

Idaho Anadromous Fish Marking Program for Steelhead and Chinook and Sockeye Salmon

2009 Marking Season



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Introduction

The Idaho Anadromous Fish Marking Program started in 1975 with a minimal crew and staff. Through the years, the program advanced both in the number of fish marked and the method of marking. Prior to 2002, all of the steelhead and Chinook salmon marked by the program were marked and counted by manual crews. However, the purchase of AutoFish technology from NMT in 2002 began to revolutionize fish marking in Idaho. By 2004, IDFG had three Automated Fish Marking trailers that processed almost all of the fish and increased marking efficiency and decreased marking time. In 2009, IDFG contracted all anadromous fish marking to PSMFC. Marking from April 17th, 2009 through the end of 2009 was conducted by the PSMFC Fish Marking Crew. This report summarizes the fish marked since PSMFC began marking the anadromous fish in Idaho.

The Idaho Anadromous Fish Marking Crew under PSMFC consists of 1 Tagging Coordinator, 6 Trailer Operators, 8 Tagging Trailer Assistants, and various temporaries. The program is based out of Lewiston, Idaho and mass-marks nearly all of the anadromous fish at the following nine hatcheries (those not mass-marked are part of other research and supplementation projects): Clearwater, Hagerman National, Oxbow, Rapid River, McCall, Pahsimeroi, Sawtooth, Magic Valley, and Niagara Springs. At these hatcheries, steelhead (*Oncorhynchus mykiss*), sockeye salmon (*Oncorhynchus nerka*), and Chinook salmon (*Oncorhynchus tshawytscha*) all receive a variety of marks, including coded-wire tags (CWT), adipose fin-clips, and Passive Integrated Transponder (PIT) tags.

Coded-wire tags are implanted from April through September and are applied as specified by mark plans that are developed by the IDFG research division in order to monitor harvest rates in a mixed stock fishery. The tags also provide information that improves the

understanding and management of salmon and steelhead populations. Concurrently, the adipose fin is removed from salmon and steelhead to differentiate hatchery raised fish from ESA listed stocks in order to have an active harvest fishery within the state. PIT tags are implanted from November through April, and give individual fish unique codes that can be detected by antenna arrays throughout Snake and Columbia River dams or at in-stream monitoring sites.

The objectives of the Idaho Anadromous Fish Marking Program are as follows:

- Evaluate the contribution rate of hatchery origin fish to tribal, sport, and commercial harvest.
- Evaluate the Idaho fish propagation programs' genetic and ecological effects on natural salmon and steelhead populations.
- Evaluate the success of new fish propagation techniques at fish hatcheries.
- Evaluate the success of restoration actions designed to increase natural production of depressed salmon and steelhead populations.
- Evaluate the impacts of human caused habitat changes on salmon and steelhead.
- Measure and evaluate the recovery of ESA listed salmon and steelhead populations.
- Identify Hatchery and Wild Salmonids in mixed stock fisheries.
- Maintain biological diversity and genetic integrity of salmon and steelhead stocks in Idaho.
- Monitor in-season numbers or returns to manage harvest of hatchery origin fish.
- Forecast returns of Hatchery stocks for fishery and adult brood stock needs.

Methods

Fish were marked with either a coded-wire tag or adipose fin removal by PSMFC personnel at six Chinook salmon facilities, four steelhead facilities, and one sockeye facility from April through September 2009. Two, 48' five line, and one, 53' six line Automated Fish Marking trailers were used, as well as a 16 person manual clipping trailer to successfully mark the fish. Additionally, PIT tagging of brood year (BY) 2009 steelhead at Hagerman National Hatchery occurred in November.

Fish are delivered to the Automated Fish Marking trailers via either forklift operated by hatchery personnel or a Canavac fish pump operated by members of the fish marking crew.

Once in the trailer, fish are either hand fed (5 line trailers) or pumped (6 line trailer) into the dual port sorter volitional entry (VE). As fish proceed through the sorter, video imaging measures the total length of each fish within 0.1 mm accuracy. Fish are then diverted to line VEs depending on length. Singly, fish then proceed down the line channel through a series of sensors and gates to the headmold and clamping area. Once a fish triggers the headmold sensor, the clamps close and secure the fish to begin the marking process. A camera then captures an image of the adipose fin, and the clipper uses that image to find the fin and remove it. After removal, a second image is taken to insure that the fin is successfully removed. Simultaneously, a coded-wire tag is implanted into the snout of the fish via a Mark IV at the end of the line. The fish is then released from the clamps and slides through a Quality Control Device (QCD) to ensure the presence of a CWT. Successfully clipped and tagged fish are sent out to proper raceways, ponds, or vats by way of a discharge pipe. If there is no tag or the fin was not properly removed, the fish will be diverted into a reject bucket to be clipped and tagged manually. The MATS computer tabulates and displays the total number of fish successfully tagged, clipped, the overall success percentage, and the fish marked per hour.

In the manual section, rejected fish are anesthetized, checked to ensure that they are properly clipped then sent through a second QCD. Any fish that is rejected from the QCD, is retagged and dropped through the QCD again. When the manual section is only clipping the adipose fin, the NMT Individual Fish Counter is used to tally the total number of fish done.

At all facilities, except Oxbow, tag retention studies were conducted to determine the actual CWT rate for each tagged raceway and/or tag code. A minimum of 300 tagged fish per raceway/pond/vat or tag code were held for 21 days to monitor tag loss. After 21 days, each fish was checked using a V-detector for the presence of a coded-wire tag and adipose fin-clip quality.

After marking was complete at each facility and before moving to the next facility each marking trailer was disinfected following the Idaho Automated Trailer Disinfection Protocol. This first step of this protocol requires all surfaces inside the trailer are first scrubbed with diluted liquid Lysol. Then, a 350 ppm Bleach Clorox solution is ran through the trailer for at least 45 minutes. All nets, buckets, and other equipment are also disinfected in this 350 ppm solution. Upon arrival at the next facility the entire trailer is flushed with fresh hatchery water before fish begin to be processed. This same procedure is also used with manual and PIT tagging trailers.

Results

The Idaho Anadromous Fish Marking Program successfully adipose fin-clipped and coded-wire tagged 100% of the fish designated for 2010 releases. A total of 15,739,707 fish were marked with various mark types (Table 1).

Hatchery	CWT ONLY	AD/CWT	AD ONLY	PIT TAG	TOTAL
Clearwater CH	268,330	557,046	1,635,233	0	2,460,609
Clearwater STHD	0	120,904	389,397	0	510,301
Hagerman Nat.	126,680	194,158	936,243	22,564	1,279,645
Magic Valley	97,516	489,165	1,060,976	0	1,647,657
McCall	100,953	208,389	1,014,671	0	1,324,013
Niagara Springs	0	240,810	1,616,468	0	1,857,278
Oxbow	0	188,313	0	15,004	203,317
Pahsimeroi	0	121,746	1,061,318	0	1,183,064
Rapid River	0	104,851	3,132,168	0	3,237,019
Sawtooth	203,057	123,433	1,550,616	0	1,877,106
Sawtooth Sockeye	100,092	0	59,606	0	159,698
Total	896,628	2,348,815	12,456,696	37,568	15,739,707

Table 1. Mark Year 2009 Mark Summary from April through November

Tag retention studies indicated high retention rates across all hatcheries. The retention rates had the following ranges:

- Clearwater Hatchery Chinook – 95.68% - 100% with a mean of 98.66%
- Pahsimeroi Hatchery Chinook – 97.59% - 98.26% with a mean of 97.93%
- Sawtooth Hatchery Chinook – 95.33% - 99.33% with a mean of 97.89%
- Rapid River Hatchery Chinook – 98.71% - 100% with a mean of 99.35%
- McCall Hatchery Chinook – 93.62% - 99.32% with a mean of 96.47%
- Clearwater Hatchery Steelhead – 97.68% - 99.67% with a mean of 98.68%
- Magic Valley Hatchery Steelhead – 96.67% - 99.67% with a mean of 98.55%
- Hagerman National Hatchery Steelhead – 97.67% - 99.67% with a mean of 98.84%
- Niagara Springs Hatchery Steelhead – 98.00% - 100% with a mean of 99.13%

Raceway and tag code specific tag retentions can be seen in Tables 2 – 15 for each hatchery.

Figure 1. Hatchery Locations for Idaho Anadromous Fish Marking Program



Oxbow Hatchery



Oxbow Hatchery Chinook

At Oxbow Hatchery, a total of 188,313 fall-run Chinook salmon were marked with a coded-wire tag and adipose fin-clip in mid April over a three and a half day period (Table 2); additionally, 15,004 PIT tags were applied during that time. Idaho Power Company provided 10,000 PIT tags, while the remaining 5,000 PIT tags were purchased by the U.S. Army Corp of Engineers. The small PIT tagging trailer (P2) was used during the PIT tagging procedure; while a 48' Automated Fish Marking Trailer (M2) processed the fish receiving a coded-wire tag and an adipose fin-clip. Prior to marking, M2 was hauled to Oxbow Hatchery by IDFG truck hauler, Bob Belveal, while P2 was transported via the Idaho Anadromous Fish Marking Crew. Fish were transported into the two trailers via 5-gallon buckets and returned to raceways through 4-inch aluminum irrigation pipes. Coded-wire tag retentions were not conducted at Oxbow Fish Hatchery because the fall-run Chinook salmon were released less than 21 days after the fish marking was completed.

Oxbow Fish Hatchery									
Raceway: 2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Raceway Total	Stock
4/20/09	AM	M2	AD/CWT	10-76-82	16,996	2,100	19,096		
4/20/09	PM	M2	AD/CWT	10-76-82	28,708	6,023	34,731		
4/21/09	AM	M2	AD/CWT	10-76-82	3,028	10,785	13,813		
4/21/09	AM	M2	AD/CWT	10-75-82	10,407	1,295	11,702		
4/21/09	PM	M2	AD/CWT	10-75-82	18,920	6,318	25,238		
4/20-4/23	AM	P2	AD/PIT tag	N/A	N/A	15,004	N/A	119,584	Hells Canyon

Oxbow Fish Hatchery									
Raceway: 1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Raceway Total	Stock
4/22/09	AM	M2	AD/CWT	10-75-82	25,261	4,850	30,111		
4/22/09	AM	M2	AD/CWT	10-74-82	2,320	0	2,320		
4/22/09	PM	M2	AD/CWT	10-74-82	18,209	5,697	23,906		
4/23/09	AM	M2	AD/CWT	10-74-82	23,517	3,879	27,396	83,733	Hells Canyon

Tag Code Totals:	10-76-82	67,640	Total Ad/CWT:	188,313
	10-75-82	67,051	Total PIT:	15,004
	10-74-82	53,622	Total Marked:	203,317

Table 2. Daily Tagging Summary at Oxbow Fish Hatchery

Clearwater Hatchery



Clearwater Fish Hatchery Chinook – Trip 1

The Idaho Anadromous Fish Marking Crew marked spring-run Chinook salmon at Clearwater Hatchery on two separate occasions. The first marking event at Clearwater Hatchery occurred in early May, and included both the Powell and South Fork of the Clearwater (SF Clearwater) stocks of Chinook salmon. A total of 836,595 spring-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip over a five day period (Table 3). The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. Prior to marking, M2 was hauled from Oxbow Hatchery to Clearwater Hatchery by IDFG truck hauler, Bob Belveal, while M3 was transported by the Idaho Anadromous Fish Marking Crew from the Lewiston compound to Clearwater Hatchery. Fish were supplied to the two trailers via forklift operated by hatchery personnel and sent to raceways through 4-inch aluminum irrigation pipes. For coded-wire tag retention studies, only raceway W4A required that fish be held in a net pen. The remaining tagged raceways were all 100% coded-wire tagged, and therefore did not necessitate segregating fish. Coded-wire tag retentions were conducted 21 days after marking by IDFG employee Judy Dillon and can also be seen in Table 3. Power surges while at Clearwater Hatchery resulted in two Mark IV tagging machines having major electrical failures, and one entire trailer had a main computer go down.

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W4B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/4/2009	BOTH	M2	Ad Only	N/A	42,002	12,999	55,001	55,001	Powell

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W4A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/4/2009	BOTH	M2	Ad/CWT	10-97-77	0	4,429	4,429		
5/4/2009	BOTH	M2	Ad/CWT	10-26-83	22,458	0	22,458		
5/5/2009	AM	M2	Ad/CWT	10-26-83	34,759	0	34,759		
5/5/2009	AM	M2	Ad Only	N/A	2,342	1,318	3,660		
5/5/2009	AM	M2	Ad/CWT	10-97-77	5,765	4,039	9,804	75,110	Powell

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/5/2009	PM	M2	CWT Only	10-94-70	0	10,453	10,453		
5/5/2009	PM	M2	CWT Only	10-99-82	49,833	0	49,833		
5/6/2009	AM	M2	CWT Only	10-99-82	6,221	0	6,221		
5/6/2009	AM	M2	CWT Only	10-94-70	0	1,383	1,383		
5/6/2009	AM	M2	CWT Only	10-96-82	7,113	0	7,113	75,003	Powell

Table 3. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 1

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W3A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/6/2009	AM	M2	CWT Only	10-96-82	4,840	0	4,840		Powell
5/6/2009	AM	M2	CWT Only	10-94-70	0	660	660		
5/6/2009	AM	M2	Ad/CWT	10-73-82	23,969	2,178	26,147		
5/6/2009	PM	M2	Ad/CWT	10-73-82	36,399	5,111	41,510		
5/6/2009	PM	M2	Ad/CWT	10-97-82	1,231	0	1,231	74,388	Powell

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: E2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/6/2009	PM	M2	CWT Only	10-96-82	34,491	0	34,491		
5/6/2009	PM	M2	CWT Only	10-94-70	0	8,496	8,496		
5/7/2009	PM	M2	CWT Only	10-96-82	0	2,000	2,000		
5/7/2009	PM	M2	CWT Only	10-94-70	0	2,468	2,468		
5/8/2009	PM	M2	CWT Only	10-96-82	3,772	1,296	5,068	52,523	Powell

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W3B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/7/2009	AM	M2	Ad Only	N/A	36,004	14,000	50,004	50,004	SF Clearwater

Table 3. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 1 (continued)

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/7/2009	PM	M2	Ad/CWT	10-98-82	45,099	5,048	50,147	50,147	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: W1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/7/2009	PM	M2	Ad/CWT	61-27-67	11,330	2,430	13,760		
5/8/2009	AM	M2	Ad/CWT	61-27-67	48,374	4,498	52,872		
5/8/2009	AM	M2	CWT Only	61-27-67	38,015	8,696	46,711		
5/8/2009	AM	M3	CWT Only	61-27-67	37,911	4,098	42,009		
5/8/2009	PM	M3	CWT Only	61-27-67	39,575	7,009	46,584	201,936	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: E2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/4/2009	AM	M3	Ad only	N/A	21,370	6,843	28,213		
5/4/2009	PM	M3	Ad only	N/A	32,474	14,322	46,796	75,009	Powell

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: E3B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/4/2009	PM	M3	Ad only	N/A	458	1,049	1,507		
5/5/2009	AM	M3	Ad only	N/A	42,658	9,501	52,159		
5/5/2009	PM	M3	Ad only	N/A	14,648	6,700	21,348	75,014	Powell

Table 3. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 1 (continued)

Clearwater Fish Hatchery Chinook Trip 1									
Raceway: E3A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/5/2009	PM	M3	Ad/CWT	10-97-82	10,291	2,610	12,901		
5/6/2009	AM	M3	Ad/CWT	10-97-82	35,797	3,762	39,559	52,460	Powell

Tag Code Totals:	10-94-70	23,460	Total Ad/CWT:	309,577
	10-96-82	53,512	Total CWT Only:	268,330
	10-97-77	14,233	Total Ad Only:	258,688
	10-26-83	57,217	Total Marked:	836,595
	10-99-82	56,054		
	10-73-82	67,657		
	10-97-82	53,691		
	10-98-82	50,147		
	61-27-67	201,936		

CWT Retention:	
W4A	95.68%
W2A	96.67%
W3A	98.68%
E2A	100.00%
W2B	99.33%
W1A	96.69%
E3A	98.68%

Table 3. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 1 (continued)

Clearwater Fish Hatchery Chinook – Trip 2

The second marking event at Clearwater Hatchery occurred in late May, and again included both the Powell and SF Clearwater stocks of spring-run Chinook salmon. A total of 1,624,014 spring-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip. The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish over a nine day period (Table 4). Prior to marking, M3 was hauled from Sawtooth Hatchery to Clearwater Hatchery by IDFG truck hauler, Bob Belveal, while M2 was transported by the Idaho Anadromous Fish Marking Crew from Sawtooth Hatchery to Clearwater Hatchery. Fish were supplied to the two trailers via forklift operated by hatchery personnel and sent to raceways through 4-inch aluminum irrigation pipes. For coded-wire tag retention studies, approximately 300 fish were held in net pens in raceways 2A, 3A, 4A, 5A, and 9A for the 21 day holding period. The coded-wire tag retentions were conducted 21 days after marking by IDFG employee Judy Dillon and can also be seen in Table 4.

Just previous to the start of marking at Clearwater Hatchery on this trip, Brian Toews of NMT, arrived at Clearwater Hatchery to work on the electrical systems in both M2 and M3. He replaced the main computer that was lost during the first trip to Clearwater Hatchery. Then, he removed the UPS backup battery systems in the trailers, which seemed to be one of the main sources of power glitches within the trailers. He also made sure all power cords and plug-ins had appropriate grounding. These upgrades seemed to greatly reduce the electrical problems in the trailers.

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 1B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/26/2009	PM	M2	Ad Only	N/A	23,537	18,748	42,285		
5/27/2009	AM	M2	Ad Only	N/A	25,449	3,266	28,715	71,000	Powell

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/27/2009	AM	M2	Ad Only	N/A	11,694	902	12,596		
5/27/2009	PM	M2	Ad Only	N/A	43,754	7,050	50,804		
5/28/2009	AM	M2	Ad Only	N/A	6,301	1,299	7,600	71,000	Powell

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 3B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/28/2009	AM	M2	Ad Only	N/A	31,028	4,419	35,447		
5/28/2009	PM	M2	Ad Only	N/A	29,750	5,803	35,553	71,000	Powell

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 4B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/28/2009	PM	M2	Ad Only	N/A	17,443	2,876	20,319		
5/29/2009	AM	M2	Ad Only	N/A	39,159	6,228	45,387		
5/29/2009	PM	M2	Ad Only	N/A	4,312	1,003	5,315	71,021	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 5B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/29/2009	PM	M2	Ad Only	N/A	35,631	5,840	41,471		
6/1/2009	AM	M2	Ad Only	N/A	23,529	6,000	29,529	71,000	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 6B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/1/2009	AM	M2	Ad Only	N/A	19,464	4,364	23,828		
6/1/2009	PM	M2	Ad Only	N/A	34,913	12,262	47,175	71,003	SF Clearwater

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 7B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/1/2009	PM	M2	Ad Only	N/A	11,149	5,282	16,431		
6/2/2009	AM	M2	Ad Only	N/A	31,454	11,808	43,262		
6/2/2009	PM	M2	Ad Only	N/A	2,378	1,913	4,291		
6/3/2009	AM	M2	Ad Only	N/A	4,753	2,263	7,016	71,000	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 8B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/3/2009	AM	M2	Ad Only	N/A	46,672	9,668	56,340		
6/3/2009	PM	M2	Ad Only	N/A	11,160	3,500	14,660	71,000	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 9B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/3/2009	PM	M2	Ad Only	N/A	40,361	12,841	53,202		
6/4/2009	AM	M2	Ad Only	N/A	14,009	3,789	17,798	71,000	SF Clearwater

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 10B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/4/2009	AM	M2	Ad Only	N/A	35,480	7,919	43,399		
6/4/2009	PM	M2	Ad Only	N/A	20,555	7,046	27,601	71,000	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 11B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/4/2009	PM	M2	Ad Only	N/A	25,294	9,711	35,005		
6/5/2009	AM	M2	Ad Only	N/A	28,396	7,600	35,996	71,001	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: W5B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/5/2009	BOTH	M2	Ad Only	N/A	56,958	16,500	73,458	73,458	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/26/2009	PM	M3	Ad Only	N/A	11,338	1,708	13,046		
5/27/2009	AM	M3	Ad Only	N/A	43,455	14,500	57,955	71,001	Powell

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/27/2009	PM	M3	Ad/CWT	10-87-82	33,866	3,858	37,724		
5/27/2009	PM	M3	Ad Only	N/A		150	150		
5/28/2009	AM	M3	Ad/CWT	10-87-82	4,648	322	4,970		
5/28/2009	AM	M3	Ad/CWT	10-91-82	16,108	1,399	17,507		
5/29/2009	AM	M3	Ad Only	N/A		2,791	2,791	63,142	Powell

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 3A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/28/2009	PM	M3	Ad/CWT	10-91-82	21,147	2,359	23,506		
5/28/2009	PM	M3	Ad Only	N/A	0	137	137		
5/28/2009	PM	M3	Ad/CWT	10-92-82	39,447	4,297	43,744	67,387	Powell

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 4A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/29/2009	AM	M3	Ad/CWT	10-72-82	27,308	2,705	30,013		
5/29/2009	AM	M3	Ad Only	N/A		17	17		
5/29/2009	PM	M3	Ad Only	N/A	7,047	4,287	11,334		
6/1/2009	AM	M3	Ad Only	N/A	21,138	8,502	29,640	71,004	SF Clearwater

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 5A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/29/2009	PM	M3	Ad/CWT	10-72-82	8,000	2,000	10,000		
5/29/2009	PM	M3	Ad/CWT	10-72-82	17,325	2,680	20,005		
5/29/2009	PM	M3	Ad Only	N/A		27	27		
6/1/2009	AM	M3	Ad Only	N/A	17,789	6,271	24,060		
6/1/2009	PM	M3	Ad Only	N/A	11,385	5,501	16,886	70,978	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 6A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/1/2009	PM	M3	Ad Only	N/A	37,198	15,391	52,589		
6/2/2009	AM	M3	Ad Only	N/A	13,420	5,000	18,420	71,009	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 7A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/2/2009	AM	M3	Ad Only	N/A	30,735	9,709	40,444		
6/2/2009	PM	M3	Ad Only	N/A	5,677	3,549	9,226		
6/3/2009	AM	M3	Ad Only	N/A	16,037	5,302	21,339	71,009	SF Clearwater

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 8A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/3/2009	AM	M3	Ad Only	N/A	30,203	9,012	39,215		
6/3/2009	PM	M3	Ad Only	N/A	22,336	9,450	31,786	71,001	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 9A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/3/2009	PM	M3	Ad/CWT	10-70-82	16,568	3,119	19,687		
6/3/2009	PM	M3	Ad Only	N/A	0	36	36		
6/4/2009	AM	M3	Ad/CWT	10-70-82	9,316	997	10,313		
6/4/2009	AM	M3	Ad Only	N/A	0	18	18		
6/4/2009	PM	M3	Ad Only	N/A	18,859	7,803	26,662		
6/5/2009	AM	M3	Ad Only	N/A	10,984	3,300	14,284	71,000	SF Clearwater

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 10A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/4/2009	AM	M3	Ad/CWT	10-70-82	26,957	3,043	30,000		
6/4/2009	AM	M3	Ad Only	N/A	0	39	39		
6/4/2009	PM	M3	Ad Only	N/A	31,230	9,731	40,961	71,000	SF Clearwater

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Chinook Trip 2									
Raceway: 11A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/5/2009	AM	M3	Ad Only	N/A	9,271	0	9,271		
6/5/2009	BOTH	M3	Ad Only	N/A	45,150	16,579	61,729	71,000	SF Clearwater

Tag Code Totals:	10-87-82	42,694	Total Ad/CWT:	247,469
	10-91-82	41,013	Total Ad only:	1,376,545
	10-92-82	43,744	Total Marked:	1,624,014
	10-72-82	60,018		
	10-70-82	60,000		

CWT Retention:	
2A	99.56%
3A	99.78%
4A	98.68%
5A	100.00%
9A	99.33%

Table 4. Daily Tagging Summary at Clearwater Fish Hatchery Chinook Trip 2 (continued)

Clearwater Fish Hatchery Steelhead

The Idaho Anadromous Fish Marking Crew returned once more to Clearwater Hatchery to mark the Dworshak B-run stock of summer steelhead in late July. A total of 510,301 summer steelhead were marked with a coded-wire tag and/or adipose fin-clip over a three day period (Table 5). The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. Prior to marking, M2 was hauled from McCall Hatchery to Clearwater Hatchery by IDFG truck hauler, Bob Belveal, while M3 was transported by the Idaho Anadromous Fish Marking Crew from McCall Hatchery to Clearwater Hatchery. Fish were supplied to the two trailers via forklift operated by hatchery personnel and sent to raceways through 4-inch aluminum irrigation pipes. For coded-wire tag retention studies, 300 fish were held in a net pen in raceway E8A for 21 days, while no fish were segregated in raceway W8A since it was a 100% coded-wire tag raceway. After the 21 day waiting period, coded-wire tag retentions were conducted by IDFG employee Judy Dillon and can also be seen in Table 5.

Clearwater Fish Hatchery Steelhead									
Raceway: W9A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/27/2009	AM	M2	Ad only	N/A	26,999	7,244	34,243		
7/27/2009	PM	M2	Ad only	N/A	29,157	9,500	38,657	72,900	Dworshak B

Clearwater Fish Hatchery Steelhead									
Raceway: W7A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/28/2009	PM	M2	Ad only	N/A	22,185	7,657	29,842		
7/29/2009	AM	M2	Ad only	N/A	34,495	8,563	43,058	72,900	Dworshak B

Clearwater Fish Hatchery Steelhead									
Raceway: W10A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/29/2009	Both	M2	Ad only	N/A	23,909	7,521	31,430		
7/29/2009	Both	M3	Ad only	N/A	32,400	9,070	41,470	72,900	Dworshak B

Table 5. Daily Tagging Summary at Clearwater Fish Hatchery for Steelhead

Clearwater Fish Hatchery Steelhead									
Raceway: W8A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/27/2009	PM	M2	Ad/CWT	10-20-73	0	1,560	1,560		
7/28/2009	AM	M2	Ad/CWT	10-20-73	0	3,705	3,705		
7/28/2009	PM	M2	Ad/CWT	10-20-73	0	3,015	3,015		
7/27/2009	PM	M2	Ad/CWT	10-69-82	1,913	0	1,913		
7/28/2009	AM	M2	Ad/CWT	10-69-82	42,247	0	42,247		
7/28/2009	PM	M2	Ad/CWT	10-69-82	20,460	0	20,460	72,900	Dworshak B

Clearwater Fish Hatchery Steelhead									
Raceway: E9A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/27/2009	AM	M3	Ad only	N/A	26,877	10,141	37,018		
7/27/2009	PM	M3	Ad only	N/A	25,569	10,313	35,882	72,900	Dworshak B

Clearwater Fish Hatchery Steelhead									
Raceway: E8A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/28/2009	PM	M3	Ad only	N/A	19,396	5,500	24,896		
7/27/2009	PM	M3	Ad/CWT	10-36-83	6,019	1,403	7,422		
7/28/2009	AM	M3	Ad/CWT	10-36-83	37,370	3,212	40,582	72,900	Dworshak B

Table 5. Daily Tagging Summary at Clearwater Fish Hatchery for Steelhead (continued)

Clearwater Fish Hatchery Steelhead									
Raceway: E7A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/28/2009	PM	M3	Ad only	N/A	28,561	9,041	37,602		
7/29/2009	AM	M3	Ad only	N/A	29,098	6,201	35,299	72,901	Dworshak B

Tag Code Total:	10-36-83	48,004	Total Ad/CWT:	120,904
	10-20-73	8,280	Total CWT only:	0
	10-69-82	64,620	Total Ad only:	389,397
			Total Marked:	510,301

CWT Retentions:	
Rwy W8A	97.68%
Rwy E8A	99.67%

Table 5. Daily Tagging Summary at Clearwater Fish Hatchery for Steelhead (continued)

Pahsimeroi Hatchery



Pahsimeroi Fish Hatchery Chinook

The Idaho Anadromous Fish Marking Crew marked Pahsimeroi stock summer-run Chinook salmon in mid-May at Pahsimeroi Hatchery. This was the first marking event at the new Pahsimeroi facility, and we encountered no major problems while marking at this new site. A total of 1,183,064 summer-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip over a six day period (Table 6). The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. Prior to marking, M3 was hauled from Clearwater Hatchery to Pahsimeroi Hatchery by IDFG truck hauler, Bob Belveal, while M2 was transported by the Idaho Anadromous Fish Marking Crew from Clearwater Hatchery to Pahsimeroi Hatchery. Fish were supplied to the two trailers via the Canavac Fish Pump operated by PSMFC personnel and sent to ponds through 4-inch aluminum irrigation pipes. Fish for coded-wire tag retention studies were placed back into vats and held for 21 days. Coded-wire tag retentions were conducted 21 days after marking by IDFG Nampa Research personnel and can also be seen in Table 6.

Pahsimeroi Fish Hatchery Chinook									
Pond : 1									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Pond Total	Stock
5/12/2009	AM	M2	Ad only	N/A	24,174	11,138	35,312		
5/12/2009	PM	M2	Ad only	N/A	40,018	15,676	55,694		
5/13/2009	AM	M2	Ad only	N/A	51,895	11,395	63,290		
5/13/2009	PM	M2	Ad only	N/A	41,322	14,093	55,415		
5/14/2009	AM	M2	Ad only	N/A	46,305	12,479	58,784		
5/14/2009	PM	M2	Ad only	N/A	39,792	13,984	53,776		
5/15/2009	AM	M2	Ad only	N/A	44,829	12,146	56,975		
5/15/2009	PM	M2	Ad only	N/A	43,176	11,919	55,095		
5/16/2009	AM	M2	Ad only	N/A	36,265	12,385	48,650		
5/16/2009	PM	M2	Ad only	N/A	33,806	12,832	46,638		
5/17/2009	AM	M2	Ad only	N/A	14,672	5,700	20,372		
5/17/2009	PM	M2	Ad only	N/A	27,167	9,090	36,257		
5/18/2009	AM	M2	Ad only	N/A	2,501	2,519	5,020	591,278	Pahsimeroi

Table 6. Daily Tagging Summary at Pahsimeroi Fish Hatchery for Chinook Salmon

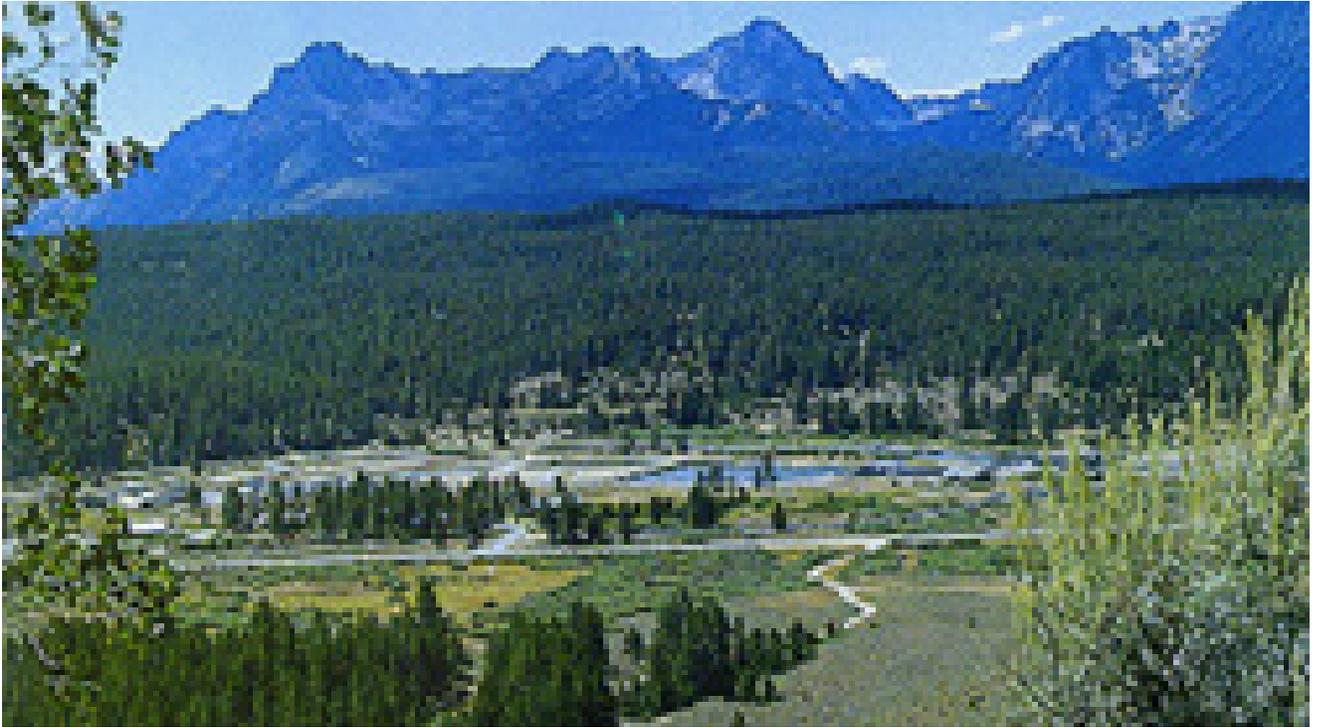
Pahsimeroi Fish Hatchery Chinook									
Pond : 2									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Pond Total	Stock
5/17/2009	AM	M2	Ad only	N/A	23,296	6,752	30,048		
5/17/2009	PM	M2	Ad only	N/A	10,990	4,037	15,027		
5/18/2009	AM	M2	Ad only	N/A	3,172	1,933	5,105		
5/12/2009	AM	M3	Ad only	N/A	20,231	12,412	32,643		
5/12/2009	PM	M3	Ad only	N/A	33,024	14,090	47,114		
5/13/2009	AM	M3	Ad only	N/A	11,872	6,786	18,658		
5/13/2009	PM	M3	Ad only	N/A	12,641	5,130	17,771		
5/13/2009	AM	M3	Ad/CWT	10-67-82	16,222	3,745	19,967		
5/13/2009	PM	M3	Ad/CWT	10-67-82	10,568	3,251	13,819		
5/14/2009	AM	M3	Ad/CWT	10-67-82	25,982	5,722	31,704		
5/14/2009	PM	M3	Ad only	N/A	0	3,605	3,605		
5/14/2009	PM	M3	Ad only	N/A	0	1,880	1,880		
5/14/2009	PM	M3	Ad/CWT	10-41-83	0	237	237		
5/14/2009	PM	M3	Ad/CWT	10-41-83	25,669	1,351	27,020		
5/14/2009	PM	M3	Ad/CWT	10-41-83	11,473	1,554	13,027		
5/15/2009	PM	M3	Ad/CWT	10-41-83	12,793	3,179	15,972		
5/15/2009	AM	M3	Ad only	N/A	29,581	9,921	39,502		
5/15/2009	PM	M3	Ad only	N/A	35,085	12,434	47,519		
5/16/2009	AM	M3	Ad only	N/A	35,294	17,950	53,244		
5/16/2009	PM	M3	Ad only	N/A	33,652	12,656	46,308		
5/17/2009	AM	M3	Ad only	N/A	42,998	22,222	65,220		
5/17/2009	PM	M3	Ad only	N/A	33,442	12,954	46,396	591,786	Pahsimeroi

Table 6. Daily Tagging Summary at Pahsimeroi Fish Hatchery for Chinook Salmon (continued)

Pahsimeroi Fish Hatchery Chinook						
Tag Code Total:	10-67-82	65,490	Total Ad/CWT:	121,746	CWT Retention:	
	10-41-83	56,256	Total CWT only:	0	Pond 2 #1	98.26%
			Total Ad only:	1,061,318	Pond 2 #2	97.59%
			Total Marked:	1,183,064		

Table 6. Daily Tagging Summary at Pahsimeroi Fish Hatchery for Chinook Salmon (continued)

Sawtooth Hatchery



Sawtooth Hatchery Chinook – Trip 1

The Idaho Anadromous Fish Marking Crew marked Salmon River stock spring-run Chinook salmon in mid-May at Sawtooth Hatchery immediately following marking at Pahsimeroi Hatchery. A total of 304,163 spring-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip over a three and a half day period (Table 7). The Idaho Anadromous Fish Marking Crew was not able to mark more fish during the first trip to Sawtooth Hatchery due to poor water conditions, fish not being adequate size for marking, and fish health issues. The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. However, throughout the marking process, power was continually lost to both trailers. The air compressor in M3, which was having more power outages than M2, was plugged into an external source. However, we were still not able to keep both trailers running on the same 240 volt, 100 amp service without losing power. Therefore, the decision was made to only run one trailer towards the end of the operation.

Prior to marking, both trailers were moved from Pahsimeroi Hatchery to Sawtooth Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the two trailers via the Canavac Fish Pump operated by PSMFC personnel and returned to inside vats through 4-inch aluminum irrigation pipes. Fish for code wire tag retention studies were placed back into vats that were 100% coded-wire tagged so no segregation of untagged fish within a vat was necessary. The coded-wire tagged fish were held for 21 days then checked for fin-clip and tag retention rates by IDFG Nampa Research personnel and can also be seen in Table 7.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 3									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/18/2009	PM	M2	Ad Only	N/A	0	6,171	6,171		
5/19/2009	AM	M2	Ad Only	N/A	20,635	13,293	33,928	40,099	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 4									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/19/2009	PM	M2	Ad Only	N/A	37,315	15,616	52,931	52,931	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 6									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/20/2009	AM	M2	Ad Only	N/A	27,952	8,949	36,901	36,901	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 7									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/20/2009	AM	M2	Ad Only	N/A	10,433	3,025	13,458		
5/20/2009	PM	M2	Ad Only	N/A	18,842	11,401	30,243	43,701	Salmon R.

Table 7. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 1

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: DV									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/20/2009	PM	M2	Ad Only	N/A	10,298	8,282	18,580	18,580	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 10									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/20/2009	PM	M2	Ad Only	N/A	4,965	4,349	9,314		
5/21/2009	AM	M2	Ad Only	N/A	8,743	10,887	19,630	28,944	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Trailer: 5									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/19/2009	AM	M3	AD/CWT	10-84-82	17,469	2,537	20,006	20,006	Salmon R.

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 11									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/19/2009	PM	M3	AD/CWT	10-84-82	12,288	1,549	13,837		
5/19/2009	PM	M3	AD/CWT	10-84-82	5,175	989	6,164	20,001	Salmon R.

Table 7. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 1 (continued)

Sawtooth Fish Hatchery Chinook Trip 1									
Vat: 12									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
5/20/2009	AM	M3	Ad only	N/A	26,488	16,512	43,000	43,000	Salmon R.

Tag Code Total:	10-84-82	40,007	Total Ad/CWT:	40,007	CWT Retentions:	
			Total CWT only:	0	Vat 5	98.67%
			Total Ad only:	264,156	Vat 11	99.33%
			Total Marked:	304,163		

Table 7. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 1 (continued)

Sawtooth Hatchery Chinook – Trip 2

The Idaho Anadromous Fish Marking Crew again marked Salmon River stock spring-run Chinook salmon in mid-July at Sawtooth Hatchery. A total of 806,606 spring-run Chinook salmon were marked with a coded-wire tag and/or adipose clip over a ten day period (Table 8). The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. Prior to marking, M2 was hauled from Rapid River Hatchery to Sawtooth Hatchery by IDFG truck hauler, Bob Belveal, while M3 was transported by the Idaho Anadromous Fish Marking Crew from Rapid River Hatchery to Sawtooth Hatchery. Fish were supplied to the two trailers via the Canavac Fish Pump operated by PSMFC personnel and sent to outside raceways through 4-inch aluminum irrigation pipes. During the marking period, water temperatures ranged from 9° Celsius at 0600 to 16° Celsius by 1500. Trailer operations were shifted earlier everyday in order to process an adequate number of fish before temperatures were too high for handling fish. Fish for coded-wire tag retention studies from raceways 11 and 12 were placed into net pens and held for 21 days, while no fish from raceway 10 were held because that raceway contained 100% coded-wired tagged fish. Coded-wire tag retentions were conducted 21 days after marking by IDFG Nampa Research personnel and can also be seen in Table 8.

Sawtooth Fish Hatchery Chinook Trip 2									
Raceway: 9									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/8/2009	AM	M2	Ad Only	N/A	27,773	9,378	37,151		
7/9/2009	AM	M2	Ad Only	N/A	44,766	9,310	54,076		
7/10/2009	AM	M2	Ad Only	N/A	45,641	10,801	56,442		
7/11/2009	AM	M2	Ad Only	N/A	47,211	8,120	55,331	203,000	Salmon R

Sawtooth Fish Hatchery Chinook Trip 2									
Raceway: 10									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/8/2009	AM	M3	CWT Only	10-13-83	0	5,728	5,728		
7/8/2009	AM	M3	CWT Only	10-39-73	8,554	0	8,554		
7/8/2009	AM	M3	CWT Only	10-27-71	8,265	0	8,265		
7/8/2009	AM	M3	CWT Only	10-28-71	8,077	0	8,077		
7/8/2009	AM	M3	CWT Only	10-40-73	5,446	0	5,446		
7/8/2009	AM	M3	CWT Only	10-14-71	4,478	0	4,478		
7/9/2009	AM	M3	CWT Only	10-13-83	0	2,299	2,299		
7/9/2009	AM	M3	CWT Only	10-13-83	0	3,356	3,356		
7/9/2009	AM	M3	CWT Only	10-39-73	10,081	0	10,081		
7/9/2009	AM	M3	CWT Only	10-27-71	9,104	0	9,104		
7/9/2009	AM	M3	CWT Only	10-28-71	8,601	0	8,601		
7/9/2009	AM	M3	CWT Only	10-40-73	8,239	0	8,239		

Table 8. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 2

Sawtooth Fish Hatchery Chinook Trip 2									
Raceway: 10 (continued)									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/9/2009	AM	M3	CWT Only	10-14-71	6,712	0	6,712		
7/9/2009	AM	M3	CWT Only	10-53-71	2,184	0	2,184		
7/10/2009	AM	M3	CWT Only	10-39-73	4,699	0	4,699		
7/10/2009	AM	M3	CWT Only	10-27-71	6,049	0	6,049		
7/10/2009	AM	M3	CWT Only	10-28-71	6,945	0	6,945		
7/10/2009	AM	M3	CWT Only	10-40-73	9,118	0	9,118		
7/10/2009	AM	M3	CWT Only	10-14-71	7,726	0	7,726		
7/10/2009	AM	M3	CWT Only	10-44-73	11,739	0	11,739		
7/10/2009	AM	M3	CWT Only	10-53-71	9,527	0	9,527		
7/10/2009	AM	M3	CWT Only	10-43-73	776	0	776		
7/11/2009	AM	M3	CWT Only	10-14-71	4,283	0	4,283		
7/11/2009	AM	M3	CWT Only	10-44-73	11,537	0	11,537		
7/11/2009	AM	M3	CWT Only	10-54-71	12,919	0	12,919		
7/11/2009	AM	M3	CWT Only	10-53-71	8,617	0	8,617		
7/11/2009	AM	M3	CWT Only	10-43-73	17,998	0	17,998	203,057	Salmon R

Table 8. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 2 (continued)

Sawtooth Fish Hatchery Chinook Trip 2									
Raceway: 11									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/12/2009	AM	M2	AD/CWT	10-93-82	1,251	4,367	5,618		
7/13/2009	AM	M2	AD/CWT	10-93-82	14,902	5,801	20,703		
7/14/2009	AM	M2	AD/CWT	10-93-82	10,591	3,244	13,835		
7/14/2009	AM	M2	Ad Only	N/A	16,551	9,201	25,752		
7/15/2009	AM	M2	Ad Only	N/A	4,010	3,575	7,585		
7/16/2009	AM	M2	Ad Only	N/A	31,686	18,589	50,275		
7/16/2009	AM	M3	Ad Only	N/A	3,142	2,878	6,020		
7/17/2009	AM	M2	Ad Only	N/A	40,836	26,962	67,798	197,586	Salmon R

Sawtooth Fish Hatchery Chinook Trip 2									
Raceway: 12									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/12/2009	AM	M3	Ad/CWT	10-25-81	10,874	3,837	14,711		
7/13/2009	AM	M3	Ad/CWT	10-25-81	7	2,248	2,255		
7/13/2009	AM	M3	Ad Only	N/A	18,252	7,986	26,238		
7/14/2009	AM	M3	Ad Only	N/A	30,657	14,994	45,651		
7/15/2009	AM	M3	Ad/CWT	10-25-81	18,553	7,751	26,304		
7/15/2009	AM	M3	Ad Only	N/A	28,493	16,126	44,619		
7/16/2009	AM	M3	Ad Only	N/A	31,185	12,000	43,185	202,963	Salmon R

Table 8. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 2 (continued)

Sawtooth Fish Hatchery Chinook Trip 2						
Tag Code Total:	10-13-83	11,383	Total Ad/CWT:	83,426	CWT Retentions:	
	10-39-73	23,334	Total CWT only:	203,057	Rwy 11	97.68%
	10-27-71	23,418	Total Ad only:	520,123	Rwy 10	95.33%
	10-28-71	23,623	Total Marked:	806,606	Rwy 12	98.67%
	10-40-73	22,803				
	10-14-71	23,199				
	10-44-73	23,276				
	10-53-71	20,328				
	10-43-73	18,774				
	10-54-71	12,919				
	10-25-81	43,270				

Table 8. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 2 (continued)

Sawtooth Hatchery Chinook – Trip 3

The Idaho Anadromous Fish Marking Crew again marked Salmon River stock spring-run Chinook salmon in late September at Sawtooth Hatchery once water temperatures had decreased. A total of 766,337 spring-run Chinook salmon were marked with an adipose fin-clip over a seven day period (Table 9). One 48' Automated Fish Marking trailer (M2) and the 16-person manual clipping trailer were used to process all of these fish. Prior to marking, M2 was hauled from Niagara Springs Hatchery to Sawtooth Hatchery by the Idaho Anadromous Fish Marking Crew, while the same crew also transported the manual clipping trailer from Lewiston to Sawtooth Hatchery. Fish were supplied to the two trailers via the Canavac Fish Pump operated by PSMFC personnel and 5-gallon buckets, and sent to outside raceways through 4-inch aluminum irrigation pipes. No coded-wire tagging was conducted on this trip; therefore, no coded-wire tag retention studies were done.

Sawtooth Fish Hatchery Chinook Trip 3									
Raceway: 7									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/22/2009	AM	M2	Ad Only	N/A	15,439	7,225	22,664		
9/23/2009	AM	M2	Ad Only	N/A	31,007	15,612	46,619		
9/22/2009	AM	Manual	Ad Only	N/A	0	6,702	6,702		
9/23/2009	AM	Manual	Ad Only	N/A	0	41,319	41,319	117,304	Salmon R

Sawtooth Fish Hatchery Chinook Trip 3									
Raceway: 8									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/19/2009	PM	M2	Ad Only	N/A	29,850	10,818	40,668		
9/20/2009	AM	M2	Ad Only	N/A	38,564	20,324	58,888		
9/20/2009	PM	M2	Ad Only	N/A	39,096	15,531	54,627		
9/22/2009	AM	M2	Ad Only	N/A	23,016	10,501	33,517	187,700	Salmon R

Sawtooth Fish Hatchery Chinook Trip 3									
Raceway: 13									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/17/2009	PM	M2	Ad Only	N/A	11,254	5,050	16,304		
9/18/2009	AM	M2	Ad Only	N/A	37,107	18,557	55,664		
9/18/2009	PM	M2	Ad Only	N/A	32,378	15,315	47,693		
9/19/2009	AM	M2	Ad Only	N/A	36,328	17,668	53,996		
9/19/2009	PM	M2	Ad Only	N/A	8,047	4,000	12,047	185,704	Salmon R

Table 9. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 3

Sawtooth Fish Hatchery Chinook Trip 3									
Raceway: 5									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	AM	Manual	Ad Only	N/A	0	47,531	47,531		
9/17/2009	AM	Manual	Ad Only	N/A	0	40,397	40,397	87,928	Salmon R

Sawtooth Fish Hatchery Chinook Trip 3									
Raceway: 6									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/17/2009	PM	M2	Ad Only	N/A	9,800	2,200	12,000		
9/17/2009	AM	Manual	Ad Only	N/A	0	8,637	8,637		
9/18/2009	AM	Manual	Ad Only	N/A	0	42,193	42,193		
9/19/2009	AM	Manual	Ad Only	N/A	0	41,791	41,791		
9/20/2009	AM	Manual	Ad Only	N/A	0	37,301	37,301		
9/22/2009	AM	Manual	Ad Only	N/A	0	45,779	45,779	187,701	Salmon R

Total Ad only:	766,337
Total Marked:	766,337

Table 9. Daily Tagging Summary at Sawtooth Fish Hatchery for Chinook Salmon Trip 3 (continued)

Sawtooth Hatchery Sockeye

The Idaho Anadromous Fish Marking Crew marked Redfish Lake stock sockeye salmon at Sawtooth Hatchery in late September while the third spring-run Chinook salmon marking operation was occurring. A total of 159,698 sockeye salmon were marked with a coded-wire tag and/or adipose fin-clip over a three day period (Table 10). One 48' Automated Fish Marking trailer (M2) was used to process these fish. Prior to marking, M2 was hauled from Niagara Springs Hatchery to Sawtooth Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the trailers via the Canavac Fish Pump operated by PSMFC personnel, and returned to inside vats through 4-inch aluminum irrigation pipes. Coded-wire tag retention checks will be conducted on the 100% coded-wire tagged vats in the spring of 2010.

Sawtooth Fish Hatchery Sockeye									
Vat: 1									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/15/2009	BOTH	M2	CWT Only	10-75-01	13,357	6,638	19,995	19,995	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: 2									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/15/2009	PM	M2	CWT Only	10-75-01	16,808	3,256	20,064	20,064	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: 3									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/15/2009	PM	M2	CWT Only	10-75-01	9,590	3,804	13,394		
9/16/2009	AM	M2	CWT Only	10-75-01	1,048	725	1,773		
9/16/2009	AM	M2	CWT Only	10-23-83	4,833	0	4,833	20,000	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: 4									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	AM	M2	CWT Only	10-75-01	2,076	1,864	3,940		
9/16/2009	AM	M2	CWT Only	10-23-83	14,855	1,206	16,061	20,001	Redfish

Table 10. Daily Tagging Summary at Sawtooth Fish Hatchery for Sockeye

Sawtooth Fish Hatchery Sockeye									
Vat: 5									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	BOTH	M2	CWT Only	10-23-83	16,717	3,315	20,032	20,032	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: 6									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	PM	M2	Ad Only	N/A	9,800	5,200	15,000		
9/16/2009	PM	M2	Ad Only	N/A	3,600	1,400	5,000	20,000	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: DV									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	PM	M2	Ad Only	N/A	4,000	1,001	5,001	5,001	Redfish

Sawtooth Fish Hatchery Sockeye									
Vat: 7									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/16/2009	PM	M2	Ad Only	N/A	13,646	5,314	18,960		
9/17/2009	AM	M2	Ad Only	N/A	384	656	1,040	20,000	Redfish

Table 10. Daily Tagging Summary at Sawtooth Fish Hatchery for Sockeye (continued)

Sawtooth Fish Hatchery Sockeye									
Vat: 8									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/17/2009	AM	M2	Ad Only	N/A	8,123	6,482	14,605	14,605	Redfish

Tag Code Totals:	10-75-01	63,999	Total Ad/CWT:	0
	10-23-83	44,866	Total CWT only:	100,092
			Total Ad only:	59,606
			Total Marked:	159,698

Table 10. Daily Tagging Summary at Sawtooth Fish Hatchery for Sockeye (continued)

Rapid River Hatchery



Rapid River Hatchery Chinook

The Idaho Anadromous Fish Marking Crew marked Rapid River stock spring-run Chinook salmon in late June at Rapid River Hatchery over an eleven day period (Table 11). A total of 3,237,019 spring-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip. The two 48' Automated Fish Marking trailers (M2 and M3) and one 53' Automated Fish Marking trailer (M1) were used to process all of these fish. This was the first location that M1 was in operation, and Joel LaHaie of NMT was present to work out any issues that may have arisen in the newly completed trailer. The trailer performed well for its first time in operation with no major issues. Prior to marking, M2 and M3 were moved from Lewiston to Rapid River Hatchery by the Idaho Anadromous Fish Marking Crew, and M1 was transported from Anacortes, WA to Rapid River Hatchery by IDFG truck hauler, Bob Belveal. Fish were supplied to all three trailers via the Canavac Fish Pump operated by PSMFC personnel and sent to rearing ponds through 4-inch aluminum irrigation pipes. Fish for coded-wire tag retention studies in ponds 1A and 1B were held in net pens for 21 days. Coded-wire tag retentions were conducted 21 days after marking by IDFG employee Judy Dillon and can also be seen in Table 11.

Rapid River Hatchery Chinook									
Pond: 1B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/15/2009	BOTH	M1	Ad only	N/A	57,824	19,332	77,156		
6/16/2009	AM	M1	Ad only	N/A	49,879	11,405	61,284		
6/16/2009	PM	M1	Ad only	N/A	48,746	18,931	67,677		
6/17/2009	AM	M1	Ad only	N/A	23,597	5,868	29,465		
6/17/2009	AM	M1	Ad/CWT	10-37-83	23,990	2,487	26,477		
6/17/2009	PM	M1	Ad/CWT	10-37-83	24,369	1,848	26,217		
6/17/2009	PM	M1	Ad/CWT	10-37-83	39	0	39		
6/17/2009	PM	M1	Ad only	N/A	55831	21,687	77,518		
6/18/2009	BOTH	M1	Ad only	N/A	56323	20,350	76,673		
6/18/2009	PM	M1	Ad only	N/A	10789	4,277	15,066		
6/19/2009	BOTH	M1	Ad only	N/A	70245	24,159	94,404		
6/22/2009	AM	M1	Ad only	N/A	18540	4,836	23,376		
6/29/2009	AM	M1	Ad only	N/A	34006	28,808	62,814		
6/26/2009	PM	M3	Ad only	N/A	4,999	2,085	7,084	645,250	Rapid River

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook

Rapid River Hatchery Chinook									
Pond: 1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/22/2009	AM	M1	Ad only	N/A	17510	5,080	22,590		
6/22/2009	PM	M1	Ad only	N/A	40,214	14,825	55,039		
6/23/2009	AM	M1	Ad only	N/A	44,289	13,574	57,863		
6/23/2009	PM	M1	Ad only	N/A	24,375	9,902	34,277		
6/23/2009	PM	M1	Ad/CWT	10-38-83	22,428	2,599	25,027		
6/24/2009	AM	M1	Ad/CWT	10-38-83	24,916	2,175	27,091		
6/24/2009	AM	M1	Ad only	N/A	51,050	15,094	66,144		
6/24/2009	PM	M1	Ad only	N/A	48,557	18,172	66,729		
6/25/2009	AM	M1	Ad only	N/A	17,844	5,683	23,527		
6/25/2009	PM	M1	Ad only	N/A	51,884	16,661	68,545		
6/26/2009	BOTH	M1	Ad only	N/A	64,619	24,599	89,218		
6/29/2009	AM	M1	Ad only	N/A	10,906	6,273	17,179		
6/26/2009	AM	M2	Ad only	N/A	0	3,525	3,525		
6/26/2009	AM	M2	Ad only	N/A	52,360	14,013	66,373	623,127	Rapid River

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook (continued)

Rapid River Hatchery Chinook									
Pond: 2C									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/15/2009	AM	M2	Ad only	N/A	16,391	14,134	30,525		
6/15/2009	PM	M2	Ad only	N/A	37,246	14,854	52,100		
6/16/2009	AM	M2	Ad only	N/A	51,815	17,283	69,098		
6/16/2009	PM	M2	Ad only	N/A	39,947	15,686	55,633		
6/17/2009	AM	M2	Ad only	N/A	49,286	14,352	63,638		
6/17/2009	PM	M2	Ad only	N/A	47,903	16,742	64,645		
6/18/2009	AM	M2	Ad only	N/A	45,205	12,057	57,262		
6/18/2009	PM	M2	Ad only	N/A	45,260	17,610	62,870		
6/19/2009	AM	M2	Ad only	N/A	15,422	5,304	20,726	476,497	Rapid River

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook (continued)

Rapid River Hatchery Chinook									
Pond: 2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/19/2009	AM	M2	Ad only	N/A	18,720	5,032	23,752		
6/19/2009	PM	M2	Ad only	N/A	33,230	11,179	44,409		
6/22/2009	AM	M2	Ad only	N/A	36,965	6,301	43,266		
6/22/2009	PM	M2	Ad only	N/A	34,670	16,394	51,064		
6/23/2009	AM	M2	Ad only	N/A	44,767	8,842	53,609		
6/23/2009	PM	M2	Ad only	N/A	42,920	18,139	61,059		
6/24/2009	AM	M2	Ad only	N/A	38,468	8,873	47,341		
6/24/2009	PM	M2	Ad only	N/A	40,785	16,853	57,638		
6/25/2009	AM	M2	Ad only	N/A	36,925	7,275	44,200		
6/25/2009	PM	M2	Ad only	N/A	30,415	15,993	46,408		
6/26/2009	AM	M2	Ad only	N/A	4,694	2,000	6,694	479,440	Rapid River

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook (continued)

Rapid River Hatchery Chinook									
Pond: 2D									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/15/2009	AM	M3	Ad only	N/A	18,757	8,727	27,484		
6/15/2009	PM	M3	Ad only	N/A	46,575	17,174	63,749		
6/16/2009	AM	M3	Ad only	N/A	43,150	11,011	54,161		
6/16/2009	PM	M3	Ad only	N/A	48,098	16,093	64,191		
6/17/2009	AM	M3	Ad only	N/A	41,681	11,268	52,949		
6/17/2009	PM	M3	Ad only	N/A	48,411	16,778	65,189		
6/18/2009	AM	M3	Ad only	N/A	40,722	10,013	50,735		
6/18/2009	PM	M3	Ad only	N/A	39,434	13,808	53,242		
6/19/2009	AM	M3	Ad only	N/A	31,624	8,623	40,247		
6/19/2009	PM	M3	Ad only	N/A	25,820	8,967	34,787	506,734	Rapid River

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook (continued)

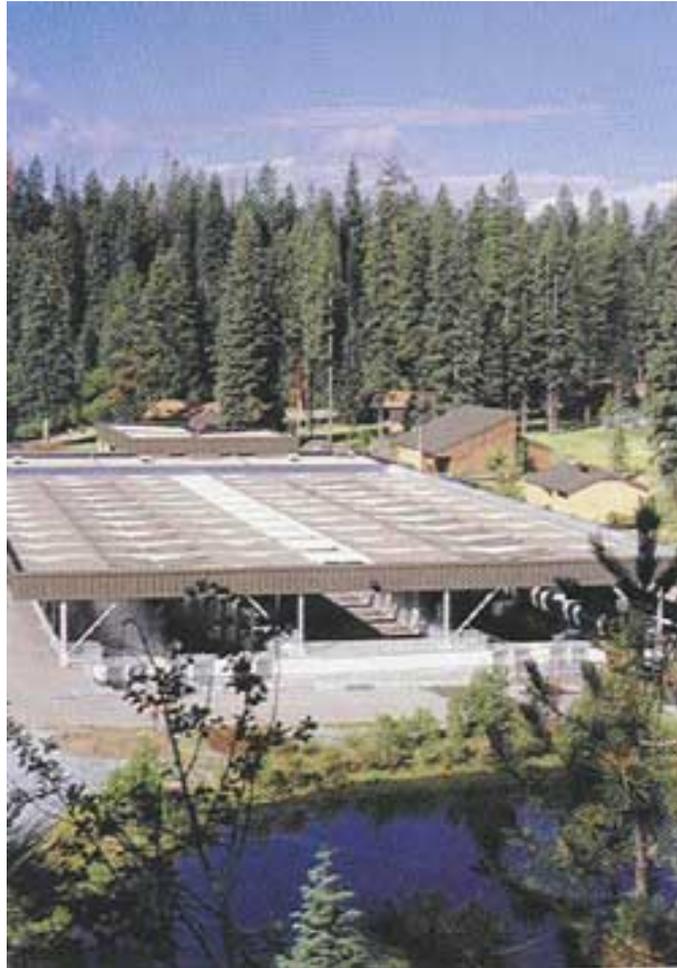
Rapid River Hatchery Chinook									
Pond: 2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/19/2009	PM	M3	Ad only	N/A	4,834	2,410	7,244		
6/22/2009	AM	M3	Ad only	N/A	28,469	6,259	34,728		
6/22/2009	PM	M3	Ad only	N/A	38,972	14,713	53,685		
6/23/2009	AM	M3	Ad only	N/A	45,392	10,468	55,860		
6/23/2009	PM	M3	Ad only	N/A	43,484	16,615	60,099		
6/24/2009	AM	M3	Ad only	N/A	39,441	12,121	51,562		
6/24/2009	PM	M3	Ad only	N/A	34,525	12,307	46,832		
6/25/2009	AM	M3	Ad only	N/A	44,502	12,408	56,910		
6/25/2009	PM	M3	Ad only	N/A	48,804	17,153	65,957		
6/26/2009	AM	M3	Ad only	N/A	33,793	5,512	39,305		
6/26/2009	PM	M3	Ad only	N/A	25,572	8,217	33,789	505,971	Rapid River

Tag Code Total:	10-37-83	52,733	Total Ad/CWT:	104,851
	10-38-83	52,118	Total CWT only:	0
			Total Ad only:	3,132,168
			Total Marked:	3,237,019

CWT Retentions:	
Pond 1A	99.36%
Pond 1B	99.36%

Table 11. Daily Tagging Summary at Rapid River Fish Hatchery for Chinook (continued)

McCall Hatchery



McCall Fish Hatchery Chinook

The Idaho Anadromous Fish Marking Crew marked South Fork of the Salmon River stock summer-run Chinook salmon in early June and late July at McCall Hatchery over a nine day period (Table 12). A total of 1,324,013 summer-run Chinook salmon were marked with a coded-wire tag and/or adipose fin-clip. In early June the 16-person manual clipping trailer was used to remove the adipose fin from 608,531 of the fish. These fish were much too small to mark with an automated trailer, and the hatchery needed to pond some marked fish in order to decrease fish densities in the vat room. This trailer was transported to McCall hatchery from Lewiston by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the trailer via the Canavac Fish Pump operated by PSMFC personnel and sent to rearing ponds through 4-inch aluminum irrigation pipes.

Marking then again started in late July at McCall Hatchery. During this time the remaining 715, 482 fish were marked with either a coded-wire tag and/or adipose fin-clip, over a four day period. The two 48' Automated Fish Marking trailers (M2 and M3) were used to process all of these fish. Prior to marking, M2 was moved from Rapid River Hatchery to McCall Hatchery by IDFG truck hauler, Bob Belveal, and M3 was transported from Rapid River Hatchery to McCall Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to both trailers via the Canavac Fish Pump operated by PSMFC personnel and sent to rearing ponds through 4-inch aluminum irrigation pipes. Fish for coded-wire tag retention studies were held back inside vats 21 days. Coded-wire tag retentions were conducted 21 days after marking by IDFG employee Judy Dillon and can also be seen in Table 12.

McCall Fish Hatchery Chinook									
Pond: 1									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
6/8/2009	DAY	Manual	Ad only	N/A	0	85,595	85,595		
6/9/2009	DAY	Manual	Ad only	N/A	0	97,685	97,685		
6/10/2009	DAY	Manual	Ad only	N/A	0	131,325	131,325		
6/11/2009	DAY	Manual	Ad only	N/A	0	140,684	140,684		
6/12/2009	DAY	Manual	Ad only	N/A	0	153,242	153,242		
7/23/2009	AM	M2	Ad only	N/A	31,340	7,973	39,313		
7/23/2009	PM	M2	Ad only	N/A	44,986	10,230	55,216	703,060	SF Salmon

Table 12. Daily Tagging Summary at McCall Fish Hatchery for Chinook

McCall Fish Hatchery Chinook									
Pond: 2									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/20/2009	PM	M2	Ad/CWT	10-28-83	25,344	3,194	28,538		
7/21/2009	AM	M2	Ad/CWT	10-28-83	21,624	3,105	24,729		
7/21/2009	AM	M2	Ad/CWT	10-29-83	23,081	2,755	25,836		
7/21/2009	PM	M2	Ad/CWT	10-29-83	24,123	3,074	27,197		
7/21/2009	PM	M2	Ad Only	NA	8,476	2,408	10,884		
7/22/2009	AM	M2	Ad Only	NA	49,956	16,560	66,516		
7/22/2009	PM	M2	Ad Only	NA	49,117	10,340	59,457		
7/23/2009	AM	M2	Ad Only	NA	17,616	5,000	22,616		
7/20/2009	PM	M3	Ad/CWT	10-27-83	30,801	8,527	39,328		
7/21/2009	AM	M3	Ad/CWT	10-27-83	10,989	1,339	12,328		
7/21/2009	AM	M3	Ad/CWT	10-30-83	23,607	3,212	26,819		
7/21/2009	PM	M3	Ad/CWT	10-30-83	20,997	2,617	23,614		
7/21/2009	PM	M3	Ad Only	NA	22,343	8,208	30,551		
7/22/2009	AM	M3	Ad Only	NA	47,832	13,350	61,182		
7/22/2009	PM	M3	Ad Only	NA	42,290	18,115	60,405	520,000	SF Salmon

Table 12. Daily Tagging Summary at McCall Fish Hatchery for Chinook (continued)

McCall Fish Hatchery Chinook									
Vat: 4									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/23/2009	AM	M3	CWT Only	61-26-32	4,011	4,990	9,001		
7/23/2009	AM	M3	CWT Only	61-26-62	16,499	0	16,499	25,500	Johnson Cr

McCall Fish Hatchery Chinook									
Vat: 3									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/23/2009	AM	M3	CWT Only	61-27-49	4,235	5,000	9,235		
7/23/2009	AM	M3	CWT Only	61-26-22	16,267	0	16,267	25,502	Johnson Cr

McCall Fish Hatchery Chinook									
Vat: 2									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/23/2009	PM	M3	CWT Only	61-26-33	0	3,577	3,577		
7/23/2009	PM	M3	CWT Only	61-27-41	21,923	0	21,923	25,500	Johnson Cr

McCall Fish Hatchery Chinook									
Vat: 1									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/23/2009	PM	M3	CWT Only	61-27-46	21,224	0	21,224		
7/23/2009	PM	M3	CWT Only	61-26-34	0	3,227	3,227	24,451	Johnson Cr

Table 12. Daily Tagging Summary at McCall Fish Hatchery for Chinook (continued)

McCall Fish Hatchery Chinook						
Tag Code Total:	10-28-83	53,267	Total Ad/CWT:	208,389	CWT Retentions:	
	10-29-83	53,033	Total CWT only:	100,953	Pond 2	98.07%
	10-27-83	51,656	Total Ad only:	1,014,671		
	10-30-83	50,433	Total Marked:	1,324,013		
	61-26-32	9,001				
	61-26-62	16,499				
	61-27-49	9,235				
	61-26-22	16,267				
	61-26-33	3,577				
	61-27-41	21,923				
	61-27-46	21,224				
	61-26-34	3,227				

Table 12. Daily Tagging Summary at McCall Fish Hatchery for Chinook (continued)

Magic Valley Hatchery



Magic Valley Hatchery Steelhead – Trip 1

The Idaho Anadromous Fish Marking Crew marked Dworshak B-run and Pahsimeroi River A-run stocks of summer steelhead at Magic Valley Hatchery in early August over a ten day period (Table 13). A total of 1,409,072 summer steelhead were marked with a coded-wire tag and/or adipose fin-clip during this time period. For the first four days of the operation, the 53' Automated Fish Marking trailer (M1) was used to mark a portion of these fish. Then, on the fifth day, one 48' Automated Fish Marking trailer (M3) arrived and assisted in the processing of fish through the remainder of the trip. Prior to marking, M1 was moved from Rapid River Hatchery to Magic Valley Hatchery by IDFG truck hauler, Bob Belveal. Then, M3 was transported from Lewiston to Magic Valley Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to both trailers via forklift operated by Magic Valley Hatchery personnel and sent to outside raceways through 4-inch aluminum irrigation pipes. Only fish in 100% coded-wire tag raceways were checked for tag retention; therefore, no fish were held separately for a 21 day period. Coded-wire tag retentions were conducted 21 days after marking by IDFG Nampa Research personnel and can also be seen in Table 13.

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/30/2009	Both	M1	Ad only	N/A	12,414	11,541	23,955		
7/30/2009	AM	M1	Ad only	N/A	0	8,050	8,050	32,005	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W1B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/30/2009	PM	M1	Ad/CWT	10-51-82	2,569	3,742	6,311		
7/30/2009	PM	M1	Ad/CWT	10-52-82	5,646	0	5,646		
7/31/2009	AM	M1	Ad/CWT	10-51-82	8,473	1,757	10,230		
7/31/2009	AM	M1	Ad/CWT	10-52-82	9,792	0	9,792	31,979	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/31/2009	AM	M1	Ad only	N/A	21,799	9,715	31,514	31,514	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/31/2009	PM	M1	Ad only	N/A	16,428	10,514	26,942		
8/1/2009	AM	M1	Ad only	N/A	2,559	2,000	4,559	31,501	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W3A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
7/31/2009	PM	M1	Ad only	N/A	21,018	10,490	31,508	31,508	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W3B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/1/2009	AM	M1	Ad only	N/A	21,500	10,067	31,567	31,567	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W4A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/1/2009	PM	M1	Ad/CWT	10-53-82	15,416	0	15,416		
8/1/2009	PM	M1	Ad/CWT	10-54-82	13,595	3,452	17,047	32,463	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W4B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/2/2009	AM	M1	Ad only	N/A	14,415	7,520	21,935		
8/2/2009	PM	M1	Ad only	N/A	5,099	4,466	9,565	31,500	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W5A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/1/2009	Both	M1	Ad only	N/A	19,997	11,507	31,504	31,504	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W5B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/1/2009	PM	M1	Ad/CWT	10-53-82	3,952	0	3,952		
8/1/2009	PM	M1	Ad/CWT	10-54-82	3,240	2,268	5,508		
8/2/2009	AM	M1	Ad/CWT	10-53-82	10,998	514	11,512		
8/2/2009	AM	M1	Ad/CWT	10-54-82	8,311	2,261	10,572	31,544	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W6A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/2/2009	PM	M1	Ad only	N/A	20,500	11,001	31,501	31,501	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W6B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/2/2009	PM	M1	Ad only	N/A	9,511	8,528	18,039		
8/3/2009	AM	M1	Ad only	N/A	12,404	7,753	20,157	38,196	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W7A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/3/2009	AM	M1	Ad only	N/A	20,500	11,501	32,001	32,001	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W7B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/3/2009	PM	M1	Ad only	N/A	14,725	10,083	24,808	24,808	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W8A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/3/2009	PM	M1	Ad only	N/A	19,001	13,003	32,004	32,004	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W8B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/3/2009	PM	M1	Ad only	N/A	4,974	4,827	9,801		
8/4/2009	AM	M1	Ad only	N/A	13,837	8,400	22,237	32,038	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W9A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/4/2009	AM	M1	Ad/CWT	10-42-83	27,760	4,194	31,954	31,954	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W9B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/4/2009	PM	M1	Ad/CWT	10-42-83	28,186	4,004	32,190	32,190	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: W10B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/4/2009	PM	M1	Ad only	N/A	11,029	10,255	21,284		
8/5/2009	AM	M1	Ad only	N/A	5,616	5,104	10,720	32,004	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E1A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/5/2009	Both	M1	Ad only	N/A	23,032	8,924	31,956	31,956	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E1B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/5/2009	PM	M1	Ad/CWT	10-51-82	4,377	2,000	6,377		
8/5/2009	PM	M1	Ad/CWT	10-52-82	3,711	0	3,711		
8/6/2009	AM	M1	Ad/CWT	10-51-82	5,910	3,267	9,177		
8/6/2009	AM	M1	Ad/CWT	10-52-82	8,194	0	8,194		
8/6/2009	AM	M1	Ad/CWT	10-66-82	4,311	270	4,581	32,040	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E2A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/6/2009	AM	M1	Ad/CWT	10-51-82	0	150	150		
8/6/2009	AM	M1	Ad/CWT	10-52-82	4,556	0	4,556		
8/6/2009	AM	M1	Ad/CWT	10-66-82	11,395	1,980	13,375		
8/6/2009	PM	M1	Ad/CWT	10-52-82	1,105	0	1,105		
8/6/2009	PM	M1	Ad/CWT	10-66-82	11,633	1,186	12,819	32,005	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E2B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	AM	M1	Ad only	N/A	20,490	11,578	32,068	32,068	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E3A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	AM	M1	Ad only	N/A	9,171	5,094	14,265		
8/7/2009	PM	M1	Ad only	N/A	12,832	4,903	17,735	32,000	Dworshak B

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E3B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/6/2009	PM	M1	Ad only	N/A	4,252	3,480	7,732		
8/6/2009	PM	M1	Ad/CWT	10-52-82	1,300	0	1,300		
8/6/2009	PM	M1	Ad/CWT	10-66-82	20,766	2,203	22,969	32,001	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E4A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	PM	M1	Ad only	N/A	26,000	6,000	32,000	32,000	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E4B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	PM	M1	Ad only	N/A	5,020	3,133	8,153		
8/8/2009	AM	M1	Ad only	N/A	15,462	8,404	23,866	32,019	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E5A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/8/2009	PM	M1	Ad only	N/A	22,004	9,503	31,507	31,507	Pahsimeroi A

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E5B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/8/2009	AM	M1	Ad only	N/A	22,500	9,500	32,000	32,000	Dworshak B

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E6A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	AM	M1	Ad only	N/A	6,442	3,776	11,982		
8/8/2009	PM	M1	Ad/CWT	10-11-71	16,689	2,856	19,545	31,527	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E6B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	AM	M1	Ad only	N/A	22,511	9,025	31,536	31,536	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E7A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	AM	M1	Ad only	N/A	7,567	3,190	10,757		
8/9/2009	PM	M1	Ad only	N/A	11,744	9,003	20,747	31,504	Pahsimeroi A

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E7B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	PM	M1	Ad only	N/A	18,500	13,006	31,506	31,506	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E8A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	AM	M3	Ad only	N/A	4,005	1,402	5,407		
8/9/2009	PM	M3	Ad only	N/A	16,643	9,450	26,093	31,500	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E8B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	PM	M3	Ad only	N/A	17,238	13,372	30,610		
8/10/2009	AM	M3	Ad only	N/A	0	890	890	31,500	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E9A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/8/2009	PM	M3	Ad only	N/A	13,453	7,689	21,142		
8/9/2009	AM	M3	Ad only	N/A	6,358	4,000	10,358	31,500	Pahsimeroi A

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E9B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/9/2009	AM	M3	Ad only	N/A	22,001	9,500	31,501	31,501	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E10A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/8/2009	AM	M3	Ad only	N/A	2,831	111	2,942		
8/7/2009	PM	M3	Ad/CWT	10-44-83	3,470	1,775	5,245		
8/8/2009	AM	M3	Ad/CWT	10-44-83	19,685	3,630	23,315	31,502	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E10B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	PM	M3	Ad/CWT	10-44-83	27,034	4,468	31,502	31,502	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E11A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/8/2009	AM	M3	Ad only	N/A	5,925	2,675	8,600		
8/8/2009	PM	M3	Ad only	N/A	6,538	0	6,538		
8/8/2009	PM	M3	Ad only	N/A	7,664	8,698	16,362	31,500	Pahsimeroi A

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E11B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/7/2009	PM	M3	Ad only	N/A	7,906	3,557	11,463		
8/7/2009	AM	M3	Ad/CWT	10-12-71	17,533	2,504	20,037	31,500	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E12A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/6/2009	AM	M3	Ad/CWT	10-65-82	14,569	0	14,569		
8/6/2009	AM	M3	Ad/CWT	10-29-71	0	2,028	2,028		
8/6/2009	PM	M3	Ad/CWT	10-65-82	13,478	0	13,478		
8/6/2009	PM	M3	Ad/CWT	10-29-71	0	1,936	1,936	32,011	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway: E12B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/5/2009	PM	M3	Ad only	N/A	17,263	15,337	32,600	32,600	Pahsimeroi A

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway E13A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/6/2009	PM	M3	Ad only	N/A	2,399	4,306	6,705		
8/7/2009	AM	M3	Ad only	N/A	4,904	2,900	7,804		
8/6/2009	PM	M3	Ad/CWT	10-65-82	11,590	0	11,590		
8/6/2009	PM	M3	Ad/CWT	10-29-71	3,013	2,392	5,405	31,504	Pahsimeroi A

Magic Valley Fish Hatchery Steelhead Trip 1									
Raceway E13B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/5/2009	PM	M3	Ad/CWT	10-65-82	9,558	0	9,558		
8/5/2009	PM	M3	Ad/CWT	10-29-71	0	2,318	2,318		
8/6/2009	AM	M3	Ad/CWT	10-65-82	16,428	0	16,428		
8/6/2009	AM	M3	Ad/CWT	10-29-71	0	3,198	3,198	31,502	Pahsimeroi A

Tag Code Total:	10-65-82	65,623	Total Ad/CWT:	428,596
	10-29-71	14,885	Total CWT only:	0
	10-51-82	32,245	Total Ad only:	1,000,476
	10-52-82	34,304	Total Marked:	1,429,072
	10-53-82	30,880		
	10-54-82	33,127		
	10-66-82	53,744		
	10-42-83	64,144		
	10-11-71	19,545		

CWT Retentions:	
Rwy W1B	97.33%
Rwy E1B	98.67%
Rwy E2A	99.00%
Rwy W4A	98.67%
Rwy W5B	98.33%
Rwy W9A	96.67%
Rwy W9B	98.00%
Rwy E12A	100.00%
Rwy E10B	98.00%

Table 13. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 1 (continued)

Magic Valley Hatchery Steelhead – Trip 2

The Idaho Anadromous Fish Marking Crew marked Sawtooth and Upper Salmon B-run stocks of summer steelhead at Magic Valley Hatchery in late August over a three day period (Table 14). A total of 218,585 summer steelhead were marked with a coded-wire tag and/or adipose fin-clip during this time period. The 53' Automated Fish Marking trailer (M1) was used to mark these fish. Prior to marking, M1 was moved from Hagerman National Hatchery to Magic Valley Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the trailer via forklift operated by Magic Valley Hatchery personnel and sent to outside raceways through 4-inch aluminum irrigation pipes. Unfortunately, there was some miscommunication and these fish were overlooked; therefore, no tag retention checks were performed on them.

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W10A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/1/2009	PM	M1	Ad/CWT	10-71-82	25,809	4,199	30,008	30,008	Sawtooth

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W11A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/1/2009	PM	M1	Ad only	N/A	7,896	6,822	14,718		
9/2/2009	AM	M1	Ad only	N/A	8,057	7,225	15,282	30,000	Sawtooth

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W11B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/2/2009	AM	M1	Ad only	N/A	16,000	14,500	30,500	30,500	Sawtooth

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W12A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/31/2009	PM	M1	CWT only	10-39-83	17,956	3,495	21,451		
8/31/2009	PM	M1	CWT only	10-75-03	10,551	0	10,551		
9/1/2009	AM	M1	CWT only	10-75-03	503	0	503	32,505	Upper Salmon B

Table 14. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 2

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W12B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/1/2009	AM	M1	Ad/CWT	10-71-82	4,552	0	4,552		
9/1/2009	Both	M1	Ad/CWT	10-71-82	21,759	4,250	26,009	30,561	Sawtooth

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W13A									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/31/2009	AM	M1	CWT only	10-39-83	25,717	6,283	32,000		
8/31/2009	AM	M1	CWT only	10-75-03	460	51	511	32,511	Upper Salmon B

Magic Valley Fish Hatchery Steelhead Trip 2									
Raceway: W13B									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/31/2009	PM	M1	CWT only	10-39-83	0	3,011	3,011		
8/31/2009	PM	M1	CWT only	10-75-03	11,416	1,977	13,393		
9/1/2009	AM	M1	CWT only	10-75-03	14,291	1,805	16,096	32,500	Upper Salmon B

Tag Code Total:	10-39-83	56,462	Total Ad/CWT:	60,569
	10-75-03	41,054	Total CWT only:	97,516
	10-71-02	60,569	Total Ad only:	60,500
			Total Marked:	218,585

Table 14. Daily Tagging Summary at Magic Valley Fish Hatchery for Steelhead Trip 2 (continued)

Hagerman National Hatchery



Photo Credit: Hagerman National Fish Hatchery, USFWS

Hagerman National Hatchery Steelhead

The Idaho Anadromous Fish Marking Crew marked Sawtooth, East Fork of the Salmon River, and Yankee Fork stocks of summer steelhead at Hagerman National Hatchery in late August over an eight day period (Table 15). A total of 1,257,081 summer steelhead were marked with a coded-wire tag and/or adipose fin-clip during this time period. The two 48' Automated Fish Marking trailers (M2 and M3) and one 53' Automated Fish Marking trailer (M1) were used to mark these fish. Prior to marking, M1 and M3 were moved from Magic Valley Hatchery to Hagerman National Hatchery and M2 was transported from Lewiston to Hagerman National Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the trailers via forklift and Hagerman National Hatchery's fish pump all operated by Hagerman National Hatchery personnel and sent to outside raceways through 4-inch aluminum irrigation pipes. Coded-wire tag retentions were performed on all 100% coded-wire tagged raceways and approximately 300 fish from raceways 46, 79, 91, and 97 were sent to inside vats to be held for 21 days. Coded-wire tag retentions were conducted 21 days after marking by IDFG Nampa Research personnel and can also be seen in Table 15.

The Idaho Anadromous Fish Marking Crew returned to Hagerman National Hatchery in mid-November to PIT tag 22,564 steelhead that had received coded-wire tags and/or adipose fin removal marks in August. During this marking event, an analysis was conducted to determine if there is an overall economic and fish health benefit by using Biomark's newly developed pre-loaded PIT tag syringes over the current method. At time of publication, results were not finalized for this analysis.

Hagerman National Fish Hatchery Steelhead									
Raceway: 37									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	AM	M3	Ad only	N/A	19,148	5,852	25,000	25,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 38									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M3	Ad only	N/A	17,300	7,700	25,000	25,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 39									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M3	Ad/CWT	10-24-83	2,742	2,009	4,751		
8/20/2009	AM	M3	Ad/CWT	10-24-83	18,851	1,320	20,171	24,922	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 40									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	AM	M3	Ad only	N/A	12,799	2,859	15,658		
8/20/2009	PM	M3	Ad only	N/A	3,071	3,483	6,554	22,212	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead

Hagerman National Fish Hatchery Steelhead									
Raceway: 41									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M3	Ad only	N/A	19,200	5,800	25,000	25,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 42									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M3	Ad only	N/A	10,820	3,371	14,191		
8/21/2009	AM	M3	Ad only	N/A	9,200	1,606	10,806	24,997	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 43									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	AM	M3	Ad only	N/A	10,894	4,500	15,394		
8/23/2009	PM	M3	Ad only	N/A	6,406	3,212	9,618	25,012	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 44									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	PM	M3	Ad only	N/A	14,052	8,949	23,001	23,001	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 45									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	PM	M3	Ad only	N/A	3,324	5,538	8,862		
8/24/2009	AM	M3	Ad only	N/A	9,938	6,202	16,140	25,002	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 46									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/24/2009	PM	M3	Ad only	N/A	2,911	3,903	6,814		
8/24/2009	AM	M3	Ad/CWT	10-24-83	14,067	2,233	16,300		
8/24/2009	PM	M3	Ad/CWT	10-24-83	1,340	553	1,893	25,007	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 47									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/24/2009	PM	M3	Ad only	N/A	14,004	11,001	25,005	25,005	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 48									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/24/2009	PM	M3	Ad only	N/A	2,651	5,258	7,909		
8/25/2009	AM	M3	Ad only	N/A	3,971	3,796	7,767	15,676	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 59									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	AM	M3	Ad only	N/A	20,963	3,037	24,000	24,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 60									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	AM	M3	Ad only	N/A	16,835	3,806	20,641	20,641	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 61									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M3	Ad only	N/A	16,698	7,306	24,004	24,004	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 62									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M3	Ad only	N/A	16,500	7,508	24,008	24,008	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 63									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	AM	M3	Ad only	N/A	20,250	3,750	24,000	24,000	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 64									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M3	Ad only	N/A	15,119	5,769	20,888	20,888	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 65									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M3	Ad only	N/A	16,000	8,129	24,129	24,129	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 66									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M3	Ad only	N/A	12,546	6,889	19,435		
8/23/2009	AM	M3	Ad only	N/A	3,765	800	4,565	24,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 67									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	AM	M3	Ad only	N/A	20,000	4,000	24,000	24,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 68									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/25/2009	PM	M3	CWT only	10-35-83	13,995	5,507	19,502	19,502	E.F. Salmon

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 69									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/25/2009	PM	M3	CWT only	10-35-83	12,122	7,131	19,253	19,253	E.F. Salmon

Hagerman National Fish Hatchery Steelhead									
Raceway: 70									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/1/2009	AM	M3	CWT only	10-35-83	11,318	0	11,318		
9/1/2009	AM	M3	CWT only	10-33-83	0	5,500	5,500	16,818	E.F. Salmon

Hagerman National Fish Hatchery Steelhead									
Raceway: 71									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M1	Ad/CWT	10-22-83	5,538	2,974	8,512		
8/19/2009	PM	M1	Ad/CWT	10-21-83	14,493	0	14,493	23,005	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 72									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M1	Ad only	N/A	9,396	6,065	15,461		
8/20/2009	AM	M1	Ad only	N/A	5,900	1,709	7,609	23,070	Yankee Fork

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 73									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	AM	M1	Ad only	N/A	19,420	3,597	23,017	23,017	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 74									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M1	Ad/CWT	10-22-83	8,019	2,883	10,902		
8/20/2009	PM	M1	Ad/CWT	10-21-83	12,081	0	12,081	22,983	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 75									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M1	Ad only	N/A	13,379	8,460	21,839		
8/21/2009	AM	M1	Ad only	N/A	735	426	1,161	23,000	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 76									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	AM	M1	Ad/CWT	10-22-83	7,819	2,923	10,742		
8/21/2009	AM	M1	Ad/CWT	10-21-83	12,169	0	12,169	22,911	Yankee Fork

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 77									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M1	Ad only	N/A	18,149	3,624	21,773	21,773	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 78									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M1	Ad only	N/A	16,350	4,650	21,000	21,000	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 79									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M1	Ad/CWT	10-22-83	2,602	2,030	4,632		
8/21/2009	PM	M1	Ad only	N/A	0	1,612	1,612		
8/21/2009	PM	M1	Ad/CWT	10-21-83	4,818	0	4,818		
8/22/2009	AM	M1	Ad/CWT	10-22-83	7,351	1,799	9,150		
8/22/2009	AM	M1	Ad/CWT	10-21-83	985	0	985	21,197	Yankee Fork

Hagerman National Fish Hatchery Steelhead									
Raceway: 80									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	AM	M1	Ad only	N/A	10,050	7,208	17,258	17,258	Yankee Fork

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 81									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M2	Ad only	N/A	16,994	6,019	23,013	23,013	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 82									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	PM	M2	Ad only	N/A	3,992	0	3,992		
8/19/2009	PM	M2	Ad only	N/A	9,156	8,299	17,455		
8/20/2009	AM	M2	Ad only	N/A	856	700	1,556	23,003	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 83									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	AM	M2	Ad only	N/A	15,316	7,726	23,042	23,042	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 84									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	Both	M2	Ad/CWT	10-25-83	19,366	3,634	23,000	23,000	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 85									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M2	Ad only	N/A	15,502	7,502	23,004	23,004	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 86									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/20/2009	PM	M2	Ad only	N/A	11,178	5,714	16,892		
8/21/2009	AM	M2	Ad only	N/A	3,600	2,508	6,108	23,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 87									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	AM	M2	Ad only	N/A	18,706	4,301	23,007	23,007	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 88									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M2	Ad only	N/A	16,707	6,300	23,007	23,007	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 89									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M2	Ad only	N/A	16,000	7,000	23,000	23,000	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 90									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	PM	M2	Ad only	N/A	7,448	4,452	11,900		
8/23/2009	AM	M2	Ad only	N/A	9,411	1,702	11,113	23,013	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 91									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M2	Ad only	N/A	3,029	1,000	4,029		
8/21/2009	Both	M2	Ad/CWT	10-25-83	15,390	3,581	18,971	23,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 92									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M2	Ad only	N/A	17,210	5,790	23,000	23,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 93									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/21/2009	PM	M2	Ad only	N/A	10,127	4,312	14,439		
8/22/2009	AM	M2	Ad only	N/A	5,601	2,970	8,571	23,010	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 94									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	AM	M2	Ad only	N/A	19,706	3,309	23,015	23,015	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 95									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	AM	M2	Ad only	N/A	4,906	0	4,906		
8/23/2009	PM	M2	Ad only	N/A	7,094	11,000	18,094	23,000	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 96									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/19/2009	AM	M2	Ad only	N/A	15,001	8,003	23,004	23,004	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 97									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/22/2009	AM	M2	Ad only	N/A	1,715	697	2,412		
8/22/2009	AM	M2	Ad/CWT	10-30-71	17,443	3,145	20,588	23,000	Sawtooth

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 98									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	PM	M2	Ad only	N/A	11,500	13,065	24,565	24,565	Sawtooth

Hagerman National Fish Hatchery Steelhead									
Raceway: 99									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/23/2009	PM	M2	CWT Only	10-34-83	0	1,718	1,718		
8/24/2009	AM	M2	CWT Only	10-33-83	15,795	0	15,795		
8/24/2009	AM	M2	CWT Only	10-34-83	0	3,533	3,533	21,046	E.F. Salmon

Hagerman National Fish Hatchery Steelhead									
Raceway: 100									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/24/2009	PM	M2	CWT Only	10-33-83	10,581	0	10,581		
8/24/2009	PM	M2	CWT Only	10-34-83	0	6,780	6,780	17,361	E.F. Salmon

Hagerman National Fish Hatchery Steelhead									
Raceway: 101									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/24/2009	PM	M2	CWT Only	10-33-83	10236	0	10,236		
8/24/2009	PM	M2	CWT Only	10-34-83	0	8964	8,964	19,200	E.F. Salmon

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Hagerman National Fish Hatchery Steelhead									
Raceway: 102									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
8/25/2009	AM	M2	CWT Only	10-33-83	9777	0	9,777		
8/25/2009	AM	M2	CWT Only	10-34-83	0	3723	3,723	13,500	E.F. Salmon

Tag Code Total:	10-24-83	43,115	Total Ad/CWT:	194,158
	10-35-83	50,073	Total CWT only:	126,680
	10-21-83	44,546	Total Ad only:	936,243
	10-22-83	43,938	Total Marked:	1,257,081
	10-25-83	41,971		
	10-30-71	20,588		
	10-33-83	51,889		
	10-34-83	24,718		

CWT Retentions:	
Rwy 71	99.67%
Rwy 74	98.00%
Rwy 76	99.33%
Rwy 84	99.67%
Rwy 99	97.67%
Rwy 100	99.33%
Rwy 101	98.00%
Rwy 102	98.67%
Rwy 39	96.67%
Rwy 46	99.33%
Rwy 68	97.33%
Rwy 69	99.33%
Rwy 70	100.00%

Table 15. Daily Tagging Summary at Hagerman National Fish Hatchery for Steelhead (continued)

Niagara Springs Hatchery



Niagara Springs Hatchery Steelhead

The Idaho Anadromous Fish Marking Crew marked Oxbow and Pahsimeroi stocks of summer steelhead in early September at Niagara Springs Hatchery over a six day period (Table 16). A total of 1,857,278 summer steelhead were marked with a coded-wire tag and/or adipose fin-clip during this time period. The two 48' Automated Fish Marking trailers (M2 and M3) and one 53' Automated Fish Marking trailer (M1) were used to mark these fish. Prior to marking, M2, and M3 were moved from Hagerman National Hatchery to Niagara Springs Hatchery and M1 was transported from Magic Valley Hatchery to Niagara Springs Hatchery by the Idaho Anadromous Fish Marking Crew. Fish were supplied to the trailers via the Canavac fish pump as well as a fish pump that was borrowed from Magic Valley Hatchery, and were operated by both PSMFC and Niagara Springs Hatchery personnel. Fish were returned to raceways through 4-inch aluminum irrigation pipes. Coded-wire tag retentions were performed on all 100% coded-wire tagged raceways after 21 days by IDFG Nampa Research personnel and can be seen in Table 16.

Niagara Springs Fish Hatchery Steelhead									
Raceway: 1									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/2/2009	AM	M3	Ad only	N/A	6,289	3,195	9,484		
9/2/2009	PM	M3	Ad only	N/A	37,341	16,327	53,668		
9/3/2009	AM	M3	Ad only	N/A	6,849	3,000	9,849		
9/3/2009	AM	M3	Ad/CWT	10-45-83	25,972	4,028	30,000	103,001	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 2									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/3/2009	PM	M3	Ad only	N/A	19,589	7,776	27,365		
9/4/2009	AM	M3	Ad only	N/A	44,251	20,242	64,493		
9/4/2009	PM	M3	Ad only	N/A	7,646	3,496	11,142	103,000	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 3									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/4/2009	PM	M3	Ad only	N/A	36,553	15,037	51,590		
9/5/2009	AM	M3	Ad only	N/A	16,410	5,000	21,410		
9/3/2009	PM	M3	Ad/CWT	10-45-83	26,022	4,105	30,127	103,127	Oxbow

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead

Niagara Springs Fish Hatchery Steelhead									
Raceway: 4									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/5/2009	AM	M3	Ad only	N/A	29,448	11,220	40,668		
9/5/2009	PM	M3	Ad only	N/A	45,726	19,060	64,786	105,454	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 5									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/6/2009	PM	M3	Ad only	N/A	27,796	11,756	39,552		
9/7/2009	AM	M3	Ad only	N/A	23,849	9,600	33,449		Oxbow
9/6/2009	AM	M3	Ad/CWT	10-45-83	0	3,887	3,887		
9/6/2009	AM	M3	Ad/CWT	10-18-83	26,118	0	26,118	103,006	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 6									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/7/2009	Both	M3	Ad only	N/A	26,592	10,109	36,701		
9/7/2009	AM	M1	Ad only	N/A	19,728	7,745	27,473		
9/7/2009	AM	M1	Ad only	N/A	20,300	7,542	27,842		
9/7/2009	PM	M1	Ad only	N/A	7,993	3,000	10,993	103,009	Oxbow

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Niagara Springs Fish Hatchery Steelhead									
Raceway: 7									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/6/2009	AM	M3	Ad/CWT	10-19-83	26,185	4,493	30,678		
9/7/2009	AM	M2	Ad only	N/A	24,061	7,491	31,552		
9/7/2009	PM	M2	Ad only	N/A	32,157	9,305	41,462	103,692	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 8									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/7/2009	AM	M1	Ad only	N/A	3,163	2,164	5,327		
9/7/2009	PM	M1	Ad only	N/A	29,506	11,167	40,673		
9/7/2009	PM	M3	Ad only	N/A	33,000	15,000	48,000		
9/7/2009	PM	M2	Ad only	N/A	7,625	3,375	11,000	105,000	Oxbow

Niagara Springs Fish Hatchery Steelhead									
Raceway: 9									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/3/2009	PM	M1	Ad/CWT	10-17-83	520	3,734	4,254		
9/4/2009	AM	M1	Ad/CWT	10-17-83	23,036	2,710	25,746		
9/4/2009	Both	M1	Ad only	N/A	45,320	17,680	63,000	93,000	Pahsimeroi A

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Niagara Springs Fish Hatchery Steelhead									
Raceway: 10									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/4/2009	PM	M1	Ad only	N/A	4,228	2,933	7,161		
9/5/2009	AM	M1	Ad only	N/A	5,750	0	5,750		
9/5/2009	AM	M1	Ad only	N/A	46,933	20,865	67,798		
9/5/2009	PM	M1	Ad only	N/A	9,526	2,792	12,318	93,027	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 11									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/5/2009	PM	M1	Ad only	N/A	37,672	12,467	50,139		
9/6/2009	AM	M1	Ad only	N/A	29,863	13,000	42,863	93,002	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 12									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/6/2009	AM	M1	Ad only	N/A	20,845	7,330	28,175		
9/6/2009	PM	M1	Ad only	N/A	50,471	18,358	68,829	97,004	Pahsimeroi A

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Niagara Springs Fish Hatchery Steelhead									
Raceway: 13									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/3/2009	PM	M1	Ad/CWT	10-46-83	13,918	0	13,918		
9/3/2009	PM	M1	Ad/CWT	10-16-83	13,091	2,991	16,082		
9/6/2009	PM	M2	Ad only	N/A	8,793	0	8,793		
9/6/2009	PM	M2	Ad only	N/A	24,788	11,916	36,704		
9/7/2009	AM	M2	Ad only	N/A	13,550	4,892	18,442	93,939	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 14									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/5/2009	PM	M2	Ad only	N/A	10,895	5,701	16,596		
9/6/2009	AM	M2	Ad only	N/A	49,684	13,654	63,338		
9/6/2009	PM	M2	Ad only	N/A	9,006	4,063	13,069	93,003	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 15									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/3/2009	Both	M1	Ad/CWT	10-46-83	26,002	0	26,002		
9/3/2009	Both	M1	Ad/CWT	10-16-83	0	3,998	3,998		
9/5/2009	AM	M2	Ad only	N/A	15,191	3,546	18,737		
9/5/2009	PM	M2	Ad only	N/A	33,767	10,501	44,268	93,005	Pahsimeroi A

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Niagara Springs Fish Hatchery Steelhead									
Raceway: 16									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/4/2009	PM	M2	Ad only	N/A	42,193	14,966	57,159		
9/5/2009	AM	M2	Ad only	N/A	27,361	8,481	35,842	93,001	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 17									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/2/2009	PM	M1	Ad/CWT	10-46-83	2,132	0	2,132		
9/3/2009	AM	M1	Ad/CWT	10-46-83	23,604	0	23,604		
9/2/2009	PM	M1	Ad/CWT	10-16-83	0	1,267	1,267		
9/3/2009	AM	M1	Ad/CWT	10-16-83	0	2,997	2,997		
9/3/2009	PM	M2	Ad only	N/A	2,744	3,190	5,934		
9/4/2009	AM	M2	Ad only	N/A	42,573	14,500	57,073	93,007	Pahsimeroi A

Niagara Springs Fish Hatchery Steelhead									
Raceway: 18									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/3/2009	AM	M2	Ad only	N/A	28,658	8,366	37,024		
9/3/2009	PM	M2	Ad only	N/A	41,997	13,979	55,976	93,000	Pahsimeroi A

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Niagara Springs Fish Hatchery Steelhead									
Raceway: 19									
Date	Shift	Trailer	Mark Type	Tag Code	MATS	Manual	Shift Total	Rwy Total	Stock
9/2/2009	AM	M2	Ad only	N/A	13,013	1,268	14,281		
9/2/2009	PM	M2	Ad only	N/A	41,934	19,320	61,254		
9/3/2009	AM	M2	Ad only	N/A	12,965	4,501	17,466	93,001	Pahsimeroi A

Tag Code Total:	10-17-83	30,000	Total Ad/CWT:	240,810
	10-46-83	65,656	Total CWT only:	0
	10-16-83	24,344	Total Ad only:	1,616,468
	10-45-83	64,014	Total Marked:	1,857,278
	10-18-83	26,118		
	10-19-83	30,678		

CWT Retention:	
Rwy 1	99.00%
Rwy 3	98.00%
Rwy 5	99.33%
Rwy 7	100.00%
Rwy 9	99.33%
Rwy 13	99.00%
Rwy 15	99.33%
Rwy 17	99.00%

Table 16. Daily Tagging Summary at Niagara Springs Fish Hatchery for Steelhead (continued)

Discussion

The 2009 marking season was a great success, especially being the first year under PSMFC Administration. The program was able to increase the overall efficiency and product quality of fish marking in Idaho. Once Brian Toews worked on the electrical system in the trailers the electrical problems seemed to be greatly reduced. The removal of the UPS backup system from M2 and M3 and the purchase of much smaller air compressors, which require much less amperage, for all three trailers seemed to make the electrical issues nearly nonexistent.

Throughout the year, and in many years past, the program has had many problems with the Grundfos pumps that supply water to the trailers. They frequently burn up, get clogged, and are very unreliable. Due to all the problems that we have had, we are in the process of purchasing new Flygt pumps for M2 and M3 (M1 already has a Flygt pump). The Flygt pumps are the industry standard in fish marking. We believe that they will greatly reduce the number of times that fish lose water in the trailer because of water pump issues. Additionally, we are in the process of upgrading the Canavac fish pump to a Matsusaka fish pump, also the industry standard. While pumping fish to the trailers with a Canavac fish pump, there is not a continuous flow of water to the fish. Therefore, frequently, fish are stranded in the line with little water for short periods of time and then hit with a large pulse of water. We would like to decrease the overall stress on the fish by always providing a steady supply of water to the fish.