

LOOKINGGLASS FISH HATCHERY ANNUAL REPORT FY2005

INTRODUCTION

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 2005 release of Imnaha stock (2903) smolts from Imnaha Satellite Facility was 435,186 fish.

CHINOOK

Adult Returns

The Imnaha Weir was installed on June 14, 2005, and chinook collection continued through September 12, 2005. In 2005, 1,221 Imnaha (2905) stock chinook (450 males, 582 females and 189 jacks) were trapped at the Imnaha Weir. Of these, 189 males, 202 females, and 11 jacks were opercle-punched and passed above the Imnaha Weir to spawn naturally. 797 chinook, consisting of 255 males, 367 females and 175 jacks, were collected and transported to Lookingglass Fish Hatchery. Of the fish held at Lookingglass Fish Hatchery, 100 males, 118 females and 46 jacks were kept for brood stock. All remaining adults were opercle-punched, transported to streams and released to spawn naturally. 39 males and 96 females were released into Lick Creek, and 45 males and 103 females were released into Big Sheep Creek. Of the chinook kept for brood stock, 95 males, 117 females and 46 jacks survived to spawn. Sperm was collected from natural males and jacks for cryopreservation.

63 unmarked Rapid River (8105) stock chinook (24 males, 27 females and 12 jacks) returned to Lookingglass Creek in 2005. In addition, 10 males and 10 females of Catherine Creek Captive Brood(20105) were transported to the hatchery from the Catherine Creek Weir. Of these fish, 20 males, 26 females and 10 jacks were released into Lookingglass Creek above the hatchery weir to spawn naturally. 34 males and 37 females and 11 jacks were given to the Confederated Tribes of the Umatilla Indian Reservation (CUTIR) for ceremonial and subsistence purposes.

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 2005. 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 117 Imnaha stock (2905) females were spawned for an estimated yield of 452,733 green and 452,733 eyed eggs.

Forty Grande Ronde River stock (80W05) females were spawned for an estimated yield of 155,070 green and 120,731 eyed eggs.

Seventeen Catherine Creek stock (201W03) females were spawned for an estimated yield of 52,107 green and 49,476 eyed eggs.

Fifty-six Lostine River stock (200W03) females were spawned for an estimated yield of 234,127 green and 207,291 eyed eggs.

Conventional Chinook Program

Upper Grande Ronde Collection Facility: 25 males, 43 females and 5 jacks of Grande Ronde River (8005) origin were transported to Lookingglass Fish Hatchery for use as broodstock.

Catherine Creek Collection Facility: 11 males, 19 females, and 4 jacks of Catherine Creek (20105) origin were transported to Lookingglass Fish Hatchery for spawning.

Lostine River Collection Facility: 47 males, 59 females and 2 jacks of Lostine River (20005) 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 2004 Imnaha, Lostine, Catherine Creek and upper Grande Ronde River stocks of chinook during October 2005.

CONSTRUCTION AND MAINTENANCE

MAINTENANCE PROJECTS ACCOMPLISHED BY ODFW PERSONNEL

- Serviced and repaired vehicles and equipment.
- Drew plans and specs for endemic building lab & storage construction, and new maintenance office
- Built new battery bracket for domestic generator. 11/22
- Made and installed new single piece floodgate at gravel sluice cleanout and new gantry lift for sluice gate operation.
- Completed new lab and storage area for Endemic building.
- Built a safety work stand for Versa Mill machine.
- Removed gravel and debris from gravel sluice channel at intake.
- Repaired mort picking nets on raceways.
- Heater and GFI outlet strip put in crawlspace above freezer.
- Repaired leak in roof over visitors center, and repaired and repainted ceiling.
- Moved temperature probes for automatic louvers in hatchery generator building.
- Installed exhaust fan in mechanical room in endemic building.
- Walls, ceiling and floors were repaired and painted in the new maintenance office.
- Built a new hand crowder for use in loading fish.
- Rebuilt man-grate and diversion board channels in main discharge channel.
- Repaired airlines and Formalin Injection System in Endemic building.
- Repaired the adult holding ponds.
- Constructed handles to operate spray-bar valves and installed drain plugs in the spray bar system for the adult holding ponds.
- Rerouted drain line at Annex building.
- Repaired toilet at Imnaha Facility.
- Built jump curtain for pond crowder.
- Graded gravel roadways around facility
- Built ramp for the east end of Raceway 18.
- Built new spawning rack.
- Repairs to traveling water screen #2 completed.

MAINTENANCE PROJECTS ACCOMPLISHED BY CONTRACTORS

Alpine Alarm – serviced all fire extinguishers for the facility and residences, serviced the alarm system, and did the annual maintenance and repairs.

Alpine Services – conducted annual maintenance on the chimney and woodstove in all residences.

Banes Electric – did emergency repairs on the hatchery

Becker Construction – assisted with gravel removal from inside the Intake structure.

Blue Mt. Water Lab – tested the domestic water system.

Dale Dodge Fencing – completed work on two adult holding pond fences and two holding ponds catwalks and two raceway walkways.

E C Electric – did load tests on hatchery generator to determine power usage.

Elkhorn Electric – completed wiring of GFI outlet under canopy and installed photocells on yard lights, helped with load testing the hatchery generator, did electrical wiring (plugs & lights) in endemic building, made emergency repairs on the Domestic Water System when a control board shorted out, and worked on electrical maintenance throughout the hatchery.

Frank McGowan – conducted annual scheduled service on chillers 1 & 2 and to decommissioned chiller 3, and did maintenance and repairs on Property # 31001, 31002, and 31003, water furnace systems.

Mason Construction – completed residing project on October 15th.

McBride Floor Covering – installed carpet and vinyl flooring in property # 31003.

Mike Becker Construction – cleaned debris out of the intake that had collected around the bottom of traveling water screens.

Miller Cabinet – delivered doors with new windows installed.

N W Pump – was here to service and inspect all of our fuel storage tanks.

O.T.E.C – installed and removed test meter on 800-amp service.

Pursewell's Pump – repaired spray bar pump on traveling water screen # 2 and reinstalled it.

S.K. Keys – replaced locks and keys to hatchery residences, Assistant Manager's office, and boot room, and installed locks on doors in Endemic building.

Verizon – installed phone in new maintenance office.

MAJOR EXPENSES

Repair & maintenance of buildings and grounds	\$ 52,600.00
Fish food	33,535.00
Repairs and maintenance to equipment	23,105.00
Temporary services	20,630.00
Supplies	86,433.00
Communication services	9,453.00
Utilities	104,350.00
Chemicals	18,985.00
Office supplies	<u>4,071.00</u>
Total	\$353,162.00

Adult Returns to Hatchery

Chinook Lookingglass Creek Stock BY05

Lookingglass Fish Hatchery	
Where trapped:	Lookingglass Creek Weir
Date of first return:	May 30, 2005
Date of last return:	September 7, 2005
Number of adults trapped:	27 females, 24 males, 12 jacks
Date of peak returns:	June 6, 2005
Number of adults released to spawn naturally:	26 females, 20 males, 10 jacks
Number of adults to hatchery for broodstock:	0
Mortality of all adult returns	
<i>at trap:</i>	0 females, 0 males
<i>at hatchery:</i>	1 female, 0 males

CTUIR staff dispatched 37 females, 34 males and 11 jacks as surplus to program needs. Fish were given to CTUIR for ceremonial and subsistence purposes.

**Includes 10 female and 10 male progeny of Catherine Creek captive brood fish that were hauled to Lookingglass Hatchery. These fish were released to spawn naturally.*

Adults Trapped Off Hatchery and Transported to Hatchery

Chinook Imnaha Stock BY05

Lookingglass Fish Hatchery	
Where trapped:	Imnaha Satellite Facility
Date weir installed:	June 14, 2005
Dates trapped:	June 14 - Sept 12, 2005
Number of adults trapped:	582 females, 450 males, 189 jacks
Date of peak trapping:	July 19, 2005
Number of adults released to spawn naturally:	202 females, 189 males, 11 jacks
Number of adults outplanted:	
<i>Big Sheep Creek</i>	103 females, 45 males
<i>Lick Creek</i>	96 females, 39 males
Number of adults to hatchery for broodstock:	279 females, 236 males, 46 jacks
Number given away/died at Wallowa Hatchery:	88 females, 19 males, 129 jacks
Mortality of all adults	
<i>at trap:</i>	13 females, 6 males, 3 jacks
<i>at hatchery:</i>	1 females, 5 males, 0 jacks

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook - Conventional Broodstock Program
Grande Ronde River Stock BY05**

Lookingglass Fish Hatchery

Where trapped:	Upper Grande Ronde Weir
Dates trapped:	May 31 - August 3, 2005
Number of adults trapped:	143 females, 128 males, 6 jacks
Date of peak trapping:	June 13, 2005
Number of adults released to spawn naturally:	103 females, 101 males, 1 jack
Number of adults to hatchery for broodstock:	40 females, 26 males, 5 jacks
Mortality of all adults	<i>at trap:</i> 0 females, 1 male*
	<i>at hatchery:</i> 3 female, 2 males

**Accidentally killed by wier*

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY05**

Lookingglass Fish Hatchery

Where trapped:	Catherine Creek Weir
Dates trapped:	May 23 – July 6, 2005
Number of adults trapped:	63 females, 62 males, 30 jacks
Date of peak trapping:	June 13, 2005
Number of adults released to spawn naturally:	72 females, 67 males, 10 jacks
Number of adults to hatchery for broodstock:	14 females, 16 males, 4 jack
Mortality of all adults	<i>at trap:</i> 1 female, 0 males*
	<i>at hatchery:</i> 2 females, 0 males

**20 jacks killed by CTUIR staff for ceremonial and subsistence purposes. One male was killed at the trap during testing of an experimental fishway device.*

**Chinook - Conventional Broodstock Program
Lostine River Stock BY05**

Lookingglass Fish Hatchery

Where trapped:	Lostine River Weir
Dates trapped:	June 9 - September 22, 2005
Date of peak trapping:	July 21, 2005
Number of adults trapped:	409 females, 330 males, 81 jacks
Number of adults released to spawn naturally:	266 females, 208 males, 23 jacks
Number of adults outplanted:	
<i>Bear Creek</i>	59 females, 52 males, 9 jacks
<i>Wallowa River</i>	33 females, 15 males, 47 jacks
Number of adults to hatchery for broodstock	51 females, 55 males, 2 jacks
Mortality of all adults	<i>at trap:</i> 0 females, 0 males
	<i>at hatchery:</i> 3 females, 3 males

Spawning Record

**Chinook
Imnaha Stock BY05**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/16/05	5,605	1	2
8/23/05	82,397	17	17
8/30/05	132,533	30	31
9/06/05	284,689	63	85
9/13/04	26,482	6	6

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: 117
 Total number of males spawned: 95 males, 46 jacks(2 live spawned & recycled)
 Total number of green eggs: 531,706
 Total number of eyed eggs: 452,733*
 Number of eggs retained for rearing: 31,329
 Number of eggs shipped: 409,918**
 Date of last spawning: 9/13/05

**A total of 11,486 eggs survived to the eyed stage but were culled due to high maternal BKD titers.*

***Eyed eggs shipped to Oxbow Fish Hatchery for incubation and rearing.*

**Chinook - Conventional Broodstock Program
Upper Grande Ronde Stock BY04**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8-11-05	4,114	1	2
8-18-05	6,486	2	2
8-25-05	46,983	13	10
9/01/05	41,196	10	8
9/08/05	48,958	12	4
9/14/05	7,333	2	13

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

Total number of females spawned: 40
 Total number of males spawned: 23 (22 live spawned & recycled)
 Total number of green eggs: 155,070
 Total number of eyed eggs: 120,731
 Number of eggs retained for rearing: 120,551
 Number of eggs transferred: 180*
 Date of last spawning: 9/14/05

**Transferred to Wallowa Hatchery for captive broodstock experiment.*

Spawning Record

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY04**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/25/05	2,880	1	2
9/01/05	11,385	4	4
9/08/05	37,842	12	12

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

Total number of females spawned: 17
 Total number of males spawned: 12 males (6 males used 2x)
 Total number of green eggs: 52,107
 Total number of eyed eggs: 49,476
 Number of eggs retained for rearing: 49,476
 Number of eggs shipped: 0
 Date of last spawning: 9/08/05

**Chinook - Conventional Broodstock Program
Lostine Stock BY05**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8-12-05	8,658	2	2
8-24-05	25,719	6	6
8-31-05	91,778	22	22
9-07-05	75,267	18	25
9-13-05	21,785	5	4
9-20-05	10,910	3	13

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

Total number of females spawned: 56
 Total number of males spawned: 43 (26 live spawned & recycled)
 Total number of green eggs: 234,127
 Total number of eyed eggs: 207,291
 Number of eggs retained for rearing: 207,291*
 Number of eggs shipped: 0
 Date of last spawning: 9/20/05

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

Rearing to Smolt Stage Only

**Chinook
Imnaha Stock BY03**

Number of smolts produced:	435,186
Weight of smolts produced (lbs.):	17,747.26
Percent mortality to stocking:	1.98%
Average number/pound of smolts produced:	24.52
Conversion rate:	1.03 at Lookingglass

Smolts were transferred from Lookingglass Fish Hatchery to Imnaha Satellite Facility 3/9-3/10/2005. Direct release took place on 3/29/2005.

**Chinook - Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY03**

Approximately 1,067 captive broodstock fish were transferred from Irrigon to Lookingglass, where they were combined with one raceway of conventionals and fed and released following the same protocols as the conventional program.

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 BY03**

Number of smolts produced:	166,850
Weight of smolts produced (lbs.):	7,273.63
Percent mortality to stocking:	3.63%
Average number/pound of smolts produced:	22.94
Conversion rate:	1.30 at Lookingglass

68,827 smolts (2832.39 pounds) were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/07/2005. Volitional release began 3/14/2005, and all remaining fish were forced out 3/27/2005. Catherine Creek Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP. The remaining 98,023 smolts (4,441.24 pounds) were direct released into Lookingglass Creek on 3/18/2005)

Rearing to Smolt Stage Only

**Chinook - Captive Broodstock Program (F₁'s)
Lostine River Stock BY03**

Number of smolts produced:	62,149
Weight of smolts produced (lbs.):	2,867.54
Percent mortality to stocking:	20.71
Average number/pound of smolts produced:	21.67
Conversion rate:	1.54 at Lookingglass

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 3/01/05, volitional release began 3/11/2005, and all remaining fish were forced out 3/20/2005. The second release group was transferred to the acclimation facility 3/21/05, volitional release began on 3/28/2005, and all remaining fish were forced out 4/1/2005. 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
Upper Grande Ronde River Stock BY03**

Number of smolts produced:	105,369
Weight of smolts produced (lbs.):	5,022.02
Percent mortality to stocking:	2.09%
Average number/pound of smolts produced:	20.98
Conversion rate:	1.15 at Lookingglass

Smolts were transferred from Lookingglass Fish Hatchery to Grande Ronde Acclimation Facility on 3/08/2005. Fish were forced out on 3/14/2005 due to freezing temperatures. Grande Ronde Acclimation Facility is operated by the CTUIR. Facility operations are BPA funded. Fish feed is provided by the LSRCP.

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

Number of smolts produced:	120,753
Weight of smolts produced (lbs.):	4,726.53
Percent mortality to stocking:	2.14%
Average number/pound of smolts produced:	25.55
Conversion rate:	1.18 at Lookingglass

The first group of smolts was transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/07/2005. Volitional release began 3/14/2005, and all remaining fish were forced out 3/27/2005. The second group was transferred on 3/28/2005. Volitional release began on 4/4/2005, and all remaining fish were forced out on 4/7/2005 due to generator problems. 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 - Conventional Broodstock Program
Lostine River Stock BY03**

Number of smolts produced:	102,557
Weight of smolts produced (lbs.):	4,156.16
Percent mortality to stocking:	1.56%
Average number/pound of smolts produced:	24.68
Conversion rate:	1.10 at Lookingglass

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 2/28/2005, volitional release began 3/11/2005, and all remaining fish were forced out 3/20/2005. The second release group was transferred to the acclimation facility 3/21/2005, volitional release began on 3/28/2005, and all remaining fish were forced out 4/01/2005. 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 BY03**

Lookingglass Fish Hatchery	
Total pounds of food fed	17,671.99
Conversion rate	1.08
Total weight gain (lbs.) - all sizes produced	16,435.68

**Chinook
Imnaha Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	14,132.30
Conversion rate	1.23
Total weight gain (lbs.) - all sizes produced	11,510.03

Food Fed and Weight Gain
Chinook – Mixed Captive Brood and Conventional

Upper Grande Ronde River Stock BY03

Lookingglass Fish Hatchery	
Total pounds of food fed	2,234.37
Conversion rate	1.09
Total weight gain (lbs.) - all sizes produced	2,035.24

**Chinook – Mixed Captive Brood and Conventionals
Upper Grande Ronde River Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	441.90
Conversion rate	1.10
Total weight gain (lbs.) - all sizes produced	402.81

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY03**

Lookingglass Fish Hatchery	
Total pounds of food fed	8,506.30
Conversion rate	1.37
Total weight gain (lbs.) - all sizes produced	6,228.95

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	1,670.43
Conversion rate	1.40
Total weight gain (lbs.) - all sizes produced	1,191.02

Food Fed and Weight Gain**Chinook - Captive Broodstock Program (F₁'s)
Lostine River Creek Stock BY03**

Lookingglass Fish Hatchery	
Total pounds of food fed	5,321.41
Conversion rate	1.54
Total weight gain (lbs.) - all sizes produced	3,466.55

**Captive Broodstock Chinook (F₁'s)
Lostine River Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	1,537.75
Conversion rate	1.30
Total weight gain (lbs.) - all sizes produced	1,186.10

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

Lookingglass Fish Hatchery	
Total pounds of food fed	3,300.69
Conversion rate	1.15
Total weight gain (lbs.) - all sizes produced	2,867.09

**Chinook - Conventional Broodstock Program
Upper Grande Ronde River Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	146.57
Conversion rate	1.17
Total weight gain (lbs.) - all sizes produced	125.10

Food Fed and Weight Gain

**Chinook – Conventional Program
Lookingglass Creek Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	4,224.28
Conversion rate	1.17
Total weight gain (lbs.) - all sizes produced	3,601.65

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

Lookingglass Fish Hatchery	
Total pounds of food fed	5504.86
Conversion rate	1.18
Total weight gain (lbs.) - all sizes produced	4,647.78

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

Lookingglass Fish Hatchery	
Total pounds of food fed	755.50
Conversion rate	1.41
Total weight gain (lbs.) - all sizes produced	536.25

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

Lookingglass Fish Hatchery	
Total pounds of food fed	4,252.43
Conversion rate	1.10
Total weight gain (lbs.) - all sizes produced	3,855.59

Food Fed and Weight Gain

**Chinook - Conventional Broodstock Program
Lostine River Stock BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	7,314.87
Conversion rate	1.18
Total weight gain (lbs.) - all sizes produced	6,205.70

FY2005 Stocking

Total number of distribution trips:	20
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:	993,373
Weight of smolts stocked:	41,807.61 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 was only one direct stream release from the hatchery (Catherine Creek stock into Lookingglass Creek) in FY2005.

**Lookingglass Fish Hatchery and Associated Facility Stocking Records
October 1, 2004 through September 30, 2005**

FACILITY	SPECIES	LOT	TYPE	DATE	FROM/TO	NO/L	MORTS	NUMBER	POUNDS
						B		STOCKE	STOCKE
LOOKINGGLASS	SPRING CHINOOK	029 03	LIBERATION	3/29/05	IMNAHA R	26	0	72247	2778.73
LOOKINGGLASS	SPRING CHINOOK	029 03	LIBERATION	3/29/05	IMNAHA R	25.4	0	36747	1446.5
LOOKINGGLASS	SPRING CHINOOK	029 03	LIBERATION	3/29/05	IMNAHA R	25.4	0	36748	1446.77
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/10/05	IMNAHA PD	24.2	0	33926	1401.9
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/10/05	IMNAHA PD	24.7	0	12350	500
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/9/05	IMNAHA PD	23.9	4	73980	3095.39
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/10/05	IMNAHA PD	23.2	5	73844	3182.93
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/9/05	IMNAHA PD	24.2	4	33923	1401.77
LOOKINGGLASS	SPRING CHINOOK	029 03	ACCLIMATE	3/10/05	IMNAHA PD	24.7	5	61503	2490
LOOKINGGLASS	SPRING CHINOOK	080M03	ACCLIMATE	3/8/05	GRND RND ACC	19.9	10	25415	1277.14
LOOKINGGLASS	SPRING CHINOOK	080M03	ACCLIMATE	3/8/05	GRND RND ACC	19.9	0	25425	1277.64
LOOKINGGLASS	SPRING CHINOOK	080W03	ACCLIMATE	3/8/05	GRND RND ACC	22.1	0	54568	2469.14
LOOKINGGLASS	SPRING CHINOOK	200F03	ACCLIMATE	3/1/05	LOSTINE ACC	22.6	9	43660	1931.86
LOOKINGGLASS	SPRING CHINOOK	200F03	ACCLIMATE	3/21/05	LOSTINE ACC	19.76	0	18490	935.73
LOOKINGGLASS	SPRING CHINOOK	200W03	ACCLIMATE	2/28/05	LOSTINE ACC	24.2	3	51850	2142.57
LOOKINGGLASS	SPRING CHINOOK	200W03	ACCLIMATE	3/21/05	LOSTINE ACC	25.18	1	25412	1009.21
LOOKINGGLASS	SPRING CHINOOK	200W03	ACCLIMATE	3/21/05	LOSTINE ACC	25.18	0	25414	1009.29
LOOKINGGLASS	SPRING CHINOOK	201F03	ACCLIMATE	3/7/05	CAT. CR. ACC	24.3	0	69005	2839.71
LOOKINGGLASS	SPRING CHINOOK	201W03	ACCLIMATE	3/28/05	CAT. CR. ACC	24.9	0	59100	2373.49
LOOKINGGLASS	SPRING CHINOOK	201W03	ACCLIMATE	3/7/05	CAT. CR. ACC	26.2	0	30871	1178.28
LOOKINGGLASS	SPRING CHINOOK	201W03	ACCLIMATE	3/7/05	CAT. CR. ACC	26.2	0	30872	1178.32
CAT. CR. ACC	SPRING CHINOOK	201F03	LIBERATION	3/14/05	CATHERINE CR	24.3	0	68827	2832.39
CAT. CR. ACC	SPRING CHINOOK	201W03	LIBERATION	4/4/05	CATHERINE CR	24.9	0	59036	2370.92
CAT. CR. ACC	SPRING CHINOOK	201W03	LIBERATION	3/14/05	CATHERINE CR	26.2	0	61717	2355.61
GRND RND ACC	SPRING CHINOOK	080M03	LIBERATION	3/14/05	GRANDE RONDE R	19.9	0	50813	2553.42
GRND RND ACC	SPRING CHINOOK	080W03	LIBERATION	3/14/05	GRANDE RONDE R	22.1	0	54556	2468.6
IMNAHA PD	SPRING CHINOOK	029 03	LIBERATION	4/8/05	IMNAHA R	23.97	0	289444	12075.26
LOSTINE ACC	SPRING CHINOOK	200F03	LIBERATION	3/11/05	LOSTINE R	22.6	0	43659	1931.81
LOSTINE ACC	SPRING CHINOOK	200F03	LIBERATION	3/28/05	LOSTINE R	19.76	0	18490	935.73
LOSTINE ACC	SPRING CHINOOK	200W03	LIBERATION	3/11/05	LOSTINE R	24.2	0	51731	2137.65
LOSTINE ACC	SPRING CHINOOK	200W03	LIBERATION	3/28/05	LOSTINE R	25.18	0	50826	2018.51