



*Fish Passage Center*

# Weekly Report #04 - 16

June 25, 2004

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**Highlights:**

- Over the spring flow objective period (April 3rd through June 20th), flows at Lower Granite averaged 70.1 Kcfs (the flow target was 85 Kcfs). The summer Flow Objective period started at Lower Granite on June 21st, 2004 and will end on August 31st, 2004, the summer flow objective is 50 Kcfs.
- Flows over the spring Biological Opinion period have averaged 205.1 and 125.5 Kcfs at McNary and Priest Rapids Dams. The flow targets are 220 Kcfs at McNary and 135 Kcfs at Priest Rapids Dam.
- All major storage reservoirs (except Libby) are near full.
- On June 22nd, 2004, the Fisheries Managers submitted SOR 2004-14 to the Action Agencies, which asked for stable summer flows at Libby (after the sturgeon pulse) while drafting to the Biological Opinion elevation of 2439 feet by the end of August.

**Summary of Events:**

**Water Supply:** Columbia Basin precipitation throughout the first twenty-one days of June has generally been below average in most basins. Over the entire water year, precipitation remains slightly below average in most basins.

**Table 1. Summary of June precipitation and cumulative October through June precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2004 June 1-21		Water Year 2004 October 1, 2003 to June 21, 2004	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.26	75	18.63
Snake River Above Ice Harbor	0.83	81	13.61	93
Columbia Above The Dalles	1.08	86	18.44	96
Kootenai	1.35	78	18.58	92
Clark Fork	0.95	70	12.65	93
Flathead	1.28	69	16.42	91
Pend Oreille/Spokane	1.22	79	25.46	96
Central Washington	0.57	128	7.30	94
Snake River Plain	0.41	61	7.63	82
Salmon/Boise/ Payette	0.49	47	15.42	90
Clearwater	1.41	81	27.30	105
SW Washington Cascades/Cowlitz	2.41	116	58.3	90
Willamette Valley	2.03	129	52.36	95

Spring snowmelt within the Columbia Basin is nearly finished. Average snowpack in the Columbia River for basins above the Snake River confluence is 5% of average, for Snake River Basins the average snowpack is 15% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 29% of average.

June Final Water Supply Forecasts have increased at most locations relative to the May Final Forecast. The June Mid-Month Water Supply Forecasts are very similar to the June Final forecasts. All locations in Table 2 remain below average in terms of Water Supply.

**Table 2. June Final and June Mid-Month Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.**

Location	June Final		June Mid-Month	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	79	85100	79	84800
Grand Coulee (Jan-July)	84	53000	84	53000
Libby Res. Inflow, MT (Jan-July)	76	4820	76	4820
Hungry Horse Res. Inflow, MT (Jan-July)	91	2020	90	2010
Lower Granite Res. Inflow (Apr- July)	71	15400	71	15300
Brownlee Res. Inflow (Apr-July)	44	2790	43	2630
Dworshak Res. Inflow (Apr-July)	91	2400	91	2400

The Spring Flow Objective period started in the Lower Snake River on April 3rd, 2004 and ended on June 20th, 2004. Over the spring period, flows at Lower Granite averaged 70.1 Kcfs. The summer Flow Objective period started in the Lower Snake River on June 21st, 2004 and will end on August 31st, 2004. Because the June final April-July forecast at Lower Granite is less than 16 Maf, the summer flow objective will be 50 Kcfs. Over the first several days of the summer flow period, flows have averaged 50.3 Kcfs

The Spring Flow Objective Periods at McNary Dam and Priest Rapids Dam began on April 10th. The flow objectives at McNary and Priest Rapids are 220 Kcfs and 135 Kcfs, respectively. Over the spring flow objective period, flows at McNary have averaged 205.1 Kcfs; flows over the last week have averaged 195.4 Kcfs. SOR 2004-12 was submitted to the Action Agencies on May 25, 2004 and asked for flows at Priest Rapids to be reduced to a minimum of 125 Kcfs (week average) on June 1, 2004 and gave the operators flexibility to provide up to 135 Kcfs if they felt more water was available than indicated by current modeling. From June 18th to June 24th, flows averaged 141.5 Kcfs at Priest Rapids, over the spring flow period flows have averaged 125.5 Kcfs.

Grand Coulee is currently at an elevation of 1286.6 feet (6-24-04) and has held steady over the last week. The BOR plans on reaching full pool at Grand Coulee on July 5th, 2004; Grand Coulee is currently 3.4 feet from full.

The Libby Reservoir is currently at an elevation of 2443.5 feet (6-24-04). Libby has refilled 2.0 feet in the last week while maintaining outflows of 15-16 Kcfs. On June 22nd, 2004, the Fisheries Managers submitted SOR 2004-14 to the Action Agencies, which asked for stable summer flows at Libby (after the sturgeon pulse) while drafting to the Biological Opinion elevation of 2439 feet by the end of August. The SOR also asked for stable flows in September to satisfy the State of Montana's request for a reduced varial zone during the productive summer months.

The Hungry Horse Reservoir is currently at an elevation of 3559.2 feet (6-24-04), and is 0.8 feet from full. Over the last week, inflows to Hungry

Horse have ranged between 4.8 and 7.6 Kcfs, enabling Hungry Horse to refill 1.3 feet.

The Dworshak Reservoir is currently at an elevation of 1598.7 feet (6-24-04). Inflows to Dworshak have decreased over the last week from 8.8 to 6.3 Kcfs; outflows have increased over the last week from 1.9 to 5.2 Kcfs. Dworshak has refilled 2.3 feet in the last week and is 1.3 feet from full.

The Brownlee Reservoir is currently at an elevation of 2074.6 feet (6-24-04). Inflows to Brownlee have ranged between 9.2 and 11.8 Kcfs; outflows have ranged between 5.4 and 16.2 Kcfs. Brownlee is currently 2.4 feet from full.

**Spill:** Spill for fish passage has continued at Mid-Columbia projects for the past week. Spill for fish passage for the past week has been provided at Ice Harbor Dam according to the Biological Opinion and has averaged 79% of average daily flow. No other spill occurred in the Snake River system. Spill at the lower Columbia River projects was provided in accord with the Biological Opinion spring spill measures. Spill at McNary Dam ended on June 23, 2004. Flows were less than 220 Kcfs and temperatures exceeded 62°F and, therefore, the project operations changed from spill to maximum transport. Over the past week spill averaged 27%, 30%, 38% and 36% of daily flow at McNary, John Day, The Dalles and Bonneville dams, respectively.

Gas bubble trauma monitoring is occurring at the Mid and Lower Columbia sites. No fish were observed with signs of GBT this past week.

## **Smolt Monitoring:**

### Spring Migrants

Compared to last week, this week's average smolt passage indices of yearling chinook, steelhead, coho, and sockeye passage indices dropped 48-67% at Lower Granite Dam, dropped 44-53% (except sockeye which remained at 5 fish/day average) at Rock Island Dam, dropped 86-100% at McNary Dam, and 59-87% at Bonneville Dam. For the remaining spring migrants in the river, the largest contributor to the passage index was steelhead at Lower Granite Dam (weekly average 1,657 fish/day), coho at Rock Island Dam (weekly average 61 fish/day), sockeye at McNary Dam (weekly average 1,119 fish/day), and coho and sockeye at Bonneville Dam (weekly average 861 and 801 fish/day, respectively).

### Summer Migrants

Subyearling chinook passage indices were lower this week at the Snake River monitoring sites (down 21% or more from last week's average); however, this may simply be reflecting movement of large numbers of hatchery subyearling fall chinook from Pittsburg Landing, Captain John Rapids, and Big Canyon Creek acclimation ponds during the first half of June. This is based on PIT tag detections at Lower Granite Dam of tagged fish released May 31-June 2 during the volitional releases of hatchery production from these three acclimation ponds. Detections of PIT tagged subyearling chinook from the Nez Perce Hatchery (Cherry Lane site) have been increasing since mid-June. This hatchery production volitional release will extend over the entire month of June. PIT tagged wild fall Chinook from the mainstem Snake River also have been detected at Lower Granite Dam in increasing numbers since the mid June, with the highest count to date of 99 tagged smolts on June 24. This week's average subyearling chinook passage index at Lower Granite Dam was 25,850 fish/day.

The Mid-Columbia weekly average passage index for subyearling chinook at Rock Island Dam was only 5% off from last week's level, averaging 258 fish/day.

The lower Columbia River monitoring sites saw the largest surge in subyearling chinook

movement this week. The weekly average subyearling chinook passage index at McNary Dam was 900% higher this week with nearly 608,000 subyearling chinook reported for the 24-hour sample period ending 0700 June 22. The weekly average subyearling chinook passage indices at John Day and Bonneville dams were up 176% and 81%, respectively, from last week's average. This week's average passage index for subyearling chinook was 48,263 fish/day at John Day Dam and 43,244 fish/day at Bonneville Dam.

**Hatchery Releases** - The scheduled release of juvenile salmonids from Columbia River Basin hatcheries above Bonneville Dam for the 2004 migration season will be about 83.5 million for the season with all yearling chinook, coho, and steelhead in river to date. Subyearling summer and fall chinook releases began in mid-May and will continue through June and finish by early July. Supplemental and planned releases made during fall 2003 are considered to be 2004 migrants. The 2004 hatchery release totals are updated after information is received from the hatcheries with numbers finalized by the end of the year. The 2004 Hatchery Zone Report gives the latest numbers received for this year's report.

Juvenile sockeye were released from net pens into Lake Wenatchee last summer and fall (2003); the majority of these fish reside in the lake and migrate from the lake and to the ocean the next spring (2004). In the Snake River basin, juvenile sockeye were released in Redfish, Alturas, and Pettit lakes last fall with near 100 smolts released this spring. Most begin their migration in late April and May from the lakes.

Hatcheries in the Snake and Columbia River basins released about 17.1 million juvenile salmon during the past two weeks. About 5.7 million fish are scheduled for release during the next two weeks. See the Hatchery Release Summary Tables for details of individual release groups.

## 2004 Hatchery Zone Report

Race/Species	Friday 25-June-2004			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	2,804,469	12,511,808	21,958,796	37,275,073
Spring Chinook	10,492,087	3,975,400	5,175,531	19,643,018
Summer Chinook	2,374,050	3,127,863		5,501,913
Coho	1,367,111	2,387,178	5,960,228	9,714,517
Sockeye	76,927	315,790		392,717
Summer Steelhead	9,214,209	1,207,230	476,912	10,898,351
Winter Steelhead			90,000	90,000
Total	26,328,853	23,525,269	33,661,467	83,515,589

Snake River - Release of yearling chinook from hatcheries in the Snake River basin is completed for the 2004 migration season. About 12.8 million yearling spring/summer chinook and an additional 1-million yearling fall chinook were released for the 2004 migration. Juvenile steelhead releases are completed for the year with approximately 9.2 million released in this Basin. About 1.4 million subyearling and yearling coho were also released in the Snake River. Release of subyearling fall chinook is either completed or nearly completed at all hatchery facilities and acclimation ponds.

Mid-Columbia - Release of about 3.98 million yearling spring chinook from hatcheries and acclimation ponds was completed for the 2004 migration season. About 1.2 million juvenile steelhead were released from State hatcheries into the Wenatchee, Methow, Okanogan, and Walla Walla rivers, and the mainstem Columbia River from Ringold H. Yearling summer chinook releases were completed from Dryden, Similkameen, and Carlton ponds as well as Wells H by early May. The first group of subyearling chinook was released from Wells H (on-site). Subyearling fall chinook were also released in the Yakima River in Mid-April through late May. Approximately 2.4 million yearling coho were released in the Wenatchee, Methow and Yakima River basins this spring. Priest Rapids and Ringold hatcheries began releasing their subyearling fall chinook on June 14, and these hatcheries account for greater

than 10-million of the 12.5 million released in the Mid-Columbia River. Releases of summer chinook from Wells Hatchery are completed, with Eastbank Hatchery subyearling fish expected in river by early July.

Lower Columbia - Yearling fall and spring chinook and coho salmon were released from acclimation ponds located in the Umatilla River basin in March and April. Yearling spring chinook were released from Round Butte H, Warm Springs NFH, Carson, Warm Springs, and Little White Salmon NFHs and Hood River Acclimation Ponds mainly in April with Klickitat H releasing their fish in early March. About 2.5 million yearling coho from Washougal H were trucked and released by the first week of April with the on-site volitional release of coho from Klickitat H. completed by May 28. Juvenile steelhead releases were completed from mid-April through early May in most of the rivers in this Reach. Upriver bright fall chinook (subyearlings) were released in the Umatilla River in late May. About 2 million fall chinook were released from Little White Salmon H on June 17 with 4-million from Klickitat H released by late June.

**Adult Fish Passage** - At Bonneville Dam, summer chinook passage ranged from 1,800 to 3,100 per day for the week ending June 24. To date, 49,725 adult summer chinook have been counted, and this total compares to about 55,300 in 2003 and 21,600 for the 10-year average at Bonneville Dam. At present, the majority of these summer chinook are destined for the Mid/upper-Columbia rivers. Most of the Snake River summer chinook have already past Bonneville Dam based on PIT tag recoveries at that project. Daily counts of adult summer chinook at Ice Harbor Dam averaged near 500 per day this past week with the daily counts at Priest Rapids Dam rising from nearly 500 per day early in the count week to about 2,600 by June 24.

Steelhead passage at Bonneville Dam continued to increase with daily passage counts that averaged 704 for the week ending June 24; about one half of these fish are passing upstream at The Dalles Dam (ave = 341 per day). At present, the steelhead run is about 1.6 times

greater than the respective 2003 and 10-year average through June 24 at Bonneville Dam. Steelhead passage is beginning to increase in the Snake River as well as in the Mid-Columbia with counts at Ice Harbor Dam near 100 per day and at Priest Rapids Dam near 30 per day by June 24.

Sockeye numbers peaked at Bonneville Dam during the week (range = 5,498 to 8,000 per day) and a total through June 24 of 78,195. This total compares to only 12,665 and 18,646 for the respective 2003 and 10-year average. The majority of sockeye are destined for the Wenatchee and Okanogan River basins. The sockeye are beginning to pass Priest Rapids in increasing numbers with about daily counts ranging from 700 early in the week to 4,000 counted on June 24. As a note, 25 sockeye have been counted at Ice Harbor Dam and should be destined for the upper Salmon River basin.

An update of age composition from CRITFC sampling at Bonneville Dam will be given in next week's FPC Report for the spring run of chinook as well as information for summer run chinook and sockeye through their most recent sample period.

**Daily Average Flow and Spill (in kcfs) at Mid-Columbia Projects**

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/11/04	130.3	0.2	131.4	0.0	144.8	9.4	145.5	11.7	154.2	26.8	165.9	22.3	171.5	100.2
06/12/04	127.2	0.2	129.1	0.0	142.5	9.3	137.2	9.9	143.9	25.2	146.7	21.6	148.3	89.2
06/13/04	121.4	0.2	122.2	0.0	134.8	9.1	132.4	9.3	139.8	23.0	143.6	21.6	146.1	88.4
06/14/04	157.1	0.2	152.8	0.0	165.1	10.0	159.3	13.6	166.0	30.2	165.2	21.5	170.3	102.5
06/15/04	124.8	0.1	138.2	0.0	153.8	10.0	155.4	14.6	162.1	31.7	168.9	21.8	171.4	103.5
06/16/04	118.8	0.1	118.7	0.0	128.1	8.1	126.3	13.6	132.8	30.7	138.6	19.8	140.0	83.5
06/17/04	132.7	0.0	132.6	0.0	141.9	8.6	138.4	13.4	143.8	30.0	140.4	21.1	141.3	83.9
06/18/04	134.4	0.1	133.7	0.0	141.2	8.4	137.8	11.3	144.5	28.7	148.4	20.8	149.9	90.4
06/19/04	124.0	0.2	120.5	0.0	130.0	8.5	127.6	9.6	133.5	24.0	138.6	21.3	140.2	84.4
06/20/04	127.6	0.2	126.2	0.0	135.1	9.0	130.7	8.9	137.2	22.0	137.5	21.5	139.1	83.7
06/21/04	148.8	0.1	149.6	3.8	156.6	9.4	152.1	13.3	157.7	30.1	167.2	33.4	166.1	96.6
06/22/04	128.9	0.2	134.0	0.0	149.5	9.1	149.1	12.4	155.3	30.6	163.0	45.4	157.1	88.0
06/23/04	93.9	0.2	94.6	0.0	104.5	7.8	105.0	13.3	112.3	29.2	124.8	35.4	123.6	69.2
06/24/04	92.1	0.1	99.4	0.0	108.8	7.6	107.4	12.3	112.7	27.4	123.0	34.7	114.8	64.4

**Daily Average Flow and Spill (in kcfs) at Snake Basin Projects**

Date	Dworshak		Brownlee Canyon		Hells Granite		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/11/04	13.9	4.3	15.4	15.2	88.1	0.0	88.4	0.0	91.3	0.0	94.7	81.1		
06/12/04	12.1	2.5	15.6	15.4	83.8	0.0	84.3	0.0	89.8	0.0	91.3	52.9		
06/13/04	9.6	0.0	15.6	17.6	77.2	0.0	76.3	0.0	79.0	0.0	80.5	44.9		
06/14/04	7.6	0.0	15.0	20.6	76.5	0.0	75.7	0.0	80.4	0.0	81.8	68.6		
06/15/04	4.6	0.0	13.4	17.7	72.6	0.0	74.5	0.0	78.3	0.0	80.0	67.9		
06/16/04	2.0	0.0	12.6	12.6	60.7	0.0	60.3	0.0	63.0	0.0	65.6	45.5		
06/17/04	1.8	0.0	11.5	13.0	55.2	0.0	53.8	0.0	55.2	0.0	55.7	40.6		
06/18/04	1.9	0.0	10.0	9.2	53.5	0.0	54.2	0.0	56.7	0.0	58.6	46.6		
06/19/04	1.9	0.0	10.0	7.0	49.3	0.0	49.5	0.0	52.2	0.0	54.1	46.5		
06/20/04	1.9	0.0	9.5	6.8	48.7	0.0	49.5	0.0	51.1	0.0	52.7	38.9		
06/21/04	4.4	0.0	11.8	11.1	46.2	0.0	46.7	0.0	50.6	0.0	52.0	37.8		
06/22/04	5.2	0.0	9.2	11.0	52.1	0.0	52.3	0.0	55.1	0.0	54.4	44.6		
06/23/04	5.2	0.0	10.9	13.9	48.4	0.0	46.8	0.0	46.4	0.0	50.1	42.9		
06/24/04	5.2	0.0	---	---	54.4	0.0	56.2	0.0	60.2	0.0	60.8	45.1		

**Daily Average Flow and Spill (in kcfs) at Lower Columbia Projects**

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
06/11/04	253.3	88.3	252.7	64.9	261.0	103.3	276.3	98.9	47.5	118.5
06/12/04	253.6	85.8	251.2	66.5	260.3	103.5	285.8	99.3	55.3	119.6
06/13/04	242.1	72.8	229.0	66.0	232.6	92.1	268.1	100.3	47.7	108.7
06/14/04	234.2	71.5	238.3	67.1	244.2	96.3	273.8	100.6	50.1	111.7
06/15/04	241.2	74.9	240.0	67.9	241.4	95.1	261.1	101.3	39.7	108.7
06/16/04	247.0	75.4	249.3	72.6	251.1	79.6	271.5	100.0	46.2	113.9
06/17/04	205.3	75.4	189.5	52.6	191.6	76.0	232.5	99.1	19.1	102.9
06/18/04	209.1	74.5	202.8	56.5	208.6	83.2	239.9	94.5	23.7	110.4
06/19/04	194.0	71.7	205.2	53.2	208.4	82.5	240.7	96.8	26.0	106.5
06/20/04	184.9	66.1	168.3	48.8	169.9	67.2	195.0	96.4	0.0	87.1
06/21/04	211.3	72.2	207.8	78.2	208.5	81.8	245.5	99.2	34.4	100.4
06/22/04	204.1	67.2	197.1	58.5	193.5	72.8	222.2	68.7	33.8	108.2
06/23/04	189.9	31.9	204.0	62.0	211.6	72.9	221.6	50.7	44.6	115.0
06/24/04	174.2	0.0	166.4	49.6	165.3	53.7	192.4	50.3	18.2	112.5

### HATCHERY RELEASE LAST TWO WEEKS

Hatchery Release Summary

From:	6/11/2004	to	6/24/2004						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2004	330,000	06-01-04	06-30-04	Cherry Lane Hatchery	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>330,000</b>				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2004	2,000,000	06-17-04	06-17-04	Little White Salmon Hatchery	Little White Salmon R
<b>U.S. Fish and Wildlife Service Total</b>					<b>2,000,000</b>				
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2004	4,220,000	06-14-04	07-02-04	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2004	201,534	06-21-04	06-21-04	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2004	6,700,000	06-14-04	06-23-04	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2004	3,450,000	06-16-04	06-18-04	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2004	210,770	06-14-04	06-15-04	Wells Hatchery	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>14,782,304</b>				
<b>Grand Total</b>					<b>17,112,304</b>				

### HATCHERY RELEASE NEXT TWO WEEKS

Hatchery Release Summary

From:	6/25/2004	to	7/8/2004						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2004	330,000	06-01-04	06-30-04	Cherry Lane Hatchery	Clearwater River M F
Nez Perce Tribe	Clearwater Hatchery	CH0	SP	2004	390,303	06-30-04	07-03-04	Meadow Creek - SELW	Selway River
<b>Nez Perce Tribe Total</b>					<b>720,303</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH0	SU	2004	298,014	06-28-04	07-08-04	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH0	SU	2004	493,178	06-28-04	07-08-04	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2004	4,220,000	06-14-04	07-02-04	Klickitat Hatchery	Klickitat River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>5,011,192</b>				
<b>Grand Total</b>					<b>5,731,495</b>				

CH = Chinook, ST = Steelhead, CO = Coho, SO = Sockeye, CT = Cutthroat Trout, CM = Chum

## Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>McNary Dam</b>											
	06/13/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/17/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/21/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	06/15/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/19/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/22/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	06/21/04	Chinook + Steelhead	46	0	0	0.00%	0.00%	0	0	0	0



## Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

### Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/11	---	---	---	0	120	123	124	24	110	110	111	24	106	107	107	24	106	107	107	23
6/12	---	---	---	0	119	121	123	21	109	110	110	24	106	107	108	24	107	107	107	23
6/13	---	---	---	0	119	120	122	24	109	110	111	24	106	107	108	24	107	107	107	23
6/14	---	---	---	0	119	121	123	24	110	110	111	24	106	107	108	24	106	107	107	23
6/15	---	---	---	0	118	119	120	24	110	110	110	24	106	107	107	24	106	107	107	23
6/16	---	---	---	0	118	121	125	24	109	110	110	24	106	107	108	24	107	107	108	23
6/17	---	---	---	0	118	120	121	24	109	110	110	24	107	107	108	24	107	108	109	23
6/18	---	---	---	0	117	119	121	24	109	109	110	24	107	108	108	24	108	108	109	23
6/19	---	---	---	0	119	122	124	24	108	108	109	24	107	107	109	24	108	108	108	23
6/20	---	---	---	0	117	119	121	24	107	108	108	24	106	107	108	24	108	108	109	23
6/21	---	---	---	0	118	120	121	24	108	108	108	24	107	108	109	24	108	109	110	23
6/22	---	---	---	0	118	119	120	24	108	109	110	24	108	108	110	24	109	109	109	24
6/23	---	---	---	0	117	119	122	24	108	108	109	24	108	109	110	24	109	109	109	23
6/24	---	---	---	0	118	119	120	24	109	109	109	24	107	108	109	24	109	109	110	23

### Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/11	107	107	108	23	107	107	107	24	108	109	109	24	108	108	108	24	109	109	109	24
6/12	107	108	108	23	106	107	107	24	108	108	109	24	108	109	109	24	109	110	110	24
6/13	107	108	108	23	106	106	107	24	108	108	108	24	108	108	109	24	109	109	110	24
6/14	107	107	108	23	106	106	106	24	107	107	108	24	106	107	108	24	108	108	108	24
6/15	107	107	108	23	106	106	106	24	107	108	108	24	106	106	107	24	107	107	108	24
6/16	107	108	109	23	107	107	108	24	108	109	110	24	107	108	109	24	108	109	110	24
6/17	107	108	108	23	107	108	108	24	109	109	110	24	108	109	110	24	110	110	111	24
6/18	108	108	109	23	108	108	108	22	109	110	110	22	109	110	110	24	110	111	111	24
6/19	108	109	110	23	108	108	109	24	110	111	111	24	109	110	110	24	110	110	111	24
6/20	108	109	110	23	109	109	109	24	110	110	111	24	110	111	112	24	111	112	112	24
6/21	110	111	119	23	109	109	110	24	110	111	111	24	111	112	113	24	112	113	113	24
6/22	109	110	111	24	109	110	110	24	111	111	112	24	111	112	112	24	112	113	113	24
6/23	109	110	111	23	110	110	111	24	111	111	112	24	111	112	112	24	112	113	113	24
6/24	109	109	111	23	109	110	110	24	110	111	111	24	112	112	112	24	112	113	113	24

### Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/11	108	109	109	24	114	114	116	24	108	108	108	23	112	112	113	23	109	110	111	23
6/12	109	109	110	24	114	115	116	24	109	109	110	23	113	113	115	23	110	111	112	23
6/13	109	109	110	24	114	114	115	24	110	110	110	23	114	114	116	23	112	112	113	23
6/14	108	108	109	24	113	114	114	24	108	108	109	23	112	112	113	23	110	110	111	22
6/15	107	108	109	24	113	114	115	24	---	---	---	0	---	---	---	0	---	---	---	0
6/16	108	109	110	24	114	115	116	24	111	113	113	23	114	114	116	23	112	113	114	23
6/17	110	110	110	24	115	116	117	24	112	113	115	23	115	115	116	23	113	114	115	23
6/18	110	110	111	24	115	116	117	24	112	112	113	23	115	115	116	23	113	114	115	23
6/19	110	110	110	24	115	115	116	24	112	113	115	23	115	116	117	23	113	114	115	23
6/20	110	111	111	24	115	115	116	24	113	114	115	23	116	117	118	23	115	116	117	23
6/21	111	112	113	24	116	117	117	24	114	115	116	20	116	117	119	23	116	116	117	23
6/22	112	112	113	24	116	117	117	24	116	117	119	23	114	115	115	23	115	115	117	23
6/23	112	112	112	24	116	117	117	24	117	118	120	23	114	115	115	23	114	114	116	23
6/24	112	112	112	24	117	117	117	24	---	---	---	0	---	---	---	0	---	---	---	0

## Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

**Total Dissolved Gas Saturation Data at Lower Columbia and Snake River Sites**

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwrtr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/11	117	117	118	23	110	111	112	24	109	109	109	24	103	104	104	24	104	104	105	24
6/12	117	118	118	23	111	112	113	24	106	109	109	24	103	103	104	24	104	105	105	24
6/13	118	118	118	23	110	111	111	24	101	102	102	24	102	102	102	24	104	104	105	24
6/14	118	118	119	22	110	112	113	24	101	102	105	24	101	102	103	24	103	104	105	24
6/15	---	---	---	0	112	113	113	24	106	106	107	24	102	103	104	24	103	104	104	24
6/16	118	118	119	23	113	114	115	24	103	106	108	24	102	103	104	24	103	104	105	24
6/17	119	119	119	23	113	114	114	24	106	107	109	24	102	103	104	24	103	104	105	24
6/18	119	120	120	23	113	113	114	21	104	105	106	24	101	102	103	24	103	103	104	24
6/19	119	119	120	23	113	114	114	24	105	105	106	24	102	103	104	24	103	104	105	24
6/20	119	120	121	23	114	114	115	21	105	105	106	24	102	103	104	24	103	104	105	24
6/21	120	121	122	23	114	115	116	24	103	104	105	24	102	103	104	24	103	105	106	24
6/22	119	120	121	23	115	116	117	24	103	104	104	24	102	103	104	24	103	104	105	24
6/23	118	119	120	23	115	115	115	24	103	104	104	24	102	103	104	24	103	104	105	24
6/24	---	---	---	0	113	114	115	24	103	104	106	24	102	103	104	24	103	104	105	24

**Total Dissolved Gas Saturation Data at Snake River Sites**

Date	<u>Clrwrtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/11	102	103	103	24	102	103	103	24	102	102	103	24	103	103	104	24	103	103	104	24
6/12	103	104	105	24	102	103	103	24	102	102	102	24	102	102	102	24	102	102	102	24
6/13	102	102	103	24	103	103	104	24	103	103	103	24	102	102	102	24	102	102	105	24
6/14	101	102	103	24	103	103	104	24	103	103	103	24	101	102	102	24	101	101	102	24
6/15	102	103	104	24	103	103	103	24	102	103	104	24	101	101	102	24	101	101	101	24
6/16	102	103	104	24	104	105	107	24	102	103	103	24	104	105	108	24	102	102	103	24
6/17	102	104	105	24	105	106	107	24	103	103	104	24	106	107	108	24	103	104	104	24
6/18	101	102	103	24	105	106	108	24	103	104	104	24	105	106	107	24	103	104	104	24
6/19	101	103	104	24	105	106	107	24	103	103	104	24	105	107	111	24	103	103	103	24
6/20	102	104	105	24	107	109	111	24	103	104	104	24	107	109	110	24	104	104	104	24
6/21	102	104	105	24	109	110	111	24	104	104	105	24	111	114	119	24	105	105	106	24
6/22	102	104	105	24	107	108	111	24	104	104	105	24	113	116	119	24	106	106	107	24
6/23	102	104	105	24	107	108	109	24	104	104	104	24	114	116	118	24	105	106	106	24
6/24	102	104	105	24	106	108	110	24	103	104	104	23	111	113	115	24	106	106	107	24

**Total Dissolved Gas Saturation Data at Snake and Lower Columbia River Sites**

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/11	105	105	105	24	104	105	105	24	103	103	103	24	118	119	119	24	106	107	107	24
6/12	103	103	104	24	103	103	104	24	104	104	105	24	114	115	118	24	107	108	108	24
6/13	103	103	103	24	103	103	103	24	103	104	104	24	113	113	113	24	109	110	110	24
6/14	102	102	102	24	102	102	104	24	102	102	103	24	116	118	118	24	109	109	110	24
6/15	101	102	102	24	101	102	102	24	102	102	103	24	117	118	119	24	108	109	111	24
6/16	102	103	105	24	102	102	103	24	102	102	103	24	114	115	118	24	110	112	115	24
6/17	104	105	106	24	103	103	104	24	104	104	106	24	112	113	113	24	114	116	118	24
6/18	103	104	105	24	103	103	104	24	104	105	106	24	115	115	116	24	114	115	116	24
6/19	105	106	110	24	103	104	104	24	103	103	104	24	115	116	116	24	113	114	116	24
6/20	106	106	108	24	104	105	105	24	104	105	106	24	113	114	115	24	114	117	120	24
6/21	107	109	112	24	105	106	107	24	105	106	108	24	112	113	113	24	115	117	120	24
6/22	108	109	111	24	106	107	107	24	106	107	109	24	115	118	119	24	115	116	118	24
6/23	111	113	115	24	107	108	113	24	106	107	108	24	116	117	118	24	116	118	120	24
6/24	109	111	112	24	107	108	110	24	106	107	107	24	114	114	115	24	118	121	123	24

## Total Dissolved Gas Saturation (%) - Average of 12 Highest Hours, 24 h Average and 24 h High

**Total Dissolved Gas Saturation Data at Lower Columbia River Sites**

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	AVG	High	hr				
6/11	107	107	107	24	115	119	120	24	105	105	105	23	111	117	119	24	108	110	112	23
6/12	108	108	109	24	115	119	120	24	104	105	105	23	110	114	118	21	108	112	114	23
6/13	109	109	110	24	114	119	120	24	104	104	105	19	111	117	118	24	109	113	114	23
6/14	108	108	109	24	114	119	119	24	103	103	104	7	110	117	118	24	108	112	113	23
6/15	109	111	112	24	114	119	120	24	---	---	---	0	111	117	119	24	109	113	116	23
6/16	112	114	116	24	116	120	121	24	105	106	108	23	110	114	119	24	110	114	116	23
6/17	115	116	117	24	116	118	119	24	107	108	109	23	109	114	117	24	109	112	115	23
6/18	114	115	115	24	116	118	119	24	108	109	110	23	111	114	118	21	111	114	115	23
6/19	114	115	117	24	115	118	119	24	110	111	111	23	113	117	119	24	111	115	117	23
6/20	114	115	117	24	115	117	119	24	111	111	112	23	113	117	118	24	112	113	116	23
6/21	116	116	118	24	116	119	121	24	113	113	114	22	117	118	120	24	114	117	118	23
6/22	117	118	119	24	117	119	120	24	114	114	115	23	116	117	118	23	113	115	118	24
6/23	115	115	116	24	115	117	119	24	113	114	114	23	116	117	118	24	111	111	112	23
6/24	116	116	118	24	114	115	115	24	112	113	113	23	115	115	116	24	109	109	110	23

**Total Dissolved Gas Saturation Data at Lower Columbia River Sites**

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas/Washugal</u>						
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>				
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	hr			
6/11	113	115	115	24	107	108	108	23	111	113	118	23	108	110	113	24
6/12	114	116	117	24	109	109	110	23	112	114	118	23	109	111	114	24
6/13	114	115	116	24	110	110	111	23	112	115	119	23	109	111	113	24
6/14	114	115	116	24	109	110	111	23	112	114	119	23	110	112	115	24
6/15	114	116	118	24	110	110	111	21	113	115	120	23	111	113	117	24
6/16	113	117	119	24	112	112	113	23	114	115	119	23	111	114	115	24
6/17	115	116	117	24	113	114	115	23	115	116	119	23	112	114	115	24
6/18	115	117	118	24	113	115	115	23	115	116	119	23	112	113	115	24
6/19	115	116	118	24	114	114	115	23	115	116	119	23	113	115	117	24
6/20	116	117	118	24	114	115	115	23	115	116	119	23	114	116	118	24
6/21	117	118	118	24	115	116	117	23	116	117	120	23	115	117	120	24
6/22	117	118	119	24	113	114	116	24	114	116	119	24	113	114	116	24
6/23	115	115	115	24	109	110	111	23	109	110	111	23	109	110	111	24
6/24	113	114	115	24	106	107	108	23	108	109	109	23	107	108	108	24

## Two-Week Summary of Passage Indices

Date	COMBINED YEARLING CHINOOK											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/11/2004 *	---	---	33	---	---	2,500	750	400	22	---	4,300	4,700
06/12/2004 *	0	---	2	---	---	2,300	700	620	17	13,999	4,978	3,910
06/13/2004 *	0	---	24	---	---	1,300	700	340	22	---	3,914	5,140
06/14/2004 *	0	---	33	---	---	400	250	220	5	3,097	6,600	4,850
06/15/2004 *	0	---	29	---	---	400	50	140	5	---	5,735	4,400
06/16/2004	0	---	21	---	---	800	50	15	1	4,260	6,628	4,310
06/17/2004 *	0	---	39	---	---	700	175	30	4	---	2,176	2,790
06/18/2004	0	---	26	---	---	600	120	80	15	2,297	559	1,130
06/19/2004 *	0	---	17	---	---	200	105	80	8	---	497	960
06/20/2004 *	3	---	41	---	---	450	215	90	5	154	447	680
06/21/2004 *	0	---	21	---	---	700	170	20	4	---	440	310
06/22/2004 *	0	---	28	---	---	600	50	40	0	160	265	270
06/23/2004 *	---	---	---	---	---	800	75	40	0	---	245	270
06/24/2004 *	---	---	---	---	---	600	75	30	4	300	282	290
<hr/>												
<b>Total:</b>	<b>3</b>	<b>0</b>	<b>314</b>	<b>0</b>	<b>0</b>	<b>12,350</b>	<b>3,485</b>	<b>2,145</b>	<b>112</b>	<b>24,267</b>	<b>37,066</b>	<b>34,070</b>
<b># Days:</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>882</b>	<b>249</b>	<b>153</b>	<b>8</b>	<b>3,467</b>	<b>2,648</b>	<b>2,430</b>
<b>YTD</b>	<b>831</b>	<b>29,063</b>	<b>73,379</b>	<b>9,904</b>	<b>4,053</b>	<b>5,165,999</b>	<b>2,653,661</b>	<b>913,088</b>	<b>12,533</b>	<b>1,077,762</b>	<b>1,004,889</b>	<b>1,465,050</b>

Date	COMBINED SUBYEARLING CHINOOK											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/11/2004 *	---	---	0	---	---	45,350	28,700	5,660	569	---	10,845	23,210
06/12/2004 *	32	---	0	---	---	32,000	22,500	5,260	568	37,752	18,547	22,280
06/13/2004 *	71	---	1	---	---	22,700	17,500	3,760	184	---	18,661	25,250
06/14/2004 *	89	---	0	---	---	24,600	14,850	3,840	156	14,856	10,299	21,580
06/15/2004 *	63	---	1	---	---	45,900	11,250	3,860	110	---	21,995	25,310
06/16/2004	54	---	0	---	---	46,600	10,950	2,429	153	48,571	31,393	24,210
06/17/2004 *	70	---	0	---	---	13,400	6,675	1,650	163	---	10,587	25,420
06/18/2004	95	---	0	---	---	25,200	5,735	1,370	176	50,544	4,915	31,540
06/19/2004 *	79	---	0	---	---	19,500	7,270	1,080	256	---	11,289	35,150
06/20/2004 *	26	---	0	---	---	31,450	14,120	1,410	440	459,709	30,110	27,770
06/21/2004 *	44	---	0	---	---	29,250	15,600	920	292	---	17,901	33,070
06/22/2004 *	17	---	0	---	---	26,400	9,550	2,180	218	607,684	35,630	50,950
06/23/2004 *	---	---	---	---	---	29,050	7,900	1,420	218	---	110,922	48,910
06/24/2004 *	---	---	---	---	---	20,100	4,628	1,014	205	244,200	127,075	75,140
<hr/>												
<b>Total:</b>	<b>640</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>411,500</b>	<b>177,228</b>	<b>35,853</b>	<b>3,708</b>	<b>1,463,316</b>	<b>460,169</b>	<b>469,850</b>
<b># Days:</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29,393</b>	<b>12,659</b>	<b>2,561</b>	<b>265</b>	<b>209,045</b>	<b>32,869</b>	<b>33,560</b>
<b>YTD</b>	<b>1,416</b>	<b>0</b>	<b>29</b>	<b>80</b>	<b>935</b>	<b>612,132</b>	<b>283,263</b>	<b>96,735</b>	<b>10,211</b>	<b>1,824,615</b>	<b>579,250</b>	<b>2,753,330</b>

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>  
 this means that one or more of the sites on this date had an incomplete or biased sample.

For clip information see: [Daily Catch Report](#)

For sockeye and yearling chinook (Snake only) race information see: [Current Passage Index Query](#)

If the text appears garbled, please hit the refresh button on your browser

NOTE for 2002 Lower Monumental Data: Due to the non-standard operation of Lower Monumental this year, the passage index reliability is in question and is being looked into.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

## Two-Week Summary of Passage Indices

COMBINED COHO													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
06/11/2004	*	---	---	0	---	---	850	2,400	120	209	---	5,973	6,044
06/12/2004	*	0	---	0	---	---	1,300	2,300	0	139	5,577	4,955	2,382
06/13/2004	*	0	---	0	---	---	100	850	0	211	---	3,844	3,126
06/14/2004	*	0	---	0	---	---	200	200	60	82	1,593	2,321	2,340
06/15/2004	*	0	---	0	---	---	400	1,550	0	86	---	1,991	1,608
06/16/2004		0	---	0	---	---	600	850	90	64	909	1,830	1,065
06/17/2004	*	0	---	0	---	---	800	375	70	117	---	1,176	627
06/18/2004		0	---	0	---	---	300	580	160	106	488	1,064	1,891
06/19/2004	*	0	---	0	---	---	200	870	70	115	---	556	1,337
06/20/2004	*	0	---	0	---	---	150	530	70	67	154	204	1,005
06/21/2004	*	0	---	0	---	---	300	1,040	40	35	---	110	592
06/22/2004	*	0	---	0	---	---	200	800	20	58	160	215	364
06/23/2004	*	---	---	---	---	---	150	650	0	30	---	147	297
06/24/2004	*	---	---	---	---	---	450	425	4	14	700	16	540
-----													
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,000</b>	<b>13,420</b>	<b>704</b>	<b>1,333</b>	<b>9,581</b>	<b>24,402</b>	<b>23,218</b>	
<b># Days:</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>429</b>	<b>959</b>	<b>50</b>	<b>95</b>	<b>1,369</b>	<b>1,743</b>	<b>1,658</b>	
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>257,333</b>	<b>119,411</b>	<b>15,714</b>	<b>28,275</b>	<b>85,942</b>	<b>174,992</b>	<b>936,289</b>	

COMBINED STEELHEAD													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
06/11/2004	*	---	---	33	---	---	5,800	4,701	760	49	---	1,241	1,604
06/12/2004	*	0	---	1	---	---	4,600	3,001	780	16	1,870	645	170
06/13/2004	*	0	---	67	---	---	3,300	2,700	460	8	---	839	184
06/14/2004	*	0	---	103	---	---	2,400	2,402	320	7	291	508	234
06/15/2004	*	0	---	50	---	---	2,800	1,154	340	10	---	284	179
06/16/2004		0	---	41	---	---	1,600	1,502	435	6	436	578	336
06/17/2004	*	0	---	16	---	---	1,800	775	220	21	---	256	228
06/18/2004		0	---	15	---	---	4,200	1,237	1,240	20	2	235	324
06/19/2004	*	0	---	11	---	---	1,900	681	330	12	---	215	345
06/20/2004	*	0	---	21	---	---	900	361	130	10	0	72	97
06/21/2004	*	0	---	11	---	---	1,400	1,302	80	7	---	161	172
06/22/2004	*	0	---	6	---	---	1,150	1,476	320	8	0	92	34
06/23/2004	*	---	---	---	---	---	900	2,303	100	5	---	132	157
06/24/2004	*	---	---	---	---	---	1,150	1,977	71	4	0	16	63
-----													
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>375</b>	<b>0</b>	<b>0</b>	<b>33,900</b>	<b>25,572</b>	<b>5,586</b>	<b>183</b>	<b>2,599</b>	<b>5,274</b>	<b>4,127</b>	
<b># Days:</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>2,421</b>	<b>1,827</b>	<b>399</b>	<b>13</b>	<b>371</b>	<b>377</b>	<b>295</b>	
<b>YTD</b>	<b>195</b>	<b>2,106</b>	<b>36,084</b>	<b>1,857</b>	<b>8,418</b>	<b>5,807,108</b>	<b>1,904,208</b>	<b>341,203</b>	<b>10,639</b>	<b>123,803</b>	<b>256,905</b>	<b>155,320</b>	

\* See sampling comments

<http://www.fpc.org/currentDaily/smpcomments.htm>

## Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/11/2004 *	---	---	0	---	---	100	100	0	6	---	9,364	9,092
06/12/2004 *	1	---	0	---	---	300	50	0	4	12,712	9,216	5,897
06/13/2004 *	0	---	0	---	---	200	0	20	5	---	5,801	5,884
06/14/2004 *	0	---	0	---	---	0	0	0	0	4,203	3,989	4,973
06/15/2004 *	0	---	0	---	---	0	0	0	4	---	2,464	4,705
06/16/2004	1	---	0	---	---	0	50	0	9	5,605	1,840	2,859
06/17/2004 *	0	---	0	---	---	0	50	0	4	---	720	1,083
06/18/2004	0	---	0	---	---	0	20	10	7	1,627	895	1,458
06/19/2004 *	0	---	0	---	---	100	0	0	12	---	1,023	1,243
06/20/2004 *	0	---	0	---	---	0	0	0	3	769	986	800
06/21/2004 *	0	---	0	---	---	50	0	0	5	---	221	646
06/22/2004 *	0	---	0	---	---	0	51	0	3	962	514	398
06/23/2004 *	---	---	---	---	---	0	0	0	4	---	215	523
06/24/2004 *	---	---	---	---	---	50	0	0	0	500	111	540
<hr/>												
<b>Total:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>800</b>	<b>321</b>	<b>30</b>	<b>66</b>	<b>26,378</b>	<b>37,359</b>	<b>40,101</b>
<b># Days:</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>	<b>23</b>	<b>2</b>	<b>5</b>	<b>3,768</b>	<b>2,669</b>	<b>2,864</b>
<b>YTD</b>	<b>4</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>7,394</b>	<b>4,638</b>	<b>949</b>	<b>6,908</b>	<b>298,247</b>	<b>235,324</b>	<b>187,725</b>

\* See sampling comments

<http://www.fpc.org/currentDaily/smpcomments.htm>

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's), subyearling chinook (chinook 0's), steelhead, coho, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, which are collection counts divided by the proportion of water passing through the sampled powerhouse. Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations. The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

### Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

ENT (Collection) = Entiat River Trap : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 Flow / (Powerhouse 1 & 2 Flow + Spill)}

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe. ENT data collected for the FPC by USFWS.

## Two Week Transportation Summary

Source: Fish Passage Center

Updated:

6/25/04 8:32 AM

		06/12/04	TO	06/25/04			
Site	Data	Species					Grand Total
		CHO	CH1	CO	SO	ST	
<b>LGR</b>	Sum of NumberCollected	411,500	12,350	6,000	800	33,900	464,550
	Sum of NumberBarged	397,710	13,472	6,233	892	37,458	455,765
	Sum of NumberBypassed	25,324	3	0	0	327	25,654
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1,859	22	17	5	34	1,937
<b>LGS</b>	Sum of NumberCollected	177,228	3,485	13,420	321	25,572	220,026
	Sum of NumberBarged	200,299	3,771	15,093	320	29,807	249,290
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	93	27	4	1	148	273
<b>LMN</b>	Sum of NumberCollected	35,853	2,145	704	30	5,586	44,318
	Sum of NumberBarged	39,489	2,295	840	30	6,419	49,073
	Sum of NumberBypassed	112	0	0	0	0	112
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	31	19	0	0	67	117
<b>MCN</b>	Sum of NumberCollected	1,021,855	16,023	6,527	17,571	1,709	1,063,685
	Sum of NumberBarged	202,801	247	578	409	0	204,035
	Sum of NumberBypassed	818,250	15,749	5,942	17,127	1,707	858,775
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	804	27	7	35	2	875
Total Sum of NumberCollected		1,646,436	34,003	26,651	18,722	66,767	1,792,579
Total Sum of NumberBarged		840,299	19,785	22,744	1,651	73,684	958,163
Total Sum of NumberBypassed		843,686	15,752	5,942	17,127	2,034	884,541
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		2,787	95	28	41	251	3,202

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

6/25/04 8:32 AM

TO: 06/25/04

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	581,916	4,836,476	250,714	7,083	5,655,942	11,332,131
	Sum of NumberBarged	527,519	4,617,418	236,405	6,524	5,346,626	10,734,492
	Sum of NumberBypassed	34,988	151,332	13,352	285	289,607	489,564
	Sum of NumberTrucked	129	43,991	220	181	15,496	60,017
	Sum of TotalProjectMortalities	2,474	23,137	291	43	3,065	29,010
<b>LGS</b>	Sum of NumberCollected	282,996	2,568,135	116,154	4,586	1,858,158	4,830,029
	Sum of NumberBarged	278,365	2,564,274	115,618	4,582	1,852,985	4,815,824
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of NumberTrucked	0	2,096	0	2	1,333	3,431
	Sum of TotalProjectMortalities	179	1,482	16	2	1,867	3,546
<b>LMN</b>	Sum of NumberCollected	88,772	842,621	14,679	895	286,047	1,233,014
	Sum of NumberBarged	87,637	833,461	14,671	895	282,598	1,219,262
	Sum of NumberBypassed	112	6,321	0	0	2,125	8,558
	Sum of NumberTrucked	10	1,352	0	0	604	1,966
	Sum of TotalProjectMortalities	84	1,460	4	0	653	2,201
<b>MCN</b>	Sum of NumberCollected	1,247,889	659,562	52,359	180,236	75,265	2,215,311
	Sum of NumberBarged	202,801	247	578	409	0	204,035
	Sum of NumberBypassed	1,043,981	646,944	51,742	179,173	74,612	1,996,452
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1,108	2,759	39	654	257	4,817
Total Sum of NumberCollected		2,201,573	8,906,794	433,906	192,800	7,875,412	19,610,485
Total Sum of NumberBarged		1,096,322	8,015,400	367,272	12,410	7,482,209	16,973,613
Total Sum of NumberBypassed		1,079,081	804,597	65,094	179,458	366,344	2,494,574
Total Sum of NumberTrucked		139	47,439	220	183	17,433	65,414
Total Sum of TotalProjectMortalities		3,845	28,838	350	699	5,842	39,574



**Cumulative Adult Passage at Mainstem Dams Through: 06/24**

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	170,188	8,885	192,010	14,258	130,296	7,371	49,725	6,078	55,269	5,573	21,563	2,431	0	0	0	0	0	0
TDA	130,226	7,717	131,207	11,522	87,249	5,199	39,486	3,755	44,299	3,749	16,345	1,597	0	0	0	0	0	0
JDA	110,304	6,353	101,436	10,206	72,403	4,083	32,691	4,291	37,684	2,991	13,492	1,113	0	0	0	0	0	0
MCN	107,497	7,675	95,550	11,123	66,222	4,195	24,558	2,667	33,332	3,311	11,265	1,067	0	0	0	0	0	0
IHR	77,106	4,658	78,170	8,020	44,313	2,700	7,183	1,243	13,311	1,908	5,162	586	0	0	0	0	0	0
LMN	71,673	3,786	70,603	7,344	42,703	2,607	4,911	714	10,889	1,295	4,367	427	0	0	0	0	0	0
LGS	62,458	3,404	69,017	7,079	41,666	2,708	3,855	706	7,606	1,052	3,357	410	0	0	0	0	0	0
LWG	70,778	4,482	70,609	8,295	40,647	2,828	3,033	592	6,966	1,008	2,788	327	0	0	0	0	0	0
PRD	13,521	1,020	18,136	656	14,413	382	10,928	344	11,097	216	2,700	89	0	0	0	0	0	0
RIS	10,917	958	16,881	753	11,256	609	2,535	153	3,628	95	547	37	0	0	0	0	0	0
RRH	4,365	734	4,216	450	4,023	171	836	26	976	18	104	3	0	0	0	0	0	0
WEL	3,291	114	2,596	162	2,154	151	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2004		2003		10-Yr Avg.		2004		2003	10-Yr Avg.	10-Yr Avg.		Wild 2004
	Adult	Jack	Adult	Jack	Adult	Jack	2004	2003	Avg.	2004	2003	Avg.	2004
BON	0	0	0	0	0	0	78,195	12,665	18,646	16,511	10,046	10,454	5,511
TDA	0	0	0	0	0	0	61,775	8,526	13,147	5,867	3,198	3,354	2,301
JDA	0	0	0	0	0	0	51,944	7,178	10,788	5,782	3,752	5,207	2,353
MCN	0	0	0	0	0	0	33,158	4,693	5,662	3,620	2,690	2,780	1,298
IHR	0	0	0	0	0	0	25	8	0	2,379	2,165	2,029	904
LMN	0	0	0	0	0	0	8	5	0	2,042	2,372	1,996	915
LGS	0	0	0	0	0	0	3	8	0	2,103	2,424	1,997	1,084
LWG	0	0	0	0	0	0	0	2	0	7,828	16,015	6,008	2,670
PRD	0	0	0	0	0	0	14,147	2,000	1,872	340	48	28	n/a
RIS	0	0	0	0	0	0	1,670	397	239	310	51	32	275
RRH	0	0	0	0	0	0	834	185	118	419	59	53	397
WEL	0	0	0	0	0	0	457	52	44	113	21	8	86

RIS/RRH are through 06/22; WEL is through 06/23.

IHR, LMN are missing 06/18.

\*\*PRD is not reporting Wild Steelhead numbers.

These numbers were collected from the COE's Running Sums text files, except where otherwise noted.

Wild steelhead numbers are included in the total.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 06/25/04

BON counts from January 1, 2004 to March 14, 2004 (our traditional counts begin March 15)

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
156	1	1,489	238

