

LOOKINGGLASS FISH HATCHERY ANNUAL REPORT FY2006

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 2006 release of acclimated Imnaha stock (2904) smolts from Imnaha Satellite Facility was 320,752 fish and 120,928 fish were directly released into the Imnaha River at the facility. A total of 441,680 fish were released into the Imnaha River.

CHINOOK

Adult Returns

The Imnaha Weir was installed on July 7, 2006, and chinook collection continued through September 11, 2006. In 2006, 791 Imnaha (2906) stock chinook (396 males, 299 females and 96 jacks) were trapped at the Imnaha Weir. Of these, 92 males, 88 females, and 28 jacks were opercle-punched and passed above the Imnaha Weir to spawn naturally. 353 chinook, consisting of 162 males, 133 females and 57 jacks, were collected and transported to Lookingglass Fish Hatchery. Of the fish held at Lookingglass Fish Hatchery, 100 males, 102 females and 57 jacks were kept for brood stock. All remaining adults were opercle-punched, transported to streams and released to spawn naturally. 62 males and 31 females were released into Big Sheep Creek. Of the chinook kept for brood stock, 98 males, 98 females and 57 jacks survived to spawn. Sperm was collected from natural males and jacks for cryopreservation.

77 Lookingglass Creek (8106) stock chinook (26 males, 24 females and 27 jacks) returned to Lookingglass Creek in 2006. Of these fish, 18 males, 22 females and 7 jacks were released into Lookingglass Creek above the hatchery weir to spawn naturally. 8 males and 2 females and 20 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 2006. Catherine Creek, Grande Ronde River, Imnaha River and a portion of the Lostine River eggs will remain at Lookingglass Fish Hatchery through rearing. A portion of the eggs from the Lostine stocks was shipped to Oxbow Fish Hatchery after eye-up.

During the report period 98 Imnaha stock (2906) females were spawned for an estimated yield of 405,583 green and 366,221 eyed eggs.

84 Grande Ronde River stock (8006) females were spawned for an estimated yield of 297,271 green and 269,466 eyed eggs.

37 Catherine Creek stock (20106) females were spawned for an estimated yield of 132,501 green and 121,868 eyed eggs.

58 Lostine River stock (20006) females were spawned for an estimated yield of 241,715 green and 206,309 eyed eggs.

Conventional Chinook Program

Upper Grande Ronde Collection Facility: 64 males, 95 females and 3 jacks of Grande Ronde River (8006) origin were transported to Lookingglass Fish Hatchery for use as broodstock.

Catherine Creek Collection Facility: 28 males, 35 females, and 2 jacks of Catherine Creek (20106) origin were transported to Lookingglass Fish Hatchery for spawning.

Lostine River Collection Facility: 70 males, 81 females and 4 jacks of Lostine River (20006) 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

Coded Wire Tagging was completed on the BY 2005 Imnaha, Lostine, Catherine Creek and Upper Grande Ronde River stocks of Chinook in July, 2006.

PIT-tagging was completed on the BY 2005 Imnaha, Lostine, Catherine Creek and Upper Grande Ronde River stocks of Chinook during October, 2006.

VIE-tagging was completed on the Catherine Creek Captive Brood and Lostine Captive Brood in October, 2006.

CONSTRUCTION AND MAINTENANCE

MAINTENANCE PROJECTS ACCOMPLISHED BY ODFW PERSONNEL

- Serviced and repaired vehicles and equipment.
- Cleaned the ditches and culverts along hatchery road.
- Worked with Pursewell Pump on installation of new well motor and shaft for TW 2 well.
- Monitored domestic water system and reset it after failures.
- Placed spill containment equipment under fuel for pressure washer at intake.
- Constructed new screen for outfall of settling pond.
- Replaced fallen insulation in attic above hatchery freezer.
- Labeled confined space manhole covers.
- Removed landslide on hatchery road and cleaned ditch and culvert of slide debris.
- Repaired and installed brace on steps going to the fish ladder.
- Completed maintenance and repair work on all Canadian troughs
- Cleaned up construction area and stored surplus siding
- Began converting old lab into a First Aid room
- Cleaned out settling pond with backhoe and repaired cracks in pavement
- Installed new Emergency Response Kit at the head end of raceway 13
- Built rock jacks to stabilize hatchery road signs
- Installed barrier weir above intake
- Removed old Canadian troughs and installed 8 new deep Canadian troughs in incubation building
- Built jump screen for Imnaha Chinook trap
- Installed new drive belts on pressure washers
- Replaced air drains on dump truck
- Repaired slip in liberation tank for pick-up
- Repaired horn on dump truck
- Replaced front wheel bearings on the ATV
- Installed new batteries and battery charger on domestic generator
- Installed new formalin tank installed in Endemic Building
- Painted floors in hatchery building and Visitor's Kiosk
- Worked on plumbing and jump boards in hatchery building
- Built scale hanger for Endemic building
- Crew installed two new bollards and an electrical vault
- Led the TEC [Training and Employment Consortium] student crew on building a new fence behind raceways
- Installed new fish stunner in spawning room
- Completed construction of new incubation system and installed 27 new single stacks

MAINTENANCE PROJECTS ACCOMPLISHED BY CONTRACTORS

Banes Electric – Repaired domestic water system and repaired spray bar pumps.

Becker Construction – Constructed the new UV system building and installed and tested the UV system, removed gravel from the intake, and did concrete work in the incubation building.

Coffey Laboratories (Pendleton/Portland, OR) – Analyzed domestic water samples and DEQ water samples.

Elkhorn Electric – Assisted in the replacement of the variable frequency drive for TW2 well, repaired the domestic water system, and worked on electrical maintenance throughout the hatchery.

Equipment Technology & Design – Replaced the variable frequency drive (VFD) for TW2 well.

Frank McGowan, MCS – Serviced and shut down chillers for the season, and installed the well monitoring system for flow and pressure.

Frontier Motors – Replaced the block heater on Dodge diesel pick-up.

Peterson Electric – Installed the electrical system for the new UV system.

Pursewell Pump – Replaced the well motor, right angle drive unit and shaft and installed pressure release valves at the TW2 well building.

Rogers Asphalt – Repaired the settling pond.

Savage Door – Moved and installed the bay door in the incubation building.

Steele's Septic Service – Pumped septic tanks of the hatchery and hatchery residences.

Stoffel Brothers Drilling, Inc. – Completed the well abandonment project.

Water Management Technologies – Installed UV lamps in the UV system and went over basic operations with the crew.

Water Well Technology – Used camera to check integrity of TW2 well.

Valley Concrete Pumping (La Grande, OR) – Worked in conjunction with Stoffel Brothers Drilling, Inc. well abandonment project.

MAJOR EXPENSES

Repair & maintenance of buildings and grounds	\$ 59,902.00
Fish food	27,751.00
Repairs and maintenance to equipment	73,198.00
Temporary services	17,015.00
Supplies	42,269.00
Communication services	10,174.00
Utilities	33,131.00
Chemicals	19,679.00
Equipment	33,143.00
Office supplies	<u>3,609.00</u>
Total	\$319,871.00

Adult Returns to Hatchery

Chinook Lookingglass Creek Stock BY06

Lookingglass Fish Hatchery	
Where trapped:	Lookingglass Creek Weir
Date of first return:	June 12, 2006
Date of last return:	August 28, 2006
Number of adults trapped:	24 females, 26 males, 27 jacks
Date of peak returns:	June 21, 2006
Number of adults released to spawn naturally:	22 females, 18 males, 7 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>	0 females, 0 males

CTUIR staff dispatched 2 females, 8 males and 20 jacks as surplus to program needs. Fish were given to CTUIR for ceremonial and subsistence purposes.

Adults Trapped Off Hatchery and Transported to Hatchery

Chinook Imnaha Stock BY06

Lookingglass Fish Hatchery	
Where trapped:	Imnaha Satellite Facility
Date weir installed:	June 16, 2006
Dates trapped:	June 16 - Sept 7, 2006
Number of adults trapped:	229 females, 396 males, 96 jacks
Date of peak trapping:	July 24, 2006
Number of adults released to spawn naturally:	
<i>Imnaha River (above weir)</i>	88 females, 92 males, 28 jacks
<i>Big Sheep Creek</i>	52 females, 98 males
<i>Lick Creek</i>	51 females, 99 males
Number of adults to hatchery for broodstock:	133 females, 162 males, 57 jacks
Number given away	1 females, 13 males, 7 jacks
Mortality of all adults	
<i>at trap:</i>	0 females, 0 males, 0 jacks
<i>at hatchery:</i>	4 females, 3 males, 0 jacks

Adults Trapped Off Hatchery and Transported to Hatchery

**Chinook - Conventional Broodstock Program
Grande Ronde River Stock BY06**

Lookingglass Fish Hatchery

Where trapped:	Upper Grande Ronde Weir
Dates trapped:	June 12 – July 12, 2006
Number of adults trapped:	117 females, 96 males, 7 jacks
Date of peak trapping:	June 13, 2006
Number of adults released to spawn naturally:	31 females, 19 males, 4 jacks
Number of adults to hatchery for broodstock:	95 females, 64 males, 3 jacks
Mortality of all adults	<i>at trap:</i> 0 females, 0 males
	<i>at hatchery:</i> 5 females, 2 males

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY06**

Lookingglass Fish Hatchery

Where trapped:	Catherine Creek Weir
Dates trapped:	May 29 – July 25, 2006
Number of adults trapped:	145 females, 141 males, 13 jacks
Date of peak trapping:	June 20, 2006
Number of adults released to spawn naturally:	109 females, 112 males, 11 jacks
Number of adults to hatchery for broodstock:	35 females, 28 males, 2 jacks
Mortality of all adults	<i>at trap:</i> 0 females, 0 males
	<i>at hatchery:</i> 1 female, 1 males

**Chinook - Conventional Broodstock Program
Lostine River Stock BY06**

Lookingglass Fish Hatchery

Where trapped:	Lostine River Weir
Dates trapped:	June 15 - September 28, 2006
Date of peak trapping:	July 20, 2006
Number of adults trapped:	253 females, 233 males, 38 jacks
Number of adults released to spawn naturally:	181 females, 171 males, 34 jacks
Number of adults to hatchery for broodstock:	81 females, 70 males, 4 jacks
Mortality of all adults	<i>at trap:</i> 0 females, 0 males
	<i>at hatchery:</i> 15 females, 9 males

Spawning Record

**Chinook
Imnaha Stock BY06**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/22/06	4,358	1	2
8/29/06	147,413	34	34
9/05/06	200,193	48	58
9/12/06	39,964	11	17
9/15/06	13,610	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: 98 males, 17 jacks
 Total number of green eggs: 405,538
 Total number of eyed eggs: 365,951
 Number of eggs retained for rearing: 365,951
 Date of last spawning: 9/15/06

**Chinook - Conventional Broodstock Program
Upper Grande Ronde Stock BY06**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/17/06	15,344	4	4
8/24/06	42,478	12	8
8/31/06	52,534	14	10
9/07/06	96,986	28	26
9/14/06	83,454	25	18
9/19/06	6,485	2	2

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

Total number of females spawned: 85
 Total number of males spawned: 66 males, 3 jacks
 Total number of green eggs: 297,281
 Total number of eyed eggs: 269,484
 Number of eggs retained for rearing: 269,316
 Number of eggs transferred: 168*
 Date of last spawning: 9/19/06

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

Spawning Record

**Chinook - Conventional Broodstock Program
Catherine Creek Stock BY06**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/31/06	76,357	20	14
9/07/06	56,144	17	15

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

Total number of females spawned: 37
 Total number of males spawned: 27 males, 2 jacks
 Total number of green eggs: 132,501
 Total number of eyed eggs: 121,868
 Number of eggs retained for rearing: 121,868
 Number of eggs shipped: 0
 Date of last spawning: 9/07/06

**Chinook - Conventional Broodstock Program
Lostine Stock BY06**

Lookingglass Fish Hatchery

Date Spawned	Number of Eggs Taken	Females Spawned	Males Spawned
8/22/06	18,157	4	4
8/30/06	36,300	8	8
9/06/06	85,169	20	20
9/12/06	80,002	20	19
9/19/06	13,487	3	3
9/22/06	4,102	1	1
9/28/06	4,498	1	2

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

Total number of females spawned: 56
 Total number of males spawned: 57
 Total number of green eggs: 241,715
 Total number of eyed eggs: 206,309
 Number of eggs retained for rearing: 104,554
 Number of eggs transferred: 101,755*
 Date of last spawning: 9/28/06

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

Rearing to Smolt Stage Only

**Chinook
Imnaha Stock BY04**

Number of smolts produced:	441,680*
Weight of smolts produced (lbs.):	17,224.33
Percent mortality to stocking:	1.82%
Average number/pound of smolts produced:	27.12
Conversion rate:	1.41 at Lookingglass

**120,928 smolts (5,397 pounds) were released directly into the Imnaha River on 3/30/2006. 120,928 smolts (10,982.69 pounds) were transferred from Lookingglass Fish Hatchery to Imnaha Satellite Facility 3/08-3/10/2006 for acclimation. Volitional release began on 3/21/2006 and the remaining fish were forced out on 4/01/06.*

**Chinook
Lookingglass Stock BY04**

Number of smolts produced:	120,092*
Weight of smolts produced (lbs.):	4,624.10
Percent mortality to stocking:	2.76%
Average number/pound of smolts produced:	25.97
Conversion rate:	1.26 at Lookingglass

**2,960 fish (84.57 pounds) were direct released into Lookingglass Creek on 10/1/05. A second release of 3,714 fish (97.74 pounds) was made on 11/1/05. Volitional release of 113,418 fish (4,441.79 pounds) was begun on 4/1 06, with the remaining fish forced out on 4/5/06.*

**Chinook - Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY04**

Approximately 137 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.

Rearing to Smolt Stage Only

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

Number of smolts produced:	18,977
Weight of smolts produced (lbs.):	677.75
Percent mortality to stocking:	2.44%
Average number/pound of smolts produced:	28.0
Conversion rate:	2.54 at Lookingglass

Smolts were transferred from Lookingglass Fish Hatchery to Grande Ronde Acclimation Facility on 3/13/2006. Volitional release began on 3/27/2006. 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 BY04**

Number of smolts produced:	45,604
Weight of smolts produced (lbs.):	2,123.77
Percent mortality to stocking:	2.15%
Average number/pound of smolts produced:	21.5
Conversion rate:	1.48 at Lookingglass

45,667 smolts (1,733.43 pounds) were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/13/2006. Volitional release began 3/27/2006, and all remaining fish were forced out 4/10/2006. Catherine Creek 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 BY04**

Number of smolts produced:	23,216
Weight of smolts produced (lbs.):	921.27
Percent mortality to stocking:	3.08%
Average number/pound of smolts produced:	25.20
Conversion rate:	1.26 at Lookingglass

23,227 smolts (689.64 pounds) were transferred from Lookingglass Fish Hatchery to Catherine Creek Acclimation Facility on 3/13/2006. Volitional release began 3/27/2006, and all remaining fish were forced out 4/10/2006. 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 BY04**

Number of smolts produced:	40,982
Weight of smolts produced (lbs.):	1,626.27
Percent mortality to stocking:	1.13%
Average number/pound of smolts produced:	25.2
Conversion rate:	1.34 at Lookingglass

41,013 smolts (1,606.17 pounds) were transferred from Lookingglass Fish Hatchery to Lostine Acclimation Facility on 2/27/06. Volitional release began 3/10/2006, and all remaining fish were forced out 3/20/2006. 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 BY04**

Number of smolts produced:	192,586
Weight of smolts produced (lbs.):	7,724.12
Percent mortality to stocking:	5.50%
Average number/pound of smolts produced:	24.93
Conversion rate:	2.14 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 2/27/2006, volitional release began 3/10/2006, and all remaining fish were forced out 3/19/2006. The second release group was transferred to the acclimation facility 3/22 – 3/23/2006, volitional release began on 3/28/2006, and all remaining fish were forced out 4/01/2006. 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 BY04**

Lookingglass Fish Hatchery	
Total pounds of food fed	5,106.11
Conversion rate	1.41
Total weight gain (lbs.) - all sizes produced	3,614.35

**Chinook
Imnaha Stock BY05**

Lookingglass Fish Hatchery	
Total pounds of food fed	14,382.69
Conversion rate	1.08
Total weight gain (lbs.) - all sizes produced	13,370.96

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

Lookingglass Fish Hatchery	
Total pounds of food fed	263.29
Conversion rate	2.54
Total weight gain (lbs.) - all sizes produced	103.77

**Chinook –Captive Broodstock Program (F₁'s)
Upper Grande Ronde River Stock BY05**

Lookingglass Fish Hatchery	
Total pounds of food fed	797.30
Conversion rate	1.26
Total weight gain (lbs.) - all sizes produced	633.06

Food Fed and Weight Gain

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

Lookingglass Fish Hatchery	
Total pounds of food fed	490.57
Conversion rate	1.48
Total weight gain (lbs.) - all sizes produced	332.41

**Chinook - Captive Broodstock Program (F₁'s)
Catherine Creek Stock BY05**

Lookingglass Fish Hatchery	
Total pounds of food fed	818.52
Conversion rate	1.50
Total weight gain (lbs.) - all sizes produced	547.38

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

Lookingglass Fish Hatchery	
Total pounds of food fed	369.00
Conversion rate	n/a
Total weight gain (lbs.) - all sizes produced	-36.74

**Captive Broodstock Chinook (F₁'s)
Lostine River Stock BY05**

Lookingglass Fish Hatchery	
Total pounds of food fed	986.51
Conversion rate	1.47
Total weight gain (lbs.) - all sizes produced	671.35

Food Fed and Weight Gain

Chinook - Conventional Broodstock Program

Upper Grande Ronde River Stock BY05

Lookingglass Fish Hatchery	
Total pounds of food fed	3,590.88
Conversion rate	1.11
Total weight gain (lbs.) - all sizes produced	3,234.43

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

Lookingglass Fish Hatchery	
Total pounds of food fed	1,874.77
Conversion rate	1.26
Total weight gain (lbs.) - all sizes produced	1,486.85

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

Lookingglass Fish Hatchery	
Total pounds of food fed	295.66
Conversion rate	2.24
Total weight gain (lbs.) - all sizes produced	132.00

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

Lookingglass Fish Hatchery	
Total pounds of food fed	1,400.06
Conversion rate	1.17
Total weight gain (lbs.) - all sizes produced	1,192.97

Food Fed and Weight Gain**Chinook - Conventional Broodstock Program**

Lostine River Stock BY04

Lookingglass Fish Hatchery	
Total pounds of food fed	2,287.26
Conversion rate	2.14
Total weight gain (lbs.) - all sizes produced	1,068.75

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

Lookingglass Fish Hatchery	
Total pounds of food fed	7,106.29
Conversion rate	1.01
Total weight gain (lbs.) - all sizes produced	7,010.34

**On Hand at Lookingglass Fish Hatchery
 September 30, 2006**
Fish on Hand – BY05

Species	Stock	Number
Spring Chinook	Imnaha	433,326
Spring Chinook	Grande Ronde	119,041
Spring Chinook	Grande Ronde Captive Brood	20,700
Spring Chinook	Lostine River	205,755
Spring Chinook	Lostine River Captive Brood	24,736
Spring Chinook	Catherine Creek	49,976
Spring Chinook	Catherine Creek Captive Brood	21,688

FY2006 Stocking

Total number of distribution trips:	23*
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:	883,137
Weight of smolts stocked:	34,921.61 lbs
Date, location, number and weight at each stocking:	See Attached

**All distribution trips but one were made to acclimation facilities associated with Lookingglass Fish Hatchery. There were two direct stream releases from the hatchery (Imnaha stock into Imnaha River, and Lookingglass Stock into Lookingglass Creek) in FY2006.*

**Lookingglass Fish Hatchery and Associated Facility Stocking Records
October 1, 2005 through September 30, 2006**

FACILITY	SPECIES	LOT	TYPE	DATE	FROM/TO	NO/LB	MORTS	NUMBER STOCKED	POUNDS STOCKED
CAT. CR. ACC	SPRING CHINOOK	201F04	LIBERATION	3/27/06	CATHERINE CR AT ACC PD - CTUIR	21.40	0	28,824	1,346.92
CAT. CR. ACC	SPRING CHINOOK	201F04	LIBERATION	3/27/06	CATHERINE CR AT ACC PD - CTUIR	21.60	0	16,780	776.85
CAT. CR. ACC	SPRING CHINOOK	201W04	LIBERATION	3/27/06	CATHERINE CR AT ACC PD - CTUIR	25.20	0	23,216	921.27
GRND RND ACC	SPRING CHINOOK	080M04	LIBERATION	3/27/06	GRANDE RONDE AT ACC PD -CTUIR	28.00	0	18,977	677.75
IMNAHA PD	SPRING CHINOOK	029 04	LIBERATION	3/21/06	IMNAHA R	27.12	0	160,376	5,913.57
IMNAHA PD	SPRING CHINOOK	029 04	LIBERATION	4/1/06	IMNAHA R	27.12	0	160,376	5,913.57
LOSTINE ACC	SPRING CHINOOK	200F04	LIBERATION	3/10/06	LOSTINE AT ACC POND - NPT	25.20	0	40,982	1,626.27
LOSTINE ACC	SPRING CHINOOK	200W04	LIBERATION	3/10/06	LOSTINE AT ACC POND - NPT	25.41	0	58,608	2,306.49
LOSTINE ACC	SPRING CHINOOK	200W04	LIBERATION	3/28/06	LOSTINE AT ACC POND - NPT	24.73	0	133,978	5,417.63
LOOKINGGLASS	SPRING CHINOOK	029 04	LIBERATION	3/30/06	IMNAHA R	21.83	0	15,918	729.18
LOOKINGGLASS	SPRING CHINOOK	029 04	LIBERATION	3/30/06	IMNAHA R	23.04	0	59,167	2,568.01
LOOKINGGLASS	SPRING CHINOOK	029 04	LIBERATION	3/30/06	IMNAHA R	21.83	0	45,843	2,100.00
LOOKINGGLASS	SPRING CHINOOK	081 04	LIBERATION	10/1/05	LOOKINGGLASS CR	35.00	0	2,960	84.57
LOOKINGGLASS	SPRING CHINOOK	081 04	LIBERATION	11/1/05	LOOKINGGLASS CR	38.00	0	3,714	97.74
LOOKINGGLASS	SPRING CHINOOK	081 04	LIBERATION	4/1/06	LOOKINGGLASS CR	26.05	0	69,809	2,679.81
LOOKINGGLASS	SPRING CHINOOK	081 04	LIBERATION	4/1/06	LOOKINGGLASS CR	24.75	0	43,609	1,761.98
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/8/06	IMNAHA PD	29.56	0	64,167	2,170.74
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/8/06	IMNAHA PD	30.23	0	63,864	2,112.60
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/8/06	IMNAHA PD	28.24	0	13,000	460.34
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/9/06	IMNAHA PD	28.24	0	51,105	1,809.67
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/9/06	IMNAHA PD	29.74	0	64,357	2,163.99
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/9/06	IMNAHA PD	28.43	0	29,169	1,025.99
LOOKINGGLASS	SPRING CHINOOK	029 04	ACCLIMATE	3/10/06	IMNAHA PD	28.43	0	35,235	1,239.36
LOOKINGGLASS	SPRING CHINOOK	080M04	ACCLIMATE	3/13/06	GRND RND ACC	29.28	0	18,986	648.43
LOOKINGGLASS	SPRING CHINOOK	200F04	ACCLIMATE	2/27/06	LOSTINE ACC	27.03	3	15,906	588.46
LOOKINGGLASS	SPRING CHINOOK	200F04	ACCLIMATE	2/27/06	LOSTINE ACC	24.67	2	25,107	1,017.71
LOOKINGGLASS	SPRING CHINOOK	200W03	ACCLIMATE	2/28/05	LOSTINE ACC	24.20	3	51,850	2,142.57
LOOKINGGLASS	SPRING CHINOOK	200W04	ACCLIMATE	2/27/06	LOSTINE ACC	25.93	16	65,722	2,534.59
LOOKINGGLASS	SPRING CHINOOK	200W04	ACCLIMATE	3/22/06	LOSTINE ACC	23.12	20	65,784	2,845.32
LOOKINGGLASS	SPRING CHINOOK	200W04	ACCLIMATE	3/23/06	LOSTINE ACC	27.99	22	68,331	2,441.26
LOOKINGGLASS	SPRING CHINOOK	201F04	ACCLIMATE	3/13/06	CAT. CR. ACC	27.40	0	28,866	1,053.50
LOOKINGGLASS	SPRING CHINOOK	201F04	ACCLIMATE	3/13/06	CAT. CR. ACC	24.71	0	16,801	679.93
LOOKINGGLASS	SPRING CHINOOK	201W04	ACCLIMATE	3/13/06	CAT. CR. ACC	33.68	0	23,227	689.64