

INTRODUCTION

Location

Wallowa Hatchery is located in Wallowa County, Oregon, approximately 324.3 miles upstream from the mouth of the Columbia River. The hatchery is located at river mile 1.0 on Spring Creek, 81.4 miles upstream from the mouth of the Grande Ronde River and 39.2 miles upstream from the mouth of the Wallowa River. Wallowa Acclimation Pond is also located at the hatchery site. Two satellite stations, Big Canyon (Wallowa system) and Little Sheep (Imnaha system), are used for adult trapping, spawning and smolt acclimation.

OBJECTIVES

Mitigation Goals

Wallowa Hatchery is operated as part of the Lower Snake River Compensation Program. Mitigation goals include collection and incubation of 2,200,000 eyed steelhead eggs for transfer to Irrigon Hatchery. Of these, 1,700,000 are Wallowa stock (5696) eggs and 500,000 are Imnaha stock (2996). An additional program goal is the acclimation of 1,267,500 steelhead smolts at Wallowa Hatchery and its two satellite facilities.

Non LSRCP fish reared for release in fiscal year 1996 include both legal and fingerling Cape Cod stock rainbow trout.

STEELHEAD

Adult Returns:

Adult steelhead returning to Wallowa Hatchery (5696) numbered 549 males and 439 females for a total of 988, compared to a total of 318 in 1995. Returning to Big Canyon facility were 189 (5695) males and 338 (5695) females, totaling 527 steelhead, compared to only 380 in 1995. Imnaha stock (2996) adults returning to Little Sheep facility numbered 192 males and 297 females, for a total of 489, up from a total return of 295 in 1995.

Eyed Egg Production:

From the 1996 Imnaha brood (2996), 558,755 eyed steelhead eggs were produced and transferred to Irrigon Hatchery. Green egg loss for this stock was 23.3%. A total of 2,083,785 eyed Wallowa stock (5696) steelhead eggs was incubated and transferred to Irrigon Hatchery. Green egg loss for 5696 steelhead was 11.3%. The historical green egg loss for both these stocks averages approximately 20%. Production goals for both (2996) and (5696) steelhead were met in 1996. No eggs were transferred to Lyons Ferry Hatchery during the report period, as their steelhead returns were excess to program needs.

Acclimations:

A total of 268,537 (2995) steelhead smolts was acclimated and released from Little Sheep facility. Wallowa stock (5695) steelhead smolts acclimated and released from Big Canyon facility numbered 372,603. In addition, 656,372 Wallowa stock (5695) steelhead smolts were acclimated and released from Wallowa acclimation facility during the report period. All steelhead acclimated and released from the above facilities were reared at Irrigon Hatchery.

CHINOOK

Rapid River (8596) adult chinook excess to program needs at Lookingglass Hatchery were transferred from Lookingglass Hatchery to Wallowa for holding and spawning this summer. Chinook transferred to Wallowa Hatchery numbered 139 males, 125 females and 16 jacks for a total of 280. Fifty-seven females were spawned and produced 233,266 green eggs, which were shipped to Irrigon Hatchery for incubation and development. A total of 29 chinook, 21 males, 4 females, and 4 jacks, were transferred back to Lookingglass Hatchery on September 13, 1996, since water conditions at Lookingglass Hatchery appeared to benefit these fish.

RAINBOW

The 1996 rainbow program consisted of 122,805 Cape Cod (7294) rainbow trout received from Klamath Hatchery in September 1995 and 36,406 (7295) rainbow trout received from Fall River Hatchery in August 1996. Of the (7294) fish, 20,066 were released in October 1995 as fingerlings. The remaining 78,017 (7294) rainbow trout were released March-August 1996 at legal size. The (7295) fingerlings from Fall River Hatchery were brought to Wallowa Hatchery for air-stocking during August 1996. A total of 36,261 fingerlings were stocked from this group. At the end of the reporting period Wallowa Hatchery received 120,933 Cape Cod (7295) rainbow trout from Klamath Hatchery, weighing a total of 6,558 pounds.

CONSTRUCTION AND MAINTENANCE

There were no capital construction projects initiated or completed at Wallowa Hatchery or its satellite facilities during the report period.

Maintenance projects accomplished by the hatchery crew

Wallowa Hatchery Complex.

- Modified the egg room formalin treatment system to treat individual incubator stacks instead of just the head tank.
- Cleaned, filled and sealed all cracks in the hatchery and acclimation pond asphalt to prevent further damage.
- Installed a replacement truck fill pump.
- Upgraded plumbing to facilitate a faster fill time for fish liberation trucks.
- Installed a new Wallowa River water line to one of the tanks in the old hatchery building.
- Modified the adult holding pond and installed a formalin treatment line to enhance holding and treating the adult Rapid River chinook received from Lookingglass Hatchery.
- Modified the hatchery host site to accommodate the larger recreational vehicles that some of our hosts now have.

Big Canyon Facility

- Excavated and repaired the domestic water supply main to the facility.
- Modified the rotating fish screens in order to make them fish tight.

Little Sheep Facility

- Installed rubber strips around the main intake screens to prevent small fish from being drawn into the ponds at high flows.
- Removed an estimated 190 cubic yards of sediment from the acclimation pond at the conclusion of the acclimation season.

Maintenance projects accomplished by contractors

Wallowa Hatchery Complex

- Modified the electrical service panel at Wallowa's Clear Creek intake to handle the increased load from a larger heater.
- Replaced the lower well pump that supplies water to the hatch house, and installed a "softstart."
- Serviced furnaces and heat pumps.
- Replaced one heat pump.
- Installed a new gate in the adult holding pond fence.
- Refurbished electronic egg picker.

Big Canyon Facility

- Removed approximately 3,000 cubic yards of gravel deposited by the February 1996 flood.
- Repaired the furnace, outside lights and fish hoist.

Little Sheep Facility

- Removed approximately 1,000 cubic yards of gravel above the intake in Little Sheep Creek.
- Repaired gas leaks in the water heater and furnace.

MAJOR PURCHASES

Lower well for egg house	\$4,925.00
Computer	\$2,649.00
Spare booster pump for egg house	\$1,248.00
Dissolved oxygen meter	<u>\$ 957.00</u>
Total	\$9,779.00

**1996 STEELHEAD ADULT RETURNS
WALLOWA HATCHERY AND SATELLITE FACILITIES**

		Wallowa Hatchery (5696 Stock)	Big Canyon (5696 Stock)	Little Sheep (2896 Stock)
Date of first return		February 27	February 26	March 14
Date of last return		June 3	June 3	May 29
Number males returning		549	189	192
Number females returning		439	338	297
Date of peak returns		March 26	April 8	April 8
Number released to spawn naturally	Males	8	51	80
	Females	45	86	97
Mortality	Males	12	0	2
	Females	1	0	0

**STEELHEAD ADULTS
INCOMING TO WALLOWA HATCHERY*
WALLOWA 5696**

Stock	5696
Where trapped	Big Canyon Trap
Dates trapped	February 28 - June 3
Dates received	March 11 - June 3
Number males received	127
Number females received	242
Total number received	369
Mortality	0

*No fish were transferred from Cottonwood Trap, WDFW, in 1996.

**STEELHEAD SPAWNING RECORD
IMNAHA 2996
LITTLE SHEEP FACILITY**

Spawn date	Number of females	Number of males	Green eggs	Normal shock loss	Eyed eggs transferred to Irrigon Hatchery
03/22/96	36	36	168,600	64,050	104,550
03/28/96	23	23	113,580	13,620	99,960
04/03/96	22	29	101,770	57,780	44,010
04/11/96	36	36	154,243	12,086	142,177
04/18/96	18	8	84,879	6,798	78,081
04/25/96	9	19	48,537	4,080	42,457
05/02/96	4	9	18,210	3,190	15,020
05/09/96	4	3	14,290	3,610	10,680
05/16/96	3	2	12,900	2,850	10,050
05/23/96	4	2	13,235	1,465	11,770
Total	159	167	728,244	169,489	558,755

**STEELHEAD SPAWNING RECORD
WALLOWA 5696
WALLOWA HATCHERY**

Spawn date	Number of females	Number of males	Green eggs	Normal shock loss	Eyed eggs transferred to Irrigon Hatchery
03/13/96	19	22	104,800	11,300	93,500
03/19/96	73	76	383,200	103,500	279,700
03/26/96	102	107	515,700	51,200	464,300
04/02/96	97	96	453,700	34,200	400,000
04/09/96	92	89	427,900	43,600	280,000
04/16/96	97	97	398,100	18,100	120,000
04/23/96	49	54	223,700	17,600	206,100
04/30/96	36	36	156,045	18,100	137,945
05/07/96	12	15	57,900	2,650	55,250
05/14/96	12	12	48,700	13,300	35,400
05/21/96	3	3	11,820	230	11,590
Total	592	607	2,781,565	313,780	2,083,785

**CHINOOK ADULTS
INCOMING TO WALLOWA HATCHERY
RAPID RIVER 8596**

Stock		8596
Originating facility		Lookingglass Hatchery
Dates received		July 10-17, 1996
Number of males received		139
Number of females received		125
Number of jacks received		16
Hauling mortality	Males	0
	Females	0
	Jacks	0

**CHINOOK SPAWNING RECORD
RAPID RIVER 8596
WALLOWA HATCHERY**

Spawn date	Number of females	Number of males	Number of jacks	Number of green eggs	Eggs transferred to Irrigon Hatchery
8/28/96	3	3	0	13,141	13,141
9/04/96	29	28	1	114,474	114,474
9/11/96	25	21	4	105,653	105,653
Total	57	52	5	233,268	233,268

**1996 STEELHEAD SMOLTS
INCOMING TO
WALLOWA SATELLITE FACILITIES***

	Big Canyon (Stock 5895)	Wallowa Acc Pd (Stock 5695)	Little Sheep (Stock 2995)
Total distribution trips to facility	25	24	11
Number of smolts transferred in	374,846	662,149	269,505
Pounds of smolts transferred in	74,196	123,221	45,325
Average no/lb of smolts	5.05	5.37	5.95
Hauling mortality from Irrigon	248	64	45

*All smolts received from Irrigon Hatchery.

**1996 STEELHEAD SMOLT
RELEASES FROM
WALLOWA SATELLITE FACILITIES**

	Big Canyon (Stock 5895)	Wallowa Acc Pd (Stock 5695)	Little Sheep (Stock 2995)
Number of smolts released	372,603	658,372	268,537
Pounds of smolts released	80,368	137,564	49,729
Average no/lb of smolts released	4.64	4.77	5.4
Mortality at facility	0	0	0

**1996 RAINBOW TROUT
RELEASES FROM WALLOWA HATCHERY**

Stock	7294*	7294*	7295**
Lifestage	Fingerling	Legal	Fingerling
Dates released	October 1995	Mar - Aug 1996	August 1996
Number released	20,066	78,017	36,261
Pounds released	572	27,576	218
Ave. no/lb released	35.10	2.83	166.34
Hauling mortality	11	78	0

*Received 122,805 7294 rainbow trout from Klamath Hatchery September 26-27, 1995

**Received 36,406 7295 rainbow trout from Fall River Hatchery on August 8, 1996.

**BROODYEAR 1995 STEELHEAD
FOOD FED AND WEIGHT GAINED
WALLOWA HATCHERY**

	Big Canyon Stock 5695	Little Sheep Stock 2995	Wallowa Acc Pond Stock 5695
Period Fed	3/96 - 5/96	3/96 - 4/96	2/96 - 5/96
Feed Used (lbs)	8,800	6,300	25,000
Weight Gained (lbs)	6,126	4,386	14,848
Conversion	1.40	1.43	1.66

**BROODYEAR 1994 RAINBOW TROUT
FOOD FED AND WEIGHT GAINED
WALLOWA HATCHERY**

	Cape Cod Broodyear 94
Period Fed	9/95 - 8/96
Feed Used (lbs)	34,915
Weight gained (lbs)	21,075
Conversion	1.66