

LOOKINGGLASS FISH HATCHERY ANNUAL REPORT FY2009

INTRODUCTION

Location

Lookingglass Fish Hatchery is located on Lookingglass Creek 2.2 miles upstream from its confluence with the Grande Ronde River near the small community of Palmer Junction. The Grande Ronde flows another 85 miles before entering the Snake River at Heller Bar. The Imnaha satellite facility is located at river mile 46 on the Imnaha River, a tributary to the Snake River as well, and is used as a smolt acclimation and release site in the spring and for adult trapping in the summer.

OBJECTIVES

Program Goals

Lookingglass Fish Hatchery is part of the Lower Snake River Compensation Program (LSRCP) and has been in operation since 1982. Long term goals of 5,720 fish in the Grande Ronde sub-basin is to mitigate for fish losses occurring as a result of the construction and operation of the four Lower Snake River Dams. Short term goals are recovery, delisting, and utilizing captive broodstock technology and conventional supplementation to prevent the extinction of three wild Chinook populations namely the Upper Grande Ronde River stock, Catherine Creek stock, and Lostine stock. Also, reintroduction of spring/summer Chinook into Lookingglass Creek using Catherine Creek stock is a goal of the program. In the Imnaha River system, the program mitigation goal is to return 3,210 hatchery adults to the area above Ice Harbor Dam. In addition, program goals include restoring and maintaining the natural spawning population, reestablishing sport and tribal fisheries, and minimizing the impacts of the program on resident stocks of fish.

CHINOOK

Trapping and Adult Returns

The adult trap on Lookingglass Creek was put into operation on March 4, 2009 primarily to trap adult steelhead returning at this time of year. Wild steelhead are enumerated and then released upstream of the weir to spawn naturally and hatchery origin steelhead are removed. A total of 242 unmarked steelhead were trapped and released. The trap was in continuous operation until September 11, 2009. The first Chinook was trapped on June 5. A total of 333 fish were trapped consisting of 47 males, 77 females, and 209 jacks. Released above the weir to spawn naturally were 33 males, 42 females, and 15 jacks.

The weir at the Imnaha Satellite Facility was installed on June 24 and in operation until September 16, 2009. A total of 3,530 fish were trapped consisting of 582 males, 595 females, and 2,353 jacks. There were 109 males, 110 females, and 55 jacks retained and used for broodstock purposes. Fish that were excess to broodstock needs were distributed to the Nez Perce Tribe for ceremonial and subsistence use and to charitable food banks. A total of 1,697 fish were distributed consisting of 149 males, 230 females, and 1,318 jacks. Also, there were 306 fish released above the weir consisting of 125 males, 116 females, and 65 jacks. In addition, a total of 872 fish were out planted to Big

Sheep Creek and Lick Creek, tributaries of the Imnaha River. Big Sheep Creek received 67 males and 58 females and Lick Creek received 97 males, 57 females, and 596 jacks.

Located on the Upper Grande Ronde River and Catherine Creek, a weir and trap are operated by the Confederated Tribes of the Umatilla (CTUIR). A portion of returning adults trapped are transported to Lookingglass and held for spawning. Lookingglass received a total of 164 fish from the Upper Grande Ronde facility. There were 73 males, 78 females, and 13 jacks. In addition, 3 males, 19 females, and 57 jacks swam into the Lookingglass trap and were identified as Grande Ronde fish due to unique marks placed on the fish. The fish from the two trap locations were combined. Lookingglass received 38 males, 44 females, and 6 jacks from the Catherine Creek weir and trap.

Located on the Lostine River, a weir and trap is operated by the Nez Perce Tribe. A portion of returning adults trapped are transported to Lookingglass and held for spawning. A total of 60 males and 60 females were brought to Lookingglass.

Spawning and Egg Production

All conventional broodstock of the various stocks of fish were spawned at Lookingglass and all fertilized eggs were incubated at Lookingglass. It is anticipated that all resulting fry will be reared at Lookingglass with the exception of approximately 100,000 Lookingglass stock and 100,000 Catherine Creek captive stock being sent to Irrigon Hatchery in the spring of 2010. This group of fish will be reared at Irrigon until October of 2010 and then returned to Lookingglass for rearing until release in the spring of 2011. The final rearing at Lookingglass will take place in the adult holding ponds which have been modified to hold fish at 20-30 fish per pound.

Egg production from 2009 spawning efforts, number of females spawned, percent eye up, green and eyed egg numbers, and fecundities for the various stocks is as follows:

There were 109 Imnaha stock females spawned yielding 513,432 green eggs resulting in 475,730 eyed eggs for an eye up of 92.7%. Average fecundity was 4,710.

A total of 57 Lostine females were spawned yielding 262,883 green eggs resulting in 245,394 eyed eggs for an eye up of 93.3%. Average fecundity was 4,612.

A total of 26 Lookingglass females were spawned yielding 101,637 green eggs resulting in 99,378 eyed eggs for an eye up of 97.8%. Average fecundity was 3,909.

A total of 43 Catherine Creek females were spawned yielding 165,263 green eggs resulting in 154,481 eyed eggs for an eye up of 93.5%. Average fecundity was 3,843.

A total of 61 Grande Ronde females were spawned yielding 261,136 green eggs resulting in 226,773 eyed eggs for an eye up of 86.8%. Average fecundity was 4,281.

Total conventional egg take was 1,304,351 green eggs yielding 1,201,756 eyed eggs.

Captive Broodstock Chinook Program

A separate annual report covers the details for operation of this program. However, a total of 227,480 smolts were released from this program including; 74,610 Lostine River into the Lostine River, 100,450 Catherine Creek stock into Lookingglass Creek, and 52,420 Grande Ronde stock into the Grande Ronde River.

Miscellaneous

Coded Wire Tagging was completed on the BY 2008 Imnaha, Lostine, Catherine Creek, Lookingglass, and Upper Grande Ronde River stocks of Chinook in June, 2009. A total of 965,616 fish received a CWT.

PIT-tagging was completed on the BY 2008 Imnaha, Lostine, Catherine Creek, Lookingglass, and Upper Grande Ronde River stocks of Chinook during October, 2009. A total of 53,692 fish received PIT tags.

CONSTRUCTION AND MAINTENANCE

MAINTENANCE PROJECTS ACCOMPLISHED BY ODFW PERSONNEL

- Serviced and repaired vehicles and equipment.
- Spread rock over boneyard area for better surface conditions
- Retrofitted one adult holding pond to use as rearing space for juvenile fish until release
- Replaced phone system at Imnaha with satellite phone connection
- Built screens for use at the hatchery water intake to keep debris and rock out of the intake
- Poured concrete floors in three residential storage sheds
- Repaired various snow removal equipment
- Constructed two firewood storage sheds at hatchery residences
- Cleaned UV system quartz sleeves with muriatic acid
- Built and installed raceway head screens in all raceways
- Continued a re-cycling program re-cycling computer paper, catalogs, plastic bottles, cardboard, aluminum, and tin cans
- Modified the adult holding trap at Imnaha putting a fence around the exterior
- Developed and used part of the acclimation pond as additional space for holding adults
- Repaired automatic fish feeders

MAINTENANCE PROJECTS ACCOMPLISHED BY CONTRACTORS

AirChek – Tested residential housing for safe levels of radon

Alpine Chimney Services- Serviced residential chimneys and wood stoves

Partney Excavation –Removed the streambed load in front of the hatchery intake deposited during spring runoff

Delta Environmental- Domestic water quality analysis and DEQ environmental water sample analysis

E C Power Systems – Repaired Kohler generator used as a backup generator at Imnaha

Hanley Engineering – Perform survey work for topographic layout for purchase of land to construct two new residences on

Elwayne Henderson Logging – Perform repair work to hatchery entry road, part of which had sloughed off into Lookingglass Creek

Ladco Electric – Repair Program Logic Controller (PLC) for the backup motor to well # 2

Ledbetter Refrigeration – Serviced and shut down chillers for the season, and installed the well monitoring system for flow and pressure.

McMillen and Co. – Repaired hatchery building roof to stop leaks. Performed mold abatement in attic area of the visitor center. Re-modeled and painted the visitor center.

Oregon Trail Electric Coop - Oregon Trail Electric Coop installed a higher efficiency lighting system to conserve energy use

Pendleton Grain Growers- Repaired pump to water delivery system at Imnaha

Steve LaPrelle construction – Remove wet insulation from attic, apply temporary sealant to stop roof leaks in hatchery building

Wilde Electric – Repaired pump used to supply water to Imnaha adult fish handling work stations

MAJOR EXPENSES

Repair & maintenance of buildings and grounds	\$ 3,922.00
Fish food	63,077.00
Repairs and maintenance to equipment	2,332.00
Supplies	33,692.00
Other Services	22,048.00
Communication services	8,194.00
Utilities*	1,576.00
Technology	4,403.00
Clothing	2,465.00

2009 LG ANN

Chemicals	9,875.00
Equipment Rental	2,799.00
Office supplies	<u>2,557.00</u>
Total	\$156,940.00

* Utilities does not include an estimated \$80,000 paid directly by LSRCP

Adult Returns to Hatchery

Chinook Lookingglass Creek Stock BY09

Lookingglass Fish Hatchery	
Where trapped:	Lookingglass Creek Weir
Dates trapped:	March 4 – September 11, 2009
Number of adults trapped:	47 males, 77 females, 209 jacks
Date of peak returns:	June 15, 2009
Number of adults released to spawn naturally:	33 males, 42 females, 15 jacks
Number of adults to hatchery for broodstock:	12 males, 27 females, 55 jacks
Number given away:	0 males, 0 females, 134 jacks
Mortality of all adult returns	<i>at trap:</i> 0 males, 0 females
	<i>at hatchery:</i> 4 males, 1 female, 5 jacks

Chinook - Conventional Broodstock Program Grande Ronde River Stock BY09

Lookingglass Fish Hatchery	
Where trapped:	Lookingglass Creek Weir
Dates trapped:	June 3 – September 14, 2009
Number of adults trapped:	3 males, 19 females, 57 jacks
Date of peak trapping:	June 15, 2009
Number of adults released to spawn naturally:	0 males, 0 females, 0 jacks
Number of adults to hatchery for broodstock:	3 males, 19 females, 34 jacks
Number given away:	0 males, 0 females, 23 jacks
Mortality of all adults	<i>at trap:</i> 0 males, 0 females, 0 jacks

Summer Steelhead Lookingglass Creek Stock BY08

Lookingglass Fish Hatchery	
Where trapped:	Lookingglass Creek Weir
Dates trapped:	March 1 – June 21, 2009
Number of adults trapped:	86 males, 108 females, 0 jacks
Date of peak returns:	March 23, 2009
Number of adults released to spawn naturally:	86 males, 108 females, 0 jacks
Number of adults to hatchery for broodstock:	0 males, 0 female, 0 jacks
Mortality of all adult returns	<i>at trap:</i> 0 males, 0 females
	<i>at hatchery:</i> 0 males, 0 female, 0 Jacks

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook
Imnaha Stock BY09**

Lookingglass Fish Hatchery	
Where trapped:	Imnaha Satellite Facility
Date weir installed:	June 24, 2009
Dates trapped:	June 24 - Sept 16, 2009
Number of adults trapped:	582 males, 595 females, 2353 jacks
Date of peak trapping:	July 20, 2009
Number of adults released to spawn naturally:	
<i>Imnaha River (above weir)</i>	125 males, 116 females, 65 jacks
<i>Big Sheep Creek</i>	67 males, 57 females, 0 jacks
<i>Lick Creek</i>	97 males, 69 females, 596 jacks
Number of adults to hatchery for broodstock:	109 males, 110 females, 55 jacks
Number given away	149 males, 230 females, 1318 jacks
Mortality of all adults	
<i>at trap:</i>	11 males, 5 females, 38 jacks
<i>at hatchery:</i>	20 males, 3 females, 57 jacks

**Chinook - Conventional Broodstock Program
Grande Ronde River Stock BY09**

Lookingglass Fish Hatchery	
Where trapped:	Upper Grande Ronde Weir
Dates trapped:	June 3 – August 3, 2009
Number of adults trapped:	116 males, 119 females, 278 jacks
Date of peak trapping:	June 25, 2009
Number of adults released to spawn naturally:	43 males, 41 females, 17 jacks
Number of adults to hatchery for broodstock:	73 males, 78 females, 13 jacks
Mortality of all adults	
<i>at trap:</i>	0 male, 0 females, 2 jacks
<i>at hatchery:</i>	36 males, 36 females, 8 jacks

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY09**

Lookingglass Fish Hatchery	
Where trapped:	Catherine Creek Weir
Dates trapped:	June 3 – August 31, 2009
Number of adults trapped:	129 males, 128 females, 433 jacks
Date of peak trapping:	June 17, 2009
Number of adults released to spawn naturally:	89 males, 86 females, 48 jacks
Number of adults to hatchery for broodstock:	38 males, 44 females, 6 jacks
Mortality of all adults	
<i>at trap:</i>	0 males, 0 females, 0 jacks
<i>at hatchery:</i>	10 males, 1 female, 0 jacks

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook - Conventional Broodstock Program
Lostine River Stock BY08**

Lookingglass Fish Hatchery

Where trapped:	Lostine River Weir
Dates trapped:	July 13 - September 22, 2009
Date of peak trapping:	July 18, 2009
Number of adults trapped:	665 males, 752 females, 1012 jacks
Number of adults released to spawn naturally:	
<i>Lostine River</i>	297 males, 346 females, 54 jacks
<i>Bear Creek</i>	31 males, 22 female, 0 jacks
Number of adults to hatchery for broodstock	60 males, 60 females, 0 jacks
Mortality of all adults	
<i>at trap:</i>	0 males, 0 females, 0 jacks
<i>at hatchery:</i>	8 males, 2 females

The Nez Perce Tribe took 275 males, 326 females and 953 jacks for ceremonial and subsistence purposes.

The Lower Snake River Compensation Plan funds the Chinook Captive Broodstock Program from egg incubation through release of progeny. Spawning took place at Bonneville Fish Hatchery, green eggs were incubated at Oxbow Fish Hatchery, and the resulting eyed eggs and fry were reared at Lookingglass Fish Hatchery

SPAWNING RECORD

Chinook Captive Broodstock Program Upper Grande Ronde River Stock BY08

Bonneville Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
9/24/08	31,779	16	21
10/01/09	98,468	48	64
10/08/08	78,192	37	37
10/16/08	17,014	8	11

Captive broodstock fish are spawned according to specific matrices, depending on treatments and cohorts of mature fish.

Total number of females spawned:	109
Total number of males spawned:	133
Total number of cryopreserved sperm samples used:	0
Total number of green eggs:	225,453
Total number of eyed eggs:	205,354
Number of eggs retained for rearing:	0*
Number of eggs shipped:	205,071
Number of eggs culled due to high BKD titers	283
Date of last spawning:	10/16/08

**All upper Grande Ronde River stock green eggs were shipped to Oxbow Fish Hatchery for incubation. Once eyed, the eggs were shipped to Lookingglass Fish Hatchery for rearing.*

SPAWNING RECORD

Chinook Captive Broodstock Program Catherine Creek Stock BY08

Bonneville Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
9/17/08	2,486	2	5
9/25/08	29,445	16	24
10/02/08	68,232	43	61
10/09/08	21,682	17	23
10/16/08	3,440	3	5

Captive broodstock fish are spawned according to specific matrices, depending on treatments and cohorts of mature fish.

Total number of females spawned:	81
Total number of males spawned:	118
Total number of cryopreserved sperm samples used:	0
Total number of green eggs:	125,285
Total number of eyed eggs:	116,895
Number of eggs retained for rearing:	0*
Number of eggs shipped:	38,997
Number of eggs released:	46,727
Number of eggs culled due to high BKD titers	31,171
Date of last spawning:	10/16/08

**All Catherine Creek stock green eggs were shipped to Oxbow Fish Hatchery for incubation. Once eyed, the eggs were shipped to Lookingglass Fish Hatchery for rearing, or released into Indian Creek by CTUIR.*

SPAWNING RECORD

Chinook Captive Broodstock Program Lostine River Stock BY08

Bonneville Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
9/10/08	3,993	2	4
9/17/08	2,017	1	2
9/24/08	44,032	26	26
9/30/08	39,088	22	30
10/08/08	40,673	32	37

Captive broodstock fish are spawned according to specific matrices, depending on treatments and cohorts of mature fish.

Total number of females spawned:	83
Total number of males spawned:	99
Total number of cryopreserved sperm samples used:	0
Total number of green eggs:	129,803
Total number of eyed eggs:	112,821
Number of eggs retained for rearing:	0*
Number of eggs shipped:	79,075
Number of eggs culled due to high BKD titers	33,746
Date of last spawning:	10/08/08

**All Lostine River stock green eggs were shipped to Oxbow Fish Hatchery for incubation. Once eyed, the eggs were shipped to Lookingglass Fish Hatchery for rearing.*

SPAWNING RECORD**Chinook
Imnaha Stock BY09**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/19/09	31,345	7	2
8/25/09	236,680	50	17
9/01/09	227,420	49	18
9/08/09	17,987	3	12

Imnaha stock chinook eggs and sperm were combined according to matrices, depending on available mature broodstock. Sperm from hatchery jacks was pooled.

Total number of females spawned: 109
 Total number of males spawned: 49
 Total number of green eggs: 513,432
 Total number of eyed eggs: 479,969
 Number of eggs retained for rearing: 475,730
 Number of eggs culled due to high BKD titers: 4,239
 Date of last spawning: 9/08/09

**Chinook
Lookingglass Stock BY09**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/20/09	17,921	4	2
8/27/09	25,727	5	2
9/03/09	43,793	11	8
9/10/09	14,196	6	3

Eggs and sperm were combined by matrices, according to available mature broodstock.

Total number of females spawned: 26
 Total number of males spawned: 11
 Total number of green eggs: 101,637
 Total number of eyed eggs: 99,378
 Number of eggs retained for rearing: 99,378
 Date of last spawning: 9/10/09

Spawning Record

**Chinook - Conventional Broodstock Program
Upper Grande Ronde Stock BY09**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/13/09	198,345	46	33
8/20/09	54,313	13	10
8/27/09	4,172	1	1
9/03/09	4,306	1	1

Eggs and sperm were combined by matrices, according to available mature broodstock.

Total number of females spawned:	61
Total number of males spawned:	45
Total number of green eggs:	261,136
Total number of eyed eggs:	226,773
Total number of eggs shipped:	330*
Number of eggs retained for rearing:	221,618
Date of last spawning:	9/03/09

**Eyed eggs shipped to Wallowa Hatchery for SNAP program*

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY09**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/20/09	7,279	2	2
8/27/09	82,104	20	17
9/03/09	52,129	15	12
9/10/09	23,751	6	6

Egg and sperm were combined by matrices, according to available mature broodstock.

Total number of females spawned:	43
Total number of males spawned:	37
Total number of green eggs:	165,263
Total number of eyed eggs:	154,481
Number of eggs retained for rearing:	154,481
Date of last spawning:	9/10/09

Spawning Record

**Chinook - Conventional Broodstock Program
Lostine Stock BY09**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/15/09	158,073	35	34
8/25/09	51,413	11	11
9/01/09	16,498	3	3
9/08/09	36,899	8	8

Lostine stock chinook were spawned by matrices, depending on available mature broodstock.

Total number of females spawned:	57
Total number of males spawned:	56
Total number of green eggs:	262,883
Total number of eyed eggs:	253,138
Number of eggs retained for rearing:	245,394
Number of eggs culled due to high BKD titers	7,578
Date of last spawning:	9/08/09

Rearing to Fingerling Stage Only

**Chinook - Conventional Broodstock Program
Lostine River Stock BY08**

Number of fingerlings produced:	54,166
Weight of fingerlings produced (lbs.):	361.11
Percent mortality to stocking:	1.70%
Average number/pound of smolts produced:	150
Conversion rate:	0.98 at Lookingglass

Fish were released without acclimation into the Lostine River on 6/05/09.

**Chinook - Captive Broodstock Program
Lostine River Stock BY08**

Number of fingerlings produced:	12,654
Weight of fingerlings produced (lbs.):	47.22
Percent mortality to stocking:	0.75%
Average number/pound of smolts produced:	268
Conversion rate:	1.35 at Lookingglass

Fish were released without acclimation into the Lostine River on 6/05/09.

Rearing to Smolt Stage Only

**Chinook
Imnaha Stock BY07**

Number of smolts produced:	293,802
Weight of smolts produced (lbs.):	14,392.3
Percent mortality to stocking:	2.88%
Average number/pound of smolts produced:	20.41
Conversion rate:	1.12 at Lookingglass

235,049 smolts (10,172.7 pounds) were transferred from Lookingglass Fish Hatchery to Imnaha Satellite Facility 3/11-3/12/2009 for acclimation. Volitional release began on 3/30/2009 and the remaining fish were forced out on 4/15/09. An additional 58,839 smolts (2,660.0 pounds) were released directly into the Imnaha River on 3/12/2009.

**Chinook
Lookingglass Stock BY07**

Number of smolts produced:	50,027
Weight of smolts produced (lbs.):	2,501.4
Percent mortality to stocking:	3.68%
Average number/pound of smolts produced:	20.0
Conversion rate:	1.02 at Lookingglass

Fish were released directly into Lookingglass Creek on 4/01/2009

**Chinook - Captive Broodstock Program (F1's)
Upper Grande Ronde River Stock BY07**

Number of smolts produced:	52,404
Weight of smolts produced (lbs.):	2,468.8
Percent mortality to stocking:	7.21%
Average number/pound of smolts produced:	21.2
Conversion rate:	1.11 at Lookingglass

Smolts were transferred to Grande Ronde Acclimation Facility in two groups. The first group of 28,080 smolts (1300.0 pounds) were transferred on 3/16/2009 for volitional release from 3/23-3/30/2009. The Second group of 24,340 smolts (1,350.0 pounds) was transferred on 3/24/2009 for volitional release from 4/08-4/15/2009. Grande Ronde Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Rearing to Smolt Stage Only

**Chinook - Conventional Broodstock Program
Upper Grande Ronde River Stock BY07**

Number of smolts produced:	94,148
Weight of smolts produced (lbs.):	4,184
Percent mortality to stocking:	3.21%
Average number/pound of smolts produced:	22.5
Conversion rate:	1.06 at Lookingglass

94,203 smolts (4,550.0 pounds) were transferred on 3/16/2009 to Grande Ronde Acclimation Facility for volitional release from 3/16- 3/23/2009. Grande Ronde Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY07**

Number of smolts produced:	100,450
Weight of smolts produced (lbs.):	4,900.0
Percent mortality to stocking:	3.46%
Average number/pound of smolts produced:	20.5
Conversion rate:	1.04 at Lookingglass

Smolts were volitionally released into Lookingglass Creek from 4/1-4/14/2009.

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY07**

Number of smolts produced:	138,343
Weight of smolts produced (lbs.):	6,125.1
Percent mortality to stocking:	4.59%
Average number/pound of smolts produced:	22.6
Conversion rate:	1.13 at Lookingglass

Smolts were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility in two groups. The first group of 118,676 smolts (4,625.4 pounds) was transferred on 3/09/2009. The second group of 20,254 smolts (910.0 pounds) was transferred on 4/01/2009. Volitional release began 3/16/2009, and all remaining fish were forced out 4/14/2009. Catherine Creek Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Rearing to Smolt Stage Only

**Chinook - Captive Broodstock Program (F₁'s)
Lostine River Stock BY07**

Number of smolts produced:	61,297
Weight of smolts produced (lbs.):	2,788.3
Percent mortality to stocking:	4.29%
Average number/pound of smolts produced:	22.2
Conversion rate:	1.03 at Lookingglass

61,956 smolts (2,710.0 pounds) were transferred from Lookingglass Fish Hatchery to Lostine Acclimation Facility on 4/01/2009. Volitional release began 4/11/2009, and all remaining fish were forced out 4/15/2009. Lostine Acclimation Pond is operated by the Nez Perce Tribe. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

**Chinook - Conventional Broodstock Program
Lostine River Stock BY07**

Number of smolts produced:	185,742
Weight of smolts produced (lbs.):	7,826.0
Percent mortality to stocking:	3.16%
Average number/pound of smolts produced:	23.7
Conversion rate:	1.11 at Lookingglass

Smolts were transferred from Lookingglass Fish Hatchery to Lostine Acclimation Facility in two groups. The first release group of 124,114 smolts (4,860.5 pounds) was transferred to the acclimation facility on 3/02/2009, volitional release began 3/18/2009, and all remaining fish were forced out 4/01/2009. The second release group of 61,628 smolts (2,810.0 pounds) was transferred to the acclimation facility 4/01/2009, volitional release began on 4/08/2009, and all remaining fish were forced out 4/15/2009. Lostine Acclimation Facility is operated by the Nez Perce Tribe. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Food Fed and Weight Gain

**Chinook
Imnaha Stock BY07**

Lookingglass Fish Hatchery	
Total pounds of food fed	3,871.0
Conversion rate	1.22
Total weight gain (lbs.) - all sizes produced	3,173.5

**Chinook
Imnaha Stock BY08**

Lookingglass Fish Hatchery	
Total pounds of food fed	17,016.0
Conversion rate	1.22
Total weight gain (lbs.) - all sizes produced	13,995.8

**Chinook
Lookingglass Stock BY07**

Lookingglass Fish Hatchery	
Total pounds of food fed	952.8
Conversion rate	1.00
Total weight gain (lbs.) - all sizes produced	951.1

**Chinook
Lookingglass Stock BY08**

Lookingglass Fish Hatchery	
Total pounds of food fed	6,785.3
Conversion rate	1.23
Total weight gain (lbs.) - all sizes produced	5,503.0

Food Fed and Weight Gain

**Chinook – Conventional Program
Upper Grande Ronde River Stock BY07**

Lookingglass Fish Hatchery	
Total pounds of food fed	1,336.6
Conversion rate	0.97
Total weight gain (lbs.) - all sizes produced	1,379.4

**Chinook – Conventional Program
Upper Grande Ronde River Stock BY08**

Lookingglass Fish Hatchery	
Total pounds of food fed	2,032.6
Conversion rate	1.41
Total weight gain (lbs.) - all sizes produced	1,440.4

**Chinook – Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY07**

Lookingglass Fish Hatchery	
Total pounds of food fed	787.8
Conversion rate	0.80
Total weight gain (lbs.) - all sizes produced	980.0

**Chinook – Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY08**

Lookingglass Fish Hatchery	
Total pounds of food fed	5,295.6
Conversion rate	1.11
Total weight gain (lbs.) - all sizes produced	4,783.6

Food Fed and Weight Gain

Chinook - Conventional Broodstock Program Catherine Creek Stock BY07

Lookingglass Fish Hatchery	
Total pounds of food fed	1,574.5
Conversion rate	1.16
Total weight gain (lbs.) - all sizes produced	1,352.3

Chinook - Conventional Broodstock Program Catherine Creek Stock BY08

Lookingglass Fish Hatchery	
Total pounds of food fed	4,034.2
Conversion rate	1.29
Total weight gain (lbs.) - all sizes produced	3,128.2

Chinook - Captive Broodstock Program (F₁'s) Catherine Creek Stock BY07

Lookingglass Fish Hatchery	
Total pounds of food fed	1,811.4
Conversion rate	0.98
Total weight gain (lbs.) - all sizes produced	1,848.7

Chinook - Captive Broodstock Program (F₁'s) Catherine Creek Stock BY08

Lookingglass Fish Hatchery	
Total pounds of food fed	1,093.8
Conversion rate	1.25
Total weight gain (lbs.) - all sizes produced	873.9

Food Fed and Weight Gain

Chinook - Conventional Broodstock Program Lostine River Stock BY07

Lookingglass Fish Hatchery	
Total pounds of food fed	2,421.2
Conversion rate	1.08
Total weight gain (lbs.) - all sizes produced	2,242.4

Chinook - Conventional Broodstock Program Lostine River Stock BY08

Lookingglass Fish Hatchery	
Total pounds of food fed	8,529.3
Conversion rate	1.30
Total weight gain (lbs.) - all sizes produced	6,569.8

Chinook - Captive Broodstock Program (F₁'s) Lostine River Stock BY07

Lookingglass Fish Hatchery	
Total pounds of food fed	967.1
Conversion rate	0.87
Total weight gain (lbs.) - all sizes produced	1,109.7

Captive Broodstock Chinook (F₁'s) Lostine River Stock BY08

Lookingglass Fish Hatchery	
Total pounds of food fed	2,061.7
Conversion rate	1.24
Total weight gain (lbs.) - all sizes produced	1,668.6

**On Hand at Lookingglass Fish Hatchery
September 30, 2009**

Fish on Hand – BY08

Species	Stock	Number
Spring Chinook	Imnaha	396,437
Spring Chinook	Grande Ronde	42,439
Spring Chinook	Grande Ronde Captive Brood	191,218
Spring Chinook	Lookingglass	154,950
Spring Chinook	Lostine River	185,546
Spring Chinook	Lostine River Captive Brood	62,116
Spring Chinook	Catherine Creek	112,676
Spring Chinook	Catherine Creek Captive Brood	35,207

FY2009 Stocking

Total number of distribution trips:	23*
Number of fry stocked:	0
Weight of fry stocked:	0 lbs
Number of parr stocked:	66,820
Weight of parr stocked:	408.3 lbs
Number of smolts stocked:	977,366
Weight of smolts stocked:	45,186.1 lbs
Date, location, number and weight at each stocking:	See Attached

**19 distribution trips were made to acclimation facilities associated with Lookingglass Fish Hatchery, and 1 trip was made to transfer fish to Irrigon Hatchery*

**Lookingglass Fish Hatchery and Associated Facility Stocking Records
October 1, 2008 through September 30, 2009**

HATCHERY	SPECIES	STOCK	TYPE	DATE	FROM/TO	NO/LB	MORTS	NUMBER STOCKED	POUNDS STOCKED
CATH.CR. ACC	SPRING CHINOOK	201 07	LIBERATION	03-16-09	CATHERINE CR	23.00	0	25,422	1,105
CATH.CR. ACC	SPRING CHINOOK	201 07	LIBERATION	03-23-09	CATHERINE CR	23.00	0	93,176	4,051
CATH.CR. ACC	SPRING CHINOOK	201 07	LIBERATION	04-01-09	CATHERINE CR	20.90	0	20,245	969
GRND RND ACC	SPRING CHINOOK	080 07	LIBERATION	03-23-09	GRANDE RONDE R	22.50	0	94,148	4,184
GRND RND ACC	SPRING CHINOOK	080F07	LIBERATION	03-18-09	GRANDE RONDE R	22.00	0	28,068	1,276
GRND RND ACC	SPRING CHINOOK	080F07	LIBERATION	04-01-09	GRANDE RONDE R	20.40	0	24,336	1,193
IMNAHA PD	SPRING CHINOOK	029 07	LIBERATION	03-30-09	IMNAHA R	23.11	0	2,350	102
IMNAHA PD	SPRING CHINOOK	029 07	LIBERATION	04-15-09	IMNAHA R	20.00	0	232,613	11,631
LOSTINE ACC	SPRING CHINOOK	200 07	LIBERATION	03-18-09	LOSTINE R	25.11	0	124,177	4,945
LOSTINE ACC	SPRING CHINOOK	200 07	LIBERATION	04-11-09	LOSTINE R	21.38	0	61,588	2,881
LOSTINE ACC	SPRING CHINOOK	200F07	LIBERATION	04-11-09	LOSTINE R	22.21	0	61,927	2,788
LOOKINGGLASS	SPRING CHINOOK	029 07	LIBERATION	03-12-09	IMNAHA R	22.12	0	58,839	2,660
LOOKINGGLASS	SPRING CHINOOK	081 07	LIBERATION	04-01-09	LOOKINGGLASS CR	20.00	0	50,027	2,501
LOOKINGGLASS	SPRING CHINOOK	201F07	LIBERATION	04-01-09	LOOKINGGLASS CR	20.50	0	100,450	4,900
LOOKINGGLASS	SPRING CHINOOK	200 08	LIBERATION	06-05-09	LOSTINE R	150.00	0	54,166	361
LOOKINGGLASS	SPRING CHINOOK	200F08	LIBERATION	06-05-09	LOSTINE R	268.00	0	12,654	47
LOOKINGGLASS	SPRING CHINOOK	080 08	TRANSFER	02-12-09	WALLOWA HATCHERY	1,300.00	0	15	0
LOOKINGGLASS	SPRING CHINOOK	081 08	TRANSFER	04-28-09	IRRIGON HATCHERY	250.46	0	103,060	411
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-11-09	IMNAHA PD	23.74	0	17,212	725
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-11-09	IMNAHA PD	22.25	0	18,795	845
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-11-09	IMNAHA PD	21.78	0	58,808	2,700
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-11-09	IMNAHA PD	22.25	0	40,050	1,800
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-12-09	IMNAHA PD	23.74	0	37,818	1,593
LOOKINGGLASS	SPRING CHINOOK	029 07	ACCLIMATE	03-12-09	IMNAHA PD	24.85	0	62,366	2,510

**Lookingglass Fish Hatchery and Associated Facility Stocking Records
October 1, 2008 through September 30, 2009**

HATCHERY	SPECIES	STOCK	TYPE	DATE	FROM/TO	NO/LB	MORTS	NUMBER STOCKED	POUNDS STOCKED
LOOKINGGLASS	SPRING CHINOOK	080 07	ACCLIMATE	03-16-09	GRND RND ACC	20.09	0	44,595	2,220
LOOKINGGLASS	SPRING CHINOOK	080 07	ACCLIMATE	03-16-09	GRND RND ACC	21.29	0	49,608	2,330
LOOKINGGLASS	SPRING CHINOOK	080F07	ACCLIMATE	03-16-09	GRND RND ACC	21.60	0	28,080	1,300
LOOKINGGLASS	SPRING CHINOOK	080F07	ACCLIMATE	03-24-09	GRND RND ACC	18.03	0	24,340	1,350
LOOKINGGLASS	SPRING CHINOOK	200 07	ACCLIMATE	03-02-09	LOSTINE ACC	26.04	0	62,035	2,382
LOOKINGGLASS	SPRING CHINOOK	200 07	ACCLIMATE	03-02-09	LOSTINE ACC	25.05	0	62,079	2,478
LOOKINGGLASS	SPRING CHINOOK	200 07	ACCLIMATE	04-01-09	LOSTINE ACC	21.93	0	61,628	2,810
LOOKINGGLASS	SPRING CHINOOK	200F07	ACCLIMATE	04-01-09	LOSTINE ACC	22.86	0	61,956	2,710
LOOKINGGLASS	SPRING CHINOOK	201 07	ACCLIMATE	03-09-09	CATH.CR. ACC	24.80	0	15,459	623
LOOKINGGLASS	SPRING CHINOOK	201 07	ACCLIMATE	03-09-09	CATH.CR. ACC	25.86	0	25,436	984
LOOKINGGLASS	SPRING CHINOOK	201 07	ACCLIMATE	03-09-09	CATH.CR. ACC	26.45	0	46,865	1,772
LOOKINGGLASS	SPRING CHINOOK	201 07	ACCLIMATE	03-09-09	CATH.CR. ACC	24.80	0	30,916	1,247
LOOKINGGLASS	SPRING CHINOOK	201 07	ACCLIMATE	03-24-09	CATH.CR. ACC	22.26	0	20,254	910