

WALLOWA HATCHERY ANNUAL REPORT FY2011

INTRODUCTION

Location

Wallowa Hatchery is located in northeast Oregon, two miles west of Enterprise. The hatchery is adjacent to Spring Creek, one mile upstream from the confluence of Spring Creek and the Wallowa River. Five rivers comprise the 613 river miles to the ocean: Spring Creek, Wallowa, Grande Ronde, Snake and Columbia Rivers. Two satellite stations, Big Canyon (Wallowa system) 30 miles west of the hatchery and Little Sheep (Imnaha system) 30 miles east of the hatchery, 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, collecting 1,241,000 (green) Wallowa stock (56) summer steelhead eggs and 313,850 (green) Little Sheep Creek stock (29) summer steelhead eggs. The smolt release goal for the Wallowa stock is 800,000 smolts. The Little Sheep Creek stock goal is 215,000 smolts, 165,000 to Little Sheep (acclimated) and 50,000 to Big Sheep (direct stream). The adult return goal is 9,200 for the Wallowa stock and 2,000 for the Little Sheep stock into their respective mitigation areas.

This is the eighth year of supplementing our existing Wallowa steelhead program with Fall Collected Brood (FCB) and the sixth year of FCB smolt releases. This was the fourth year of spawning on returning FCB adults. The main goals of the program are reduce the potential for straying into Columbia River tributaries and enhance fall harvest opportunities within the LSRCP compensation area. All eggs collected from the FCB adults are segregated, uniquely marked as smolts, and then incorporated into our rearing program. We replaced conventional program eggs with eggs from the FCB thus maintaining our goal of 800,000 smolts.

SUMMER STEELHEAD

Adult Returns

Return numbers at Wallowa, Big Canyon and Little Sheep were all lower than the previous record return year. The stock designations for adults collected during the 2011 season were Wallowa and Big Canyon (5611) and Little Sheep/Imnaha (2911).

Wallowa Hatchery collected 3,499 hatchery origin steelhead. Of those, 1,463 were male and 2,036 were female. This number includes the FCB adults (295 males and 287 females) that were RV clipped and returned to the Wallowa Hatchery trap. This was 1,377 less returning adults than the 2010 return.

Big Canyon satellite facility had a return of 2,985 adult hatchery origin steelhead consisting of 1,076 males and 1,909 females. This was 291 less adults than the number returning in 2010. We had 133 (58 males, 75 females) natural origin steelhead return, all of which were passed above the weir in Deer Creek to spawn naturally. The natural origin steelhead returns in 2010 were 135 adults.

Little Sheep facility had 1,556 hatchery adults return (593 males, 963 females), which is 1,881 less than the 2010 return of 3,437. Natural origin returns were 248 adults (93 male, 155 female), compared to 289 in 2010. Of the adults collected, 87 hatchery and 219 natural origin steelhead were passed above the weir in Little Sheep Creek. Additional releases include 401 hatchery adults transferred to Big Sheep Creek to spawn naturally.

Egg Production - Wallowa Stock (5611) Summer Steelhead

There were a total of 1,384,465 Wallowa stock eggs taken during the season, 1,126,925 production and 258,540 FCB eggs. We transferred 1,130,350 eyed eggs to Irrigon Hatchery. 1,200 eggs were transferred to local school education programs (STEP). In addition, 52,000 Wallowa stock eggs were transferred to Lyons Ferry Hatchery (WDFW). The green to eyed egg loss was 7.8% for the Wallowa stock as a whole. This is the fourth year for spawning the RV fin clipped adults (FCB progeny) returning to Wallowa Hatchery. The FCB segregated eggs had a slightly higher percent loss of 12.8%.

Egg Production - Imnaha Stock (2911) Summer Steelhead

A total of 337,800 green eggs were taken in the 2011 season. We transferred 294,450 eyed eggs to Irrigon Hatchery. Egg loss was 12.8%, comparable to the 8% loss in 2010.

Smolt Acclimation Summer Steelhead

There were 500,521 Wallowa stock (5610) smolts acclimated and released from Wallowa Hatchery. Big Canyon acclimated and released 326,358 Wallowa stock (5610) smolts.

Little Sheep satellite facility acclimated and released 158,027 Imnaha stock (2910) smolts.

Irrigon Hatchery reared the above stocks of smolts acclimated and release at our facilities.

CAPITAL CONSTRUCTION AND MAINTENANCE

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

MAJOR PROJECTS ACCOMPLISHED BY ODFW PERSONNEL

Wallowa Facility

A large portion of our time this year was spent on adult steelhead collections. We collected record adult returns at all three collection sites and distributed approximately 4,290 adults to local food banks.

Residence #1 had a new woodshed constructed off the side of the existing garage.

Replaced the bearings on the Wallowa intake rotating screen.

A larger welding table was built to better accommodate fish screens.

A new smolt slide was built on the abatement pond fish ladder.

A lumber rack was built to organize and store extra lumber and aluminum screen.

Stainless steel pipe drains were built to replace the old leaking drains in the circulars.

All of the new informational signs and kiosks were constructed around the hatchery.

Big Canyon Facility

A new and improved work bench was built for the shop.

Three new metal doors were installed to replace the old rusted out doors.

Repaired miscellaneous screens and replaced dam boards as needed.

Little Sheep Facility

A new workbench was built for the new shop building.

Replaced miscellaneous dam and ladder boards.

MAINTENANCE PROJECTS ACCOMPLISHED BY CONTRACTORS

Wallowa Hatchery

Hampton Paving completed some asphalt work at the hatchery. They filled in an electrical trench, a planted area by the spawning room, and tapered an apron off the road to the acclimation ponds. They also widened the apron to the acclimation ponds, which will help the liberation truck drivers make the turn.

The Door Guy installed two new roll up doors in the shop that were falling apart.

Gibson Excavating Inc. replaced a septic tank in one of the residences.

Miller Plumbing installed a new toilet and plumbed in new lines for the septic tank.

Miller Plumbing installed two new septic pumps for the hatchery septic pump station.

Big Canyon Facility

Moffit Brothers Construction removed 50 cubic yards of rock and debris from the Big Canyon weir. The rock build up was going to make installing the weir impossible.

Mountain View Glass provided and installed three metal doors at Big Canyon. The old doors were starting to rust apart.

Little Sheep Facility

J.B. Bane & Company performed some electrical work on the wiring to the radial gates. One of the lift motors was inoperable.

MAJOR PURCHASES

Fish Food	\$13,920
DEQ water analysis	\$1,513
Propane	\$4,806
Chest freezer	\$789
Push lawn mower	\$799
Iodine	\$1,649
Oxygen Sensor	\$1,236
O2 bottles	\$793
Wood storage rack	\$1,294
Aluminum	\$2,281
Computers	\$2,146
Software	\$647
Pressure washer supplies	\$805

MAJOR REPAIRS and MAINTENANCE

Paving	\$4,990
Big Canyon rock removal	\$1,904
Metal man doors Big Canyon	\$1,420
Radial gate work Little Sheep	\$1,594
Septic tank and plumbing	\$5,397
Hatchery Septic pumps	\$2,107
Roll-up Doors	\$4,951
Tires for pickups and lib truck	\$4,163

Adult Returns to Hatchery

Steelhead Wallowa Stock 56 BY10

Big Canyon Facility

Date of first return:	March 4, 2011
Date of last return:	May 27, 2011
Number of adults returning:	1,076 males, 1,909 females
Date of peak returns:	April 1, 2011
Number of fish released to spawn naturally:	58 males, 75 females
Number of fish planted for angling opportunity:	
<i>Wallowa River</i>	47 males, 54 females
<i>Roulet Pond</i>	22 males, 18 females
<i>Ladd Pond</i>	12 males, 18 females
Mortality of all adult returns:	0 males; 0 females

803 males and 1,379 females in excess of program needs were given away to food banks and educational use.

Wallowa Fish Hatchery

Date of first return:	February 8, 2011
Date of last return:	May 18, 2011
Number of adults returning:	1,463 males, 2,036 females
Date of peak returns:	March 30, 2011
Number of fish released to spawn naturally:	0 males, 0 females
Number of fish planted for angling opportunity:	
<i>Marr Pond</i>	64 males, 36 females
<i>Wallowa River</i>	7 males, 15 females
<i>Wallowa Wildlife Pond</i>	27 males, 24 females
Mortality of all adult returns:	4 males; 1 females

796 males and 1,073 females in excess of program needs were given away to food banks and educational use.

Steelhead Imnaha Stock 29 BY11

Little Sheep Creek Facility

Date of first return:	March 14, 2011
Date of last return:	May 26, 2011
Number of adults returning:	593 males, 963 females
Date of peak returns:	April 7, 2011
Number of fish released to spawn naturally:	140 males, 166 females
Number of fish outplanted to Big Sheep Creek:	184 males, 217 females
Mortality of all adult returns:	3 males; 1 female

184 males and 339 females in excess of program needs were given away to food banks.

Spawning Record

Steelhead

Wallowa Stock 56 BY11 (*includes Fall Caught Brood fish*)

Wallowa Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
3/16/11	191,800	34	34
3/23/11	173,400	34	34
3/30/11	366,700	64	64
4/06/11	264,565	48	48
4/13/11	245,900	45	40
4/20/10	143,100	29	24

Total number of females spawned:	254
Total number of males spawned:	244
Total number of green eggs:	1,385,465
Number of green eggs shipped:	52,000*
Total number of eyed eggs:	1,228,850
Number of eggs retained for rearing:	0
Number of eyed eggs shipped:	1,131,550**
Excess to program:	97,300
Date of last spawning:	4/20/11

**52,000 green eggs shipped to Lyons Ferry Hatchery for the Cottonwood Program.*

***1,200 eyed eggs were transferred to STEP and 1,130,350 were shipped to Irrigon Fish Hatchery for incubation and rearing.*

Spawning Record

Steelhead Imnaha Stock 29 BY11

Little Sheep Creek Facility

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
3/29/11	26,650	5	6
4/05/11	63,075	12	12
4/12/11	23,300	5	5
4/19/11	63,575	12	12
4/26/11	58,200	11	11
5/02/11	41,000	9	10
5/10/11	63,000	9	9

Total number of females spawned:	63
Total number of males spawned:	65
Total number of green eggs:	338,800
Total number of eyed eggs:	297,450
Number of eggs retained for rearing:	0*
Number of eggs shipped:	297,450
Date of last spawning:	5/10/11

**Unfertilized eggs and milt were transported to Wallowa Fish Hatchery for fertilization.
All eyed eggs were shipped to Irrigon Fish Hatchery for incubation and rearing.*

Fingerling Trout Reared

Rainbow Trout
Cape Cod Stock 72 BY10

Number fingerlings produced:	37,475
Weight of fingerlings produced (lbs.):	300
Percent mortality to release:	12.0
Average number/pound of fingerlings produced:	125
Conversion rate:	0.64

Legal Trout Reared

Rainbow Trout
Cape Cod Triploid Stock 72T BY09

Number legals produced:	22,000
Weight of legals produced (lbs.):	9,156
Percent mortality to release:	8.56
Average number/pound of legals produced:	2.40
Conversion rate:	0.94

Trophy Trout Reared

Rainbow Trout
Cape Cod Stock 72 BY08

Number trophies produced:	1,775
Weight of trophies produced (lbs.):	2,491
Percent mortality to release:	3.69
Average number/pound of trophies produced:	0.71
Conversion rate:	1.12

Smolts Reared

Spring Chinook – Captive Brood Program Grande Ronde River Stock 80Z BY09

Number smolts produced:	303
Weight of smolts produced (lbs.):	16.5
Percent mortality to transfer:	4.39%
Average number/pound of smolts produced:	18.4
Conversion rate:	1.09

Steelhead

Wallowa Stock 56 BY10

Number of smolts produced:	826,879*
Weight of smolts produced (lbs.):	200,399.0
Percent mortality to stocking:	5.62%
Average number/pound of smolts produced:	4.13
Conversion rate:	1.02 at Irrigon Fish Hatchery

**Irrigon Fish Hatchery reared 830,156 smolts weighing 189,590 pounds for this program. A total of 326,358 smolts survived to release from Big Canyon Acclimation Facility. A total of 500,521 smolts survived to release from Wallowa Acclimation Facility. Pounds produced at Wallowa Fish Hatchery facilities totaled 10,809. Conversion rates at Big Canyon and Wallowa Acclimation facilities were 1.27 and 1.49, respectively.*

Steelhead

Imnaha Stock 29 BY10

Number smolts produced:	158,027*
Weight of smolts produced (lbs.):	36,750.0
Percent mortality to stocking:	33.0%
Average number/pound of smolts produced:	4.30
Conversion rate:	0.99 at Irrigon Fish Hatchery

**Irrigon Fish Hatchery reared 158,548 smolts weighing 35,275 pounds for this program. A total of 158,027 smolts survived to release from Little Sheep Creek Facility, where they were acclimated prior to release. Pounds produced at Little Sheep Creek Facility totaled 1,475, and the conversion rate was 1.59.*

Food Fed and Weight Gain

**Chinook – Captive Broodstock Program
Grande Ronde River Stock 80Z BY09**

Wallowa Hatchery	
Total pounds of food fed	3.34
Conversion rate	1.27
Total pounds weight gained - all sizes produced	2.64

**Chinook – Captive Broodstock Program
Grande Ronde River Stock 80Z BY10**

Wallowa Hatchery	
Total pounds of food fed	5.48
Conversion rate	1.31
Total pounds weight gained - all sizes produced	4.18

**Steelhead
Wallowa Stock 56 BY10**

Big Canyon Facility	
Total pounds of food fed	4,250.0
Conversion rate	1.27
Total pounds weight gained - all sizes produced	3,351.0

**Steelhead
Wallowa Stock 56 BY10**

Wallowa Acclimation Pond	
Total pounds of food fed	11,100.0
Conversion rate	1.49
Total pounds weight gained - all sizes produced	7,458.0.0

**Steelhead
Imnaha Stock BY08**

Little Sheep Creek Facility	
Total pounds of food fed	2,350.0
Conversion rate	1.59
Total pounds weight gained - all sizes produced	1,475.0

Food Fed and Weight Gain

Rainbow Trout
Cape Cod Triploid Stock 72T BY08

Wallowa Hatchery	
Total pounds of food fed	3,372.0
Conversion rate	1.22
Total pounds weight gained - all sizes produced	2,753.1

Rainbow Trout
Cape Cod Triploid Stock 72T BY09

Wallowa Hatchery	
Total pounds of food fed	16,110.0
Conversion rate	0.94
Total pounds weight gained - all sizes produced	17,148.5

Rainbow Trout
Cape Cod Stock 72 BY10

Wallowa Hatchery	
Total pounds of food fed	186.4
Conversion rate	0.64
Total pounds weight gained - all sizes produced	289.1

Rainbow Trout
Oak Springs Triploid Stock 53T BY09

Wallowa Hatchery	
Total pounds of food fed	60.0
Conversion rate	0.95
Total pounds weight gained - all sizes produced	63.0

**On Hand at Wallowa Fish Hatchery
September 30, 2011**

Fish On Hand – BY09

Species	Stock	Number
Rainbow Trout	Oak Springs	2,716

Fish on Hand – BY10

Species	Stock	Number
Spring Chinook	Grande Ronde Captive Brood	294

FY11 Stocking

Total number of distribution trips:	14*
Number of fry stocked	0
Weight of fry stocked:	0 lbs.
Number of fingerlings stocked:	37,475
Weight of fingerlings stocked:	300 lbs.
Number of smolts stocked:	984,906
Weight of smolts stocked:	237,149.0 lbs
Number of legals stocked:	22,000
Weight of legals stocked:	9,156.0 lbs.
Number of trophies stocked:	1,775
Weight of trophies stocked:	2,941.0 lbs.
Date, location, number and weight at each stocking:	See Attached

*One trip was to transport Captive Broodstock to Bonneville Hatchery.

Wallowa Fish Hatchery and Associated Facility Stocking Records
October 1, 2010 through September 30, 2011

HATCHERY	SPECIES	STOCK	TYPE	DATE	FROM/TO	NO/LB	MORTS	NUMBER	POUNDS
								STOCKED	STOCKED
BIG CANYON	SUMMER STEELHEAD	056 10	LIBERATION	04-13-11	DEER CREEK	4.10	0	77,347	18,865.00
BIG CANYON	SUMMER STEELHEAD	056 10	LIBERATION	04-14-11	DEER CREEK	4.10	0	82,397	20,097.00
BIG CANYON	SUMMER STEELHEAD	056 10	LIBERATION	05-09-11	DEER CREEK	4.20	0	81,564	19,420.00
BIG CANYON	SUMMER STEELHEAD	056 10	LIBERATION	05-09-11	DEER CREEK	4.30	0	85,050	19,779.00
LITTLE SHEEP	SUMMER STEELHEAD	029 10	LIBERATION	04-01-11	SHEEP CR, L	4.30	0	158,027	36,750.00
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	02-16-11	MARR PD	0.93	0	100	107.00
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	02-16-11	WALLOWA LK	0.93	0	300	323.00
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	04-28-11	MARR PD	0.69	0	50	72.46
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	04-28-11	WALLOWA WILDLIFE PD	0.69	0	25	36.23
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	05-13-11	WALLOWA LK	0.69	0	300	434.78
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	05-13-11	MARR PD	0.69	0	50	72.46
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	05-13-11	WALLOWA WILDLIFE PD	0.69	0	50	72.46
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	05-26-11	KINNEY LK	0.66	0	200	303.03
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	05-27-11	WALLOWA LK	0.66	0	300	454.54
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	06-10-11	MARR PD	0.65	0	200	307.69
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	06-10-11	VICTOR PD	0.65	0	100	153.84
WALLOWA	RAINBOW TROUT	072 08	LIBERATION	06-11-11	WALLOWA WILDLIFE PD	0.65	0	100	153.84
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	VAN PATTEN LK	180.00	0	3,000	16.67
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	TWIN LK	180.00	0	1,000	5.56
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	HEART LK	180.00	0	2,000	11.11
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	CRATER LK	180.00	0	2,500	13.89
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	PROSPECT LK	180.00	0	2,000	11.11
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	UNIT LK	180.00	0	2,000	11.11
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	ANEROID LK	180.00	0	4,000	22.22
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	HAWK LK	180.00	0	2,000	11.11
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	LEGORE LK	180.00	0	1,500	8.33
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	FRANCIS LK	180.00	0	4,000	22.22
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	HOBO LK	180.00	0	2,000	11.11
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	08-11-11	MELLARD RES	180.00	0	1,000	5.56
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	09-08-11	ALDRICH PDS	94.00	0	499	5.31
WALLOWA	RAINBOW TROUT	072 10	LIBERATION	09-21-11	OXBOW RES	69.00	0	9,976	144.58

Wallowa Fish Hatchery and Associated Facility Stocking Records
October 1, 2010 through September 30, 2011

HATCHERY	SPECIES	STOCK	TYPE	DATE	FROM/TO	NO/LB	MORTS	NUMBER STOCKED	POUNDS STOCKED
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	04-28-11	MARR PD	2.30	0	250	108.70
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	04-28-11	WALLOWA WILDLIFE PD	2.30	0	250	108.70
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	04-29-11	WALLOWA LK	2.30	0	5,000	2,173.91
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-13-11	WALLOWA LK	2.50	0	6,000	2,400.00
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-13-11	MARR PD	2.50	0	500	200.00
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-13-11	VICTOR PD	2.50	0	500	200.00
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-13-11	WALLOWA WILDLIFE PD	2.50	0	500	200.00
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-26-11	KINNEY LK	2.20	0	3,000	1,363.63
WALLOWA	RAINBOW TROUT	072T09	LIBERATION	05-27-11	WALLOWA LK	2.50	0	6,000	2,400.00
WALLOWA ACC	SUMMER STEELHEAD	056 10	LIBERATION	04-11-11	SPRING CR	4.00	0	185,326	46,332.00
WALLOWA ACC	SUMMER STEELHEAD	056 10	LIBERATION	04-10-11	SPRING CR	4.00	0	187,898	46,975.00
WALLOWA ACC	SUMMER STEELHEAD	056 10	LIBERATION	04-24-11	SPRING CR	4.40	0	127,297	28,931.00
WALLOWA	SPRING CHINOOK	080Z09	TRANSFER	05-31-11	BONNEVILLE HATCHERY	18.41	0	303	16.46
WALLOWA	RAINBOW TROUT	072 08	DESTROY	07-25-11	ON-SITE	0.55	0	1,555	2,827.00
WALLOWA	RAINBOW TROUT	072T09	DESTROY	06-23-11		2.40	0	10,956	4,565.00
WALLOWA	RAINBOW TROUT	072T09	DESTROY	06-23-11		2.90	0	11,210	3,866.00
WALLOWA	RAINBOW TROUT	072T09	DESTROY	06-23-11		3.00	0	10,816	3,605.00
WALLOWA	RAINBOW TROUT	072T09	DESTROY	06-23-11		3.10	0	10,440	3,368.00
WALLOWA	RAINBOW TROUT	072T09	DESTROY	07-25-11	ON-SITE	1.86	0	4,460	2,398.00