

LOOKINGGLASS FISH HATCHERY

FY2003

INTRODUCTION

HERRIG	DN
KRAKKE	
STARR	10/1
ANDERSON	
WISCHER	

Location

Lookingglass Fish Hatchery is located on the left bank of Lookingglass Creek at river mile 2.2, approximately 85 miles upstream from the mouth of the Grande Ronde River and 324 miles upstream from the mouth of the Columbia River. Imnaha Satellite Facility, located at river mile 46 on the Imnaha River, is used for adult trapping and smolt acclimation. During the summer months, Imnaha Weir is installed across the Imnaha River at this site.

OBJECTIVES

Mitigation Goals

Lookingglass Fish Hatchery is part of the Lower Snake River Compensation Program (LSRCP) and has been in operation since 1982. A satellite facility on the Imnaha River is used for smolt acclimation and adult collection. Mitigation goals are variable according to adult returns and interagency agreements. The 2003 release of Imnaha stock (2901) smolts from Imnaha Satellite Facility was 268,426 fish.

CHINOOK

Adult Returns

The Imnaha Weir was installed on July 7, 2003, and chinook collection continued through September 8, 2003. In 2003, 1,294 Imnaha (2903) stock chinook, 458 males, 447 females and 389 jacks, were trapped at the Imnaha Weir. Of these, 260 males, 250 females, and 50 jacks were opercle-punched and passed above the Imnaha Weir to spawn naturally. Seven hundred twenty-eight chinook, consisting of 195 males, 195 females and 338 jacks, were collected and transported to Lookingglass Fish Hatchery. Of the fish held at Lookingglass Fish Hatchery, 115 males, 109 females and 137 jacks were kept for brood stock. All remaining adults were opercle-punched, transported to streams and released to spawn naturally. Thirty-six males and 40 females were released into Lick Creek, and 44 males and 46 females were released into Big Sheep Creek. In addition, two jacks were returned to the Imnaha River to spawn naturally and 199 jacks were released into Lick Creek for nutrient enrichment. Of the chinook kept for brood stock, 96 males, 98 females and 56 jacks survived to spawn. Sperm was collected from natural males and jacks for cryopreservation. Two jacks were dispatched due to visible oral tumors; similar tumors were observed on Grande Ronde 2000-cohort captive broodstock chinook, and were identified as squamous cell carcinomas of unknown etiology.

RECEIVED

DEC 13 2003

LSRCP OFFICE

Seventy-six unmarked Rapid River (8103) stock chinook returned to Lookingglass Creek in 2003. The 43 males and 33 females collected at Lookingglass Fish Hatchery were given to the Confederated Tribes of the Umatilla Indian Reservation (CUTIR). CUTIR staff dispatched all returning fish.

Egg Production

Eggs from Imnaha stock chinook, as well as the three conventional program stocks, Catherine Creek, Grande Ronde River, and Lostine, were eyed-up at Lookingglass Fish Hatchery in 2003. Catherine Creek and Grande Ronde River eggs will remain at Lookingglass Fish Hatchery through rearing. Eggs from the Imnaha and Lostine stocks were shipped to Oxbow Fish Hatchery after eye-up.

During the report period 98 Imnaha stock (2903) females were spawned for an estimated yield of 497,969 green and 438,050 eyed eggs. Upon examination it was determined that one female exhibited oral tumors and her eggs were culled.

Twenty-three Grande Ronde River stock (80W03) females were spawned for an estimated yield of 120,733 green and 105,374 eyed eggs.

Twenty-eight Catherine Creek stock (201W03) females were spawned for an estimated yield of 103,916 green and 90,891 eyed eggs.

Twenty-one Lostine River stock (200W03) females were spawned for an estimated yield of 106,646 green and 101,811 eyed eggs.

Conventional Chinook Program

Upper Grande Ronde Collection Facility: 33 males, 38 females and one jack of Grande Ronde River (80W03) origin were transported to Lookingglass Fish Hatchery for use as broodstock.

Catherine Creek Collection Facility: 20 males, 29 females, and two jacks of Catherine Creek (201W03) origin were transported to Lookingglass Fish Hatchery for spawning.

Lostine River Collection Facility: 16 males, 21 females and six jacks of Lostine River (200W03) origin were transported to Lookingglass Fish Hatchery for use as broodstock.

Captive Broodstock Chinook Program

A separate annual report covers the operation of this program.

Miscellaneous

PIT-tagging was completed on the BY 2002 Imnaha, Lostine, Catherine Creek and upper Grande Ronde River stocks of chinook during October 2003.

CONSTRUCTION AND MAINTENANCE

MAINTENANCE PROJECTS ACCOMPLISHED BY ODFW PERSONNEL

- Completed intake fish barrier for ladder.
- Installed chains on all heavy equipment.
- Installed snow tires on feed cart.
- Installed snow tires on pickups.
- Re-rocked and leveled auxiliary hatchery road to intake.
- Cleared fire break near buildings/residences (according to USFWS fire plan).
- Set up snow poles along hatchery road.

MAINTENANCE PROJECTS ACCOMPLISHED BY CONTRACTORS

Lookingglass Fish Hatchery Complex

McGowan Construction Services - Worked on chillers, SCADA system and the domestic water system. Replaced three defective valves and repaired two breaks in the domestic water lines.

Bio-Mark - Replaced lithium battery module and external battery pack on a defective PIT-tag reader.

Alpine, Inc. - Serviced undercharged fire extinguisher.

Racom - Repaired hand-held alarm radio.

Lintec Machine & Hydraulics - Repaired broken air line to feeder, repaired feed auger and brought other repair parts. Repaired domestic line piping to hydro pneumatic tank.

Pursewell Pump - Inspected well and domestic water system. Removed and inspected domestic water pump. Attempted to lower pump into well hole but could not gain more than 20 inches.

Elkhorn Electric - Completed the following electrical safety compliance work:
 Installed spawning sump pump area annunciator lights for alarm system.
 Replaced faulty electrical switch box in sump pump area.
 Replaced sump pump fan appliance with UL approved wall heater.
 Installed annunciator light for heater alarm.
 Repaired/replaced faulty ceiling fan motor.
 Ordered replacement humidistats and relays for ceiling cooling/ventilation system.

Locating, Inc. - Located underground lines prior to excavation work.

Elkhorn Electric - Wired exhaust fans in storage building and actuator. Performed the following safety upgrades:

- Replaced damaged 440-volt snow- and moisture-proof plug covers on raceway.
- Replaced diesel generator room louver motor and actuator arm for vent.
- Replaced heater fan motor on wall-mounted heater in spawning room.
- Replaced alarm indicator lights on Motorola system.
- Replaced contactors in breaker fuses for well pump motor.
- Repaired broken or damaged electrical cords.
- Repaired heater units in intake building.
- Repaired heaters in domestic generator building.
- Repaired/replaced roof ventilator motor.
- Replaced faulty roof humidifier sensors and fan sensors.
- Re-installed floodlight for flagpole.
- Installed motor exhaust fan in heavy equipment building.

Becker Construction - Repaired sewer line at residence #1, finished window at residence #2, excavated domestic water line and repaired broken water line under well building.

Pioneer Implement - Completed winterization and servicing of all equipment, including forklift, ATV, three lawn mowers, and three riding lawn tractors (JD-170, JD-318, JD-755). Installed and serviced snow blowers on four tractors (JD-170, JD-318, JD-755, JD-5410). Serviced walk-behind snow blower, and serviced and repaired backhoe (JD-312B).

McGowan Construction Services - completed warranty work/service on hydropneumatic domestic water system. Tested and adjusted domestic contact relay system, domestic air pump, and air relief valve and pop-off valve on domestic tanks in residences. Tested water furnace system in each residence. Resolved air hammers and clanging in residences.

Kringlen Refrigeration - completed service to feed room chillers and compressors. Replaced solenoids on compressor 1, added Freon to entire system and replaced water valve on compressor line.

Pioneer Implement - completed work on heavy equipment and servicing for winter, including John Deere 310B backhoe and John Deere 6410 tractor/snow blower.

Courtney Motors - completed service and free safety inspection on all pickup trucks.

Barnes Diesel Power - completed annual service and safety inspection on road grader. Replaced fuel pump system and cracked housing and strobe light. Repaired headlight bracket and replaced light.

McGowan Construction Services - Frank McGowan was here on 6 January 2002 to get the chiller back on line.

Zee Medical Service, Inc. - updated all of our first aid kits to meet OSHA requirements.

McGowan Construction Services - Repaired and adjusted the domestic water system. Repaired a disconnected wire.

Elkhorn Electric - Finished up some minor electrical projects.

Cook and Emele - Adjusted the heating systems in the hatchery residences.

Blue Mountain Water Laboratory - Sampled the domestic water at the hatchery and residences.

LaGrande Paint & Glass - Replaced all windows in the hatchery residences.

Elkhorn Electric - Replaced relays in the feeder control panel and replaced the heating element in the visitors' restroom water heater.

SK Key & Locksmith - Re-keyed the locks at the hatchery residences so that all locks can be opened with the same key. Made extra keys for spares.

Alpine Chimney - Inspected and cleaned chimneys at the hatchery residences.

Cook & Emele - Conducted warranty work on the heat pumps at the hatchery residences.

Courtney Motors - Performed regular service on the Ford Ranger.

Alpine Alarm - Replaced satellite receivers in all the residences and the hatchery bunkhouse.

Lintec Machine & Hydraulics - Installed a new flow meter on the Formalin treatment system in the endemic building.

Steele's Septic Service - Pumped the septic tanks at the residences and hatchery.

McGowan Construction Services - repaired some minor problems with chillers 1 & 2 and some major problems with chiller 3, discovered in the course of routine maintenance. Performed the annual inspection, reprogrammed and tested the chiller system. Dave Baker, Irrigon Fish Hatchery, cross-trained with Frank McGowan.

Pursewell Pump - Repaired stub shaft on TW2 at the intake.

High Mt. Custom Spraying - Sprayed for noxious weeds. Also sprayed along access road and residences for fire control.

Lintec Machine & Hydraulics - Built crowders for the troughs. Worked on hydraulics on the fish pump.

Confederated Tribes of the Umatilla Indian Reservation - Poured concrete spawning pad in the Endemic Building . Project was completed by Ryan Seeger and three laborers.

Courtney Motors - Replaced vacuum advance module and preformed safety check inspection on Lookingglass Fish Hatchery liberation truck. Serviced Wallowa Fish Hatchery liberation truck and performed safety inspection.

Rogers Paving Company - Completed repair work on the hatchery road.

Lin-Tec Machine and Hydraulics - Replaced a valve on the spawning room supply lift tower pump. Used a pneumatic valve so it can be opened and closed from one control panel.

McGowan Construction Services - Tuned up chiller #2. He was called because of cavitation problems in the system (violent vibrations in pipes). Problem appeared to be caused by the water supply valve control. Downloaded amperage and temperature data from system, and found an amperage problem. Adjusted amperage accordingly but wants to perform a more comprehensive test when he can shut down the system. Added oil to chiller #2. Returned on 30 September to check the chiller system. Checked the DDCV card for adequacy, made minor adjustments, and changed a faulty circuit.

Imnaha Satellite Facility

Alpine Alarm - Installed new satellite phone system to upgrade security and comply with working alone policy. Phones now work off solar power and are available at all times.

Alpine Chimney - Installed fireplace insert in the residence.

Pioneer Implement - Repaired propane leak on ONAN backup generator.

Barnes Diesel - Replaced the main generator.

MAJOR EXPENSES

Repair & maintenance of buildings and grounds	\$ 46,902.00
Fish food	46,552.00
Repairs and maintenance to equipment	34,360.00
Temporary services	27,054.00
Supplies	20,400.00
Communication services	16,651.00
Utilities	14,800.00
Chemicals	4,206.00
Office supplies	<u>2,495.17</u>
Total	\$213,420.17

Adult Returns to Hatchery

**Chinook
Lookingglass Creek Stock BY03**

Lookingglass Fish Hatchery		
Date of first return:		May 21, 2003
Date of last return:		September 4, 2003
Number of females returning:	33	
Number of males returning:		43
Date of peak returns:		May 28, 2003
Number of females released to spawn naturally:		0
Number of males released to spawn naturally:		0
Mortality of all adult returns:		0

All trapped adults were given to the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). CTUIR staff dispatched all fish received.

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook
Imnaha Stock BY03**

Lookingglass Fish Hatchery		
Where trapped:		Imnaha Satellite Facility
Date weir installed:		July 7, 2003
Dates trapped:		July 13 - Sept 9, 2003
Number of adults trapped:		447 females, 458 males, 389 jacks
Date of peak trapping:		July 18, 2003
Number of adults released to spawn naturally:		336 females, 340 males, 52 jacks*
Number of adults to hatchery for broodstock:		109 females, 115 males, 338 jacks
Mortality of all adults	<i>at trap:</i>	2 females, 3 males, 1 jack
	<i>at hatchery:</i>	11 females, 19 males, 79 jacks

**Disposition of fish released to spawn naturally: 250 females, 260 males and 52 jacks were released into the Imnaha River; 46 females and 44 males were released into Big Sheep Creek; and 40 females and 36 males were released into Lick Creek. An additional 199 jacks were released into Lick Creek for nutrient enrichment.*

All fish released to the Imnaha River, excepting two jacks, were released from Imnaha Satellite Facility. All fish released to Big Sheep or Lick creeks were transported from Lookingglass Fish Hatchery, as were two jacks released to the Imnaha River on 7/31/2003.

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook - Conventional Broodstock Program
Grande Ronde River Stock BY03**

Lookingglass Fish Hatchery

Where trapped:	Upper Grande Ronde Weir
Dates trapped:	March 5 - August 1, 2003
Number of adults trapped:	64 females, 59 males, 39 jacks
Number of adults caught by seine:	14 females, 13 males*
Date of peak trapping:	June 10, 2003
Number of adults released to spawn naturally:	39 females, 39 males, 6 jacks
Number of adults transported to hatchery:	38 females, 33 males, 1 jack
Mortality of all adults	
<i>at trap:</i>	1 female, 0 males
<i>at hatchery:</i>	16 females, 19 males, 2 jacks

**In 2003, water temperatures in the Grande Ronde River reached near-lethal levels for salmon. CTUIR staff seined the river below the weir to collect and remove at-risk chinook. Of the 27 fish caught by seine, 14 were passed above the weir to spawn naturally, 12 were transported to Lookingglass Fish Hatchery, and one expired.*

32 hatchery-origin jacks were dispatched as surplus to program.

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY03**

Lookingglass Fish Hatchery

Where trapped:	Catherine Creek Weir
Dates trapped:	March 5 - August 1, 2003
Number of adults trapped:	259 females, 223 males, 76 jacks
Date of peak trapping:	June 10, 2003
Number of adults released to spawn naturally:	229 females, 202 males, 22 jacks
Number of adults transported to hatchery:	29 females, 20 males, 2 jacks
Mortality of all adults	
<i>at trap:</i>	1 female, 1 male
<i>at hatchery:</i>	1 female, 5 males

52 hatchery-origin jacks were dispatched as surplus to program.

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook - Conventional Broodstock Program
Lostine River Stock BY03**

Lookingglass Fish Hatchery

Where trapped:	Lostine River Weir
Dates trapped:	May 16 - October 1, 2003
Date of peak trapping:	
Number of adults trapped:	191 females, 193 males, 84 jacks
Number of adults released to spawn naturally:	169 females, 176 males, 78 jacks*
Number of adults transported to hatchery:	20 females, 13 males, 6 jacks
Mortality of all adults	
<i>at trap:</i>	1 female, 1 male
<i>at hatchery:</i>	4 females, 3 males, 4 jacks

**A total of 168 females, 173 males and 39 jacks were passed above the Lostine River weir to spawn naturally. Of these, one female and three males had been transported to the hatchery for use as broodstock; however, they were released to the Lostine River on September 18, 2003, when they showed no signs of becoming ripe. In addition, one female, three males and 39 jacks were outplanted to Bear Creek.*

Spawning Record

**Chinook
Imnaha Stock BY03**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/12/03	5,486	1	1
8/19/03	37,383	6	7
8/26/03	93,608	19	37
9/02/03	181,113	33	51
9/09/03	166,646	35	53
9/16/03	13,733	4	4

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:	98
Total number of males spawned:	152 (96 adults, 56 jacks)
Total number of green eggs:	497,969
Total number of eyed eggs:	438,050*
Number of eggs retained for rearing:	0
Number of eggs shipped:	438,050**
Date of last spawning:	9/16/03

**An additional 14,941 eggs survived to the eyed stage but were culled due to health concerns. Of these, 11,342 were from high-titer BKD parents, and 3,599 were out of a female with visible tumors.*

***All eyed eggs were shipped to Oxbow Fish Hatchery for incubation and rearing.*

Spawning Record

Chinook - Conventional Broodstock Program Upper Grande Ronde Stock BY03

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/14/03	21,515	4	4
8/21/03	36,140	6	6
8/28/03	33,201	7	7
9/04/03	21,160	4	4
9/11/03	4,512	1	2
9/15/03	4,175	1	1

Upper Grande Ronde stock chinook eggs and sperm were combined by matrices, depending on available mature broodstock.

Total number of females spawned:	23
Total number of males spawned:	21 <i>(two were used more than once)</i>
Total number of green eggs:	120,733
Total number of eyed eggs:	105,374
Number of eggs retained for rearing:	105,374
Number of eggs shipped:	0
Date of last spawning:	9/15/03

Spawning Record

Chinook - Conventional Broodstock Program Catherine Creek Stock BY03

Lookingglass Fish Hatchery

Date Spawmed	Number of Eggs Taken	Females Spawmed	Males Spawmed
8/14/03	11,703	3	3
8/21/03	44,995	12	12
8/28/03	35,420	10	8
9/04/03	11,798	3	3

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

Total number of females spawned: 28
 Total number of males spawned: 19 (*seven males were used twice*)
 Total number of green eggs: 103,916
 Total number of eyed eggs: 90,891
 Number of eggs retained for rearing: 90,891
 Number of eggs shipped: 0
 Date of last spawning: 9/04/03

Spawning Record

Chinook - Conventional Broodstock Program Lostine Stock BY03

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/20/03	15,212	3	3
8/27/03	19,515	4	4
9/03/03	36,229	7	7
9/10/03	29,270	6	6
9/16/03	6,420	1	2

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

Total number of females spawned: 21
 Total number of males spawned: 22 (*two males were spawned twice*)
 Total number of green eggs: 106,646
 Total number of eyed eggs: 101,811
 Number of eggs retained for rearing: 101,811
 Number of eggs shipped: 0
 Date of last spawning: 9/16/03

**All eyed eggs were shipped to Oxbow Fish Hatchery for incubation and rearing.*

Rearing to Smolt Stage Only

Chinook

Imnaha Stock BY01

Number of smolts produced:	268,426
Weight of smolts produced (lbs.):	16,508.36
Percent mortality to stocking:	0.8%
Average number/pound of smolts produced:	16.26
Conversion rate:	1.07 at Lookingglass

Lookingglass Fish Hatchery produced 286,510 smolts weighing 16,866.37 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Imnaha Satellite Facility 3/10-3/11/2003. Volitional release began 4/01/2003, and all remaining fish were forced out 4/15/2003.

Conversion rate at Imnaha Satellite Facility was -358.01 (fed 1,364.00 lbs of food and actually lost 3.81 pounds overall).

Chinook - Captive Broodstock Program (F₁'s) Upper Grande Ronde River Stock BY01

Number of smolts produced:	210,113
Weight of smolts produced (lbs.):	15,000.94
Percent mortality to stocking:	0.9%
Average number/pound of smolts produced:	14.01
Conversion rate:	1.12 at Lookingglass

Lookingglass Fish Hatchery produced 210,398 smolts weighing 15,169.29 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Grande Ronde Acclimation Facility in two groups. The first release group was transferred to the acclimation facility on 3/10/2003, volitional release began 3/17/2003, and all remaining fish were forced out 3/23/2003. The second release group was transferred to the acclimation facility on 3/24/2003, volitional release began on 3/30/2003, and all remaining fish were forced out 4/14/2003. Grande Ronde Acclimation facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for captive broodstock smolts at Grande Ronde Acclimation Facility was -1.05.

Rearing to Smolt Stage Only

Chinook - Captive Broodstock Program (F₁'s) Catherine Creek Stock BY01

Number of smolts produced:	105,292
Weight of smolts produced (lbs.):	8,258.20
Percent mortality to stocking:	1.5%
Average number/pound of smolts produced:	12.75
Conversion rate:	1.00 at Lookingglass

Lookingglass Fish Hatchery produced 105,343 smolts weighing 8,269.33 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/7/2003. Volitional release began 3/13/2003, and all remaining fish were forced out 3/23/2003. Catherine Creek Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for captive broodstock smolts at Catherine Creek Acclimation Facility was -72.63.

Chinook - Captive Broodstock Program (F₁'s) Lostine River Stock BY01

Number of smolts produced:	141,867
Weight of smolts produced (lbs.):	9,191.73
Percent mortality to stocking:	0.9%
Average number/pound of smolts produced:	15.43
Conversion rate:	1.28 at Lookingglass

Lookingglass Fish Hatchery produced 141,932 smolts weighing 8,887.41 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Lostine Acclimation Facility in two groups. The first release group was transferred to the acclimation facility on 3/03/2003, volitional release began 3/17/2003, and all remaining fish were forced out 3/23/2003. The second release group was transferred to the acclimation facility 3/24 - 3/25/2003, volitional release began on 4/1/2003, and all remaining fish were forced out 4/14/2003. Lostine Acclimation Pond is operated by the Nez Perce Tribe. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for captive broodstock smolts at Lostine Acclimation Facility was 0.99.

Rearing to Smolt Stage Only

Chinook - Conventional Broodstock Program Upper Grande Ronde River Stock BY01

Number of smolts produced:	26,923
Weight of smolts produced (lbs.):	1,965.18
Percent mortality to stocking:	0.9%
Average number/pound of smolts produced:	13.70
Conversion rate:	1.13 at Lookingglass

Lookingglass Fish Hatchery produced 26,946 smolts weighing 1,966.86 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Grande Ronde Acclimation Facility on 3/24/2003. Volitional release began 3/30/2003, and all remaining fish were forced out 4/14/2003. Grande Ronde Acclimation facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for conventional broodstock smolts at upper Grande Ronde Acclimation Facility was -66.43.

Chinook - Conventional Broodstock Program Catherine Creek Stock BY01

Number of smolts produced:	24,392
Weight of smolts produced (lbs.):	1,935.87
Percent mortality to stocking:	1.2%
Average number/pound of smolts produced:	12.60
Conversion rate:	1.15 at Lookingglass

Lookingglass Fish Hatchery produced 24,404 smolts weighing 1,936.83 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/25/2003. Volitional release began 3/31/2003, and all remaining fish were forced out 4/14/2003. Catherine Creek Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for conventional broodstock smolts at Catherine Creek Acclimation Facility was -76.25.

Rearing to Smolt Stage Only

Chinook - Conventional Broodstock Program Lostine River Stock BY01

Number of smolts produced:	100,882
Weight of smolts produced (lbs.):	5,565.74
Percent mortality to stocking:	0.7%
Average number/pound of smolts produced:	18.13
Conversion rate:	1.22 at Lookingglass

Lookingglass Fish Hatchery produced 100,944 smolts weighing 5,567.79 pounds for this program. Smolts were transferred from Lookingglass Fish Hatchery to Lostine Acclimation Facility in two groups. The first release group was transferred to the acclimation facility on 3/03/2003, volitional release began 3/17/2003, and all remaining fish were forced out 3/23/2003. The second release group was transferred to the acclimation facility 3/24/2003, volitional release began on 4/1/2003, and all remaining fish were forced out 4/14/2003. Lostine Acclimation Facility is operated by the Nez Perce Tribe. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

Conversion rate for conventional broodstock smolts at Lostine Acclimation Facility was -50.00.

Food Fed and Weight Gain

Chinook Imnaha Stock BY01

Lookingglass Fish Hatchery

Total pounds of food fed	16,847.61
Conversion rate	1.07
Total weight gain (lbs.) - all sizes produced	15,747.70

Chinook Imnaha Stock BY02

Lookingglass Fish Hatchery

Total pounds of food fed	9,164.70
Conversion rate	1.10

Total weight gain (lbs.) - all sizes produced	8,325.15
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Food Fed and Weight Gain

**Chinook - Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	15,904.34
Conversion rate	1.12
Total weight gain (lbs.) - all sizes produced	14,246.64

**Chinook - Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	3,250.73
Conversion rate	1.12
Total weight gain (lbs.) - all sizes produced	2,911.21

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	7,795.81
Conversion rate	1.00
Total weight gain (lbs.) - all sizes produced	7,823.89

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	5,083.99
Conversion rate	1.17
Total weight gain (lbs.) - all sizes produced	4,360.24

Food Fed and Weight Gain

**Chinook - Captive Broodstock Program (F₁'s)
Lostine River Creek Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	10,517.91
Conversion rate	1.28
Total weight gain (lbs.) - all sizes produced	8,236.59

**Captive Broodstock Chinook (F₁'s)
Lostine River Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	4,632.94
Conversion rate	1.25
Total weight gain (lbs.) - all sizes produced	13,705.93

**Chinook - Conventional Broodstock Program
Upper Grande Ronde River Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	2,095.85
Conversion rate	1.13
Total weight gain (lbs.) - all sizes produced	1,855.86

**Chinook - Conventional Broodstock Program
Upper Grande Ronde River Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	2,187.00
Conversion rate	1.21
Total weight gain (lbs.) - all sizes produced	1,805.71

Food Fed and Weight Gain

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	2,104.60
Conversion rate	1.15
Total weight gain (lbs.) - all sizes produced	1,827.83

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	2,196.87
Conversion rate	1.16
Total weight gain (lbs.) - all sizes produced	1,894.74

**Chinook - Conventional Broodstock Program
Lostine River Stock BY01**

Lookingglass Fish Hatchery	
Total pounds of food fed	6,464.64
Conversion rate	1.22
Total weight gain (lbs.) - all sizes produced	5,285.79

**Chinook - Conventional Broodstock Program
Lostine River Stock BY02**

Lookingglass Fish Hatchery	
Total pounds of food fed	3,405.22
Conversion rate	1.19
Total weight gain (lbs.) - all sizes produced	2,852.66

FY2003 Stocking

Total number of distribution trips:	21
Number of fry stocked:	0
Weight of fry stocked:	0 lbs
Number of parr stocked:	0
Weight of parr stocked:	0 lbs
Number of smolts stocked:	877,895
Weight of smolts stocked:	58,426.02 lbs
Number of legal trout stocked:	0
Weight of legal trout stocked:	0 lbs
Date, location, number and weight at each stocking: See Attached	

All distribution trips were made to acclimation facilities associated with Lookingglass Fish Hatchery. There were no direct stream releases in FY2003.

Lookingglass Fish Hatchery and Associated Facility Stocking Records
 October 1, 2002 through September 30, 2002

FACILITY	SPECIES	LOT	DATE	RELEASE SITE	NO/LB	MORTS	NUMBER STOCKED	POUNDS STOCKED
CATHERINE CREEK ACCLIMATION	CHINOOK	201F01	03/23/03	CATHERINE CREEK AT ACC SITE	12.75	0	105,292	8,258.20
CATHERINE CREEK ACCLIMATION	CHINOOK	201W01	04/14/03	CATHERINE CREEK AT ACC SITE	12.6	0	24,392	1,935.87
GRANDE RONDE RIVER ACCLIMATION	CHINOOK	080F01	03/23/03	GRANDE RONDE RIVER AT ACC SITE	14.2	0	110,049	7,749.93
GRANDE RONDE RIVER ACCLIMATION	CHINOOK	080F01	04/14/03	GRANDE RONDE RIVER AT ACC SITE	13.8	0	100,064	7,251.01
GRANDE RONDE RIVER ACCLIMATION	CHINOOK	080F01	04/14/03	GRANDE RONDE RIVER AT ACC SITE	13.7	0	26,923	1,965.18
IMNAHA ACCLIMATION	CHINOOK	029 01	04/15/03	IMNAHA RIVER AT ACC SITE	16.26	0	268,426	16,508.36
LOSTIVE RIVER ACCLIMATION	CHINOOK	200F01	03/23/03	LOSTINE RIVER AT ACC SITE	15.34	0	57,986	3,780.05
LOSTIVE RIVER ACCLIMATION	CHINOOK	200F01	04/14/03	LOSTINE RIVER AT ACC SITE	15.5	0	83,881	5,411.68
LOSTIVE RIVER ACCLIMATION	CHINOOK	200W01	03/23/03	LOSTINE RIVER AT ACC SITE	16.1	0	51,795	3,217.08
LOSTIVE RIVER ACCLIMATION	CHINOOK	200W01	04/14/03	LOSTINE RIVER AT ACC SITE	20.9	0	49,087	2,348.66