

MAGIC VALLEY HATCHERY
LOWER SNAKE RIVER COMPENSATION PLAN
2011 OPERATIONS REPORT

By

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MAGIC VALLEY STEELHEAD HATCHERY

Magic Valley Steelhead Hatchery has been a part of the Lower Snake River Compensation Plan since the completion of construction in 1987. The hatchery's annual production goal for the 2010 brood year was 1.54 million "A" and "B" strain steelhead smolts for release into the Salmon River and tributaries. Information for 2010 brood year is found in Table 1. and Table 2. shows current information for brood year 2011.

Brood year 2010 production was completed in April 2011 with the stocking of steelhead smolts (Table 3). The four steelhead stocks released as smolts were 811,341 "B" strain from Dworshak, in addition to 91,525 Upper Salmon "B" strain from Squaw Creek; 531,801 "A" strain Pahsimeroi stock; and 124,942 Sawtooth "A" strain stock. Additionally, 37,631 Dworshak B, 45,926 Pahsimeroi A, and 7,604 Sawtooth A surplus fry/fingerlings were stocked into Salmon Falls Creek Reservoir in early September 2010.

All smolts released were adipose fin clipped. In addition, 702,954 fish were coded wire tagged with 671,237 being released. An additional 32,844 were tagged with passive integrated transponders (PIT Tags) in February; of which 32,752 were released at ten different locations.

In May and June 2011 the hatchery received a total of 1,857,950 eyed eggs to begin the 2011 brood year. Of those eggs 575,848 were "A" strain from Pahsimeroi; 135,760 "A" strain from Sawtooth stock; 1,035,254 "B" strain from Dworshak and 111,088 USB (Upper Salmon B strain). Our current inventory consists of Four stocks: 862,732 Dworshak "B" strain fish weighing 45,988 pounds, 127,763 USB strain steelhead weighing 5,901 pounds, 479,847 Pahsimeroi "A" strain steelhead weighing 27,947 pounds, and 127,027 Sawtooth "A" strain steelhead weighing 6,273 pounds.

Although water rights during the current phase of production allow for 125.59 cfs, maximum raceway flows have been measured at approximately 84.8 cfs. (82.4 cfs. November, 2010)

PERSONNEL

Personnel presently consist of Rick Lowell, Hatchery Manager II; Steve Kammeyer, Assistant Fish Hatchery Manager; Wade Symons, Fish Culturist; and Danielle Dorsch, Fish Culturist.

MAINTENANCE PROJECTS

During the year, the following projects were completed:

- Repaired woodpecker damage to the west gable end of residence “A”.
- Cleaned all residence rain gutters and stove pipes.
- Winterized the hatchery irrigation system.
- Remodeled master bathrooms in all hatchery residences.
- Received 16 new “Nielson Type” feeders for the traveling bridge.
- Fabricated a weather cover for the Kawasaki Mule.
- Repaired hole in the bottom housing of the north-side feed elevator.
- Completed painting the entire interior of Residence “B”.
- A local contractor installed a new high bay garage door opener.
- Had a state of Idaho electrical engineer serve two days of community service repairing electrical connections to our automatic feeders in the vat room.
- Repaired holes in the outside raceways bird netting enclosure.
- Installed a new mirror in Residence “C” bathroom.
- A local contractor replaced the compressor to our dormitory heat pump.
- Serviced hatchery pressure washers.
- Serviced both back-up trash pumps.
- Painted all residence mailboxes and fabricated a new mail box mounting bracket.
- Had our large 8-inch fish pump serviced by Magic Valley Heliarc. We have also sent in our 4-inch pump for repairs.
- Had Arnold Machinery pick up our large Clark forklift for repairs.
- Serviced the riding lawn mower.
- Completed painting the entire upstairs living area in residence “A”.
- Installed new fire hoses in all of the hatchery and residence fire boxes.
- Had a 2” pipe replaced in our domestic well system. We also cleaned out the well house and disinfected it with Clorox.
- Mowed high weeds around the well house area.
- Purchased and installed three new Purell hand sanitizing dispensers in the vat room.
- Installed new timer mechanism for vats 17 and 18.
- Pressure washed decks at residences A & D.
- Repaired raceway intake gates in raceways E9, W13, and W 14.
- Cleaned the bulk feed metering cones and prepared for bulk feed deliveries.
- A local electrical contractor repaired/replaced a switch on the 4” fish pump.
- Received four new dishwashers for the hatchery residences.
- A local contractor was awarded the contract for converting all of our t-12 fluorescent light fixtures to t-8 fixtures. All work was completed by the 15th September, 2011.

TABLE 1. BROOD YEAR 2010 STEELHEAD SURVIVAL RATES.

	Pahsimeroi A run	Sawtooth A run	Dworshak B¹ run	Upper Salmon B¹ run	TOTAL
Total Eggs Received	611,895	140,203	991,124	94,757	1,837,979
Smolts Stocked ¹	531,801	124,942	811,341	91,525	1,559,609
Smolt Release Weight (lbs)	101,488	24,742	157,742	18,391	302,363
Smolt Number per Pound (fpp)	5.24	5.05	5.14	4.98	5.16
Surplus Fall Parr Release	45,962	7,604	37,631	0	91,197
Surplus Fall Weight Release (lbs)	698	95	564	0	1,357
Total Release Number ¹	577,763	132,546	848,972	91,525	1,650,806
Total Release Weight (lbs)	102,186	24,837	158,306	18,391	303,720
Pounds of Feed	108,044	26,921	177,396	20,067	332,428
Feed Conversion	1.06	1.08	1.12	1.09	1.09
% Survival Egg to Raceway Mark	96.56%	96.62%	88.33%	93.64%	91.98%
% Survival Egg to Release	94.42%	94.54%	86.12%	91.47%	89.82%

¹At marking, 5,301 Dworshak B parr were added to the USB group to back-fill a raceway and are included as part of the USB release group.

TABLE 2. BROOD YEAR 2011 (11/11)

Stock	DWOR¹	USB¹	PAH	SAW	TOTAL
Total Eggs Received	1,035,254	111,088	575,848	135,760	1,857,950
Initial Swim-up Inventory (95%)	983,491	105,533	547,055	128,972	1,765,051
Initial Weight (Swim-up)	378.3	40.6	154.1	36.3	609.3
Initial Raceway Inventory ¹	864,751	128,098	480,705	127,284	1,600,838
Initial Raceway Weight	7,464.5	837.0	4,220.2	825.2	13,346.9
Initial Surplus Inventory	66,927		75,611		142,538
Initial Surplus Weight	573.0		640.2		1,213.2
Initial Raceway & Surplus	931,678	128,098	556,316	127,284	1,743,376
Rcwy Inventory Start ¹	863,338	127,861	480,125	127,148	1,598,472
Rcwy Inventory End	862,732	127,763	479,847	127,027	1,597,369
Rcwy Avg fpp Start	29.30	35.20	27.40	37.40	29.59
Rcwy Avg fpp End	18.76	21.65	17.17	20.25	18.55
Rcwy Total Weight Start	29,465.5	3,632.4	17,522.8	3,399.7	54,020.4
Rcwy Total Weight End	45,987.8	5,901.3	27,946.8	6,272.9	86,108.9
Rcwy Avg Length Start	4.46	4.19	4.56	4.11	4.44
Rcwy Avg Length End	5.17	4.93	5.33	5.04	5.19
Rcwy Length Increase	0.71	0.74	0.77	0.93	0.75
Rcwy Monthly Mortality	606	98	278	121	1,103
Rcwy Monthly % Mortality	0.07%	0.08%	0.06%	0.10%	0.07%
Rcwy Feed	16,005.0	2,357.0	9,201.0	2,337.0	29,900.0
Rcwy Monthly Conversion	0.97	1.04	0.88	0.81	0.93
No. Shipped Month	0		0		0
Wt. Shipped Month	0.0		0.0		0.0
No. Shipped to Date	66,754		75,432		142,186
Wt. Shipped to Date	1,481.0		1,845.0		3,326.0
MVSH Feed to Date	38,512.1	5,135.5	23,331.3	5,127.8	72,106.7
MVSH Conversion to Date	0.82	0.88	0.79	0.82	0.81
MVSH Survival To Date	92.4%	90.9%	96.4%	93.6%	93.6%

¹USB Initial egg #'s were reduced 5,544 due to shortage encountered during marking.

DWOR Backfill in USB Raceways numbered 4,865 in W13A & 21,939 in W13B and were differentially CWT tagged.

A total of 26,804 DWOR were used. Adjusted numbers have been applied to USB/ DWOR initial/ current raceway inventories.

TABLE 3. BROODYEAR 2010 STEELHEAD SMOLT DISTRIBUTION

Dates Stocked	Release Site	Release Number	Stock	No./ Lb	Release Pounds	Marks/ Tags
4/4 - 4/5/2011	Salmon R (Sect. 16; Red Rock)	125,803	Pah A	5.43	23,167	100% AD, 93,066 CWT, 2,081 PIT
4/5 - 4/6/2011	Salmon R (Sect. 17; Shoup Bridge)	93,785	Pah A	4.98	18,833	100% AD, 31,073 CWT, 1,599 PIT
4/6 - 4/8/2011	Salmon R (Sect. 17; Colston Corner)	125,106	Pah A	5.46	22,900	100% AD, 61,426 CWT, 2,095 PIT
4/8 - 4/12/2011	Little Salmon R (Stinky Springs)	187,107	Pah A	5.11	36,588	100% AD, 30,641 CWT, 3,678 PIT
4/12 - 4/14/2011	Little Salmon R (Stinky Springs)	218,167	Dwor B	5.30	41,141	100% AD, 122,859 CWT, 3,981 PIT
4/14 - 4/19/2011	East Fork Salmon R (lower)	282,118	Dwor B	5.24	53,796	100% AD, 61,597 CWT, 4,983 PIT
4/19 - 4/22/2011	Squaw Creek	280,753	Dwor B	4.95	56,756	100% AD, 60,603 CWT, 5,076 PIT
4/22 - 4/25/2011	Salmon R (Sect. 19; McNabb Point)	124,942	Saw A	5.05	24,742	100% AD, 91,591 CWT, 2,093 PIT
4/26/2011	Pahsimeroi River (below weir)	30,303	Dwor B	5.01	6,049	0% AD, 1,061 No Tags, 29,242 CWT, 1,795 PIT
4/26 - 4/27/2011	Pahsimeroi River (below weir)	91,525	USB	4.98	18,391	0% AD, 2,386 No Tags, 89,139 CWT, 5,371 PIT
	Total	1,559,609		5.16	302,363	