Timing: 7/1/08 to 9/18/08 Peak of Return: 7/11/08				
1,740	Marked Jacks	52	Unmarked Jacks	1,792	Total Jacks	
1,780	Marked Males	254	Unmarked Males	2,034	Total Males	
1,708	Marked Females	89	Unmarked Females	1,794	Total Females	
5,228	Marked Salmon	392	Unmarked Salmon	5,620	Total Salmon	
Fish Disposition:						
		Jacks	Males	Females	Jills	Totals
	Prespawning Mortality	2	14	20	0	36
	Spawned	45	551	593	1	1,190
	Killed: Not used *	19	89	6	0	114
	Released above weir	52	252	85	0	389
	Trap Mortalities	0	9	30	0	39
	Surplus to Food Banks	1,212	66	66	0	1,344
	Surplus Yankee Fork**	87	755	596	0	1,438
	Surplus to Rendering Plant	375	298	397	0	1,070
	Totals:	1,792	2,034	1,793	1	5,620

* Note: The Carcasses from spawning and pre-spawning mortalities were sampled for disease information, frozen, and later distributed to a rendering plant along with some fish that were killed and not used. ** Fish transferred for Shoshone-Bannock Tribes Yankee Fork Supplementation Program.

Males	Females	Green	Eyed	%
Spawned	Spawned	Eggs	Eggs	Eye
596 (includes jacks)	594	2,894,444*	2,701,418	93.3

*A total of 594 females were spawned, 10 females eggs were culled due to high ELISA scores.

Table 2. Rearing record for spring chinook salmon at Sawtooth FH, BY06.

Starting green inventory	223,758
Resulting eyed eggs	188,742
Survival to eye-up	84.4%
Eggs culled-High ELISA values	0
Fry ponded	179,573
Survival to ponding	95.1%
Smolts released	174,132
Survival from ponding to release	97.0%
Survival from green to release	77.8%
Weight of smolts produced	9,111 lbs.
Number fish per pound (smolts)	19.1
Pounds of feed fed	11,060 lbs.

Conversion rate	1.21
Feed cost/1000 smolts*	\$ 152.64
*(feed cost <i>only</i> - excludes labor & overhead)	

Table 3. Sawtooth spring chinook smolt distribution, April 23, 2008.

Mark	Number Released	Location
*CWT only	174,132	SFH Weir (4/23/08)

* Includes 14,922 PIT tags.
No. / lb Average 19.1

Table 4. SFH steelhead trapped, spawned and fish disposition, 2008.

Fish Disposition	Run Timing	Peak of Return
	3/21/08 to 5/06/08	4/02/08 to 4/26/08
Fish Trapped	4,187	(2,272 males, 1,915 females)
Fish Released	23	(16 males, 7 females)
Fish Spawned	1,134	(567 males, 567 females)
Pre-spawn Mortality	0	
Killed, Not Used (rendering plant)	3,030	
Charitable/Tribal Distribution	1,633	
Fish Recycled Through Fishery	<u>0</u>	
	4,164	(4,141 marked, 23 unmarked)

Table 5. East Fork (EF) Natural steelhead trapped, spawned, and fish disposition, 2008.

Fish Disposition	Run Timing	Peak of Return
	3/24/08 to 5/14/08	4/17/08
Fish Trapped:	119	(83 males, 36 females)
Fish Released:	37	(27 males, 10 females)
Fish Spawned	77	(51 males, 26 females)
Pre-spawn Mortality	0	
Killed, not used	5	(5 males, 0 females)

Table 6. Squaw Creek "B-run" steelhead trapped, spawned and fish disposition, 2008.

Fish Disposition	Run Timing 4/7/08 to 4/30/08	Peak of Return 4/10/08
Fish Trapped	22 (9 males, 13 females)	
Fish Released*	1 (0 males, 1 female)	
Fish Spawned**	24 (10 males: 6 used 2+ times, 14 females)	
Pre-spawn Mortality	0	
Killed, Not Used	6	

* Fish released above weir were "A-run size. **Includes marked males that were under B-sized, but by real time, CWT reading indicated that fish were of "B" origin.

Table 7. Steelhead spawning record, 2008.

Spawning Station	Males Spawned	Females Spawned	Green Eggs	Eyed Eggs	% Eye
Sawtooth	567	567	2,614,775	2,333,978	89.3
East Fork	51	26	124,031	100,263	80.84
Squaw Cr. "B"	10	14	103,746	68,988	66.5
Pahsimeroi	213	213	1,012,676	883,700	87.3

Table 8. 2008 Sawtooth FH Steelhead Egg Shipments.

HATCHERY or OFF-SITE LOCATION	NUMBER SHIPPED	STOCK
Shoshone-Bannock Streamside Incubators	0 624,654	Pahsimeroi Sawtooth
Hagerman National Fish Hatchery	1,151,100 215,000	Sawtooth Pahsimeroi
Hagerman State Fish Hatchery	221,700	Pahsimeroi
Magic Valley Fish Hatchery	513,550 100,263 68,988	Sawtooth East Fork Squaw Creek
Total Eggs Shipped	871,700	Pahsimeroi
Total Eggs Shipped	2,289,304	Sawtooth
Total Eggs Shipped	100,263 68,988	East Fork Squaw Creek
Total Eggs Shipped	3,330,255	All Stocks

Table 9. Planting sites and numbers of catchable triploid rainbow trout stocked in the Stanley Basin by Sawtooth FH, 2008.

Site	Number
Sawtooth Kids Pond	875
Stanley Lake	3,000
Little Bayhorse Lake	1,000
Kelly Creek Pond	1,200
Salmon River	28,200
Yankee Fork Dredge Ponds	3,500
Valley Creek	4,000
Blue Mountain Meadow Pond	300
Squaw Creek Pond	954
Grouse Lake	100
Big Bayhorse Lake	1,000
Alturas Lake	200
Totals	46,129

