



*Fish Passage Center*

# Weekly Report #02 - 17

July 5, 2002

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**SUMMARY OF EVENTS:**

- Storage reservoirs are currently operating to both meet the BiOp flow objectives and refill.
- As of July 4th, 2002: Grand Coulee is 3.3 feet from full, Libby is 2.1 feet from full, Dworshak is 0.9 feet from full, Brownlee is 2.8 feet from full, and Hungry Horse is 1.9 feet from full.
- The BiOp spring flow period has ended at Lower Granite, McNary, and Priest Rapids. Spring flows averaged 83.4 Kcfs at Lower Granite (BiOp target = 97 Kcfs), 269.3 Kcfs at McNary (BiOp target = 246 Kcfs), and 180.6 Kcfs at Priest Rapids (BiOp target = 135 Kcfs).
- The BiOp summer flow period has begun at both Lower Granite and McNary. Summer objectives are 51 Kcfs at Lower Granite and 200 Kcfs at McNary. To date, summer flows have averaged 77.3 Kcfs at Lower Granite and 318.9 Kcfs at McNary.
- Combined storage in the Upper Snake River System is at 56 % of capacity.

**Water:** Precipitation in June of 2002 was below normal throughout much of the Columbia Basin; ranging between 41% and 122% of average. Water Year 2002 appears to be approximately average in terms of cumulative precipitation.

The NWRFC released the July Early water supply forecast on June 27, 2002. Table 2 displays the 2002 July Early water supply forecast along with the June Final forecast for multiple reservoirs.

**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	June 2002		Cumulative 10/1/01 – 6/30/02	
	Observed (inches)	% Avg	Observed (inches)	% Avg
Columbia Above Coulee	2.24	94	20.84	102
Snake R. Above Ice Harbor	1.08	74	13.36	89
Columbia Above The Dalles	1.54	86	19.19	97
Kootenai	2.01	82	19.49	93
Clark Fork	2.35	122	15.06	106
Flathead	3.20	121	20.23	107
Pend Oreille/Spokane	1.98	90	31.05	114
Central Washington	0.69	108	7.29	92
Snake R. Plain	0.40	41	6.86	71
Clearwater	2.87	115	28.63	107
SW Washington Cascades/Cowlitz	2.58	87	71.23	109
Willamette Valley	1.62	72	56.0	100

**Table 2. July Early and June Final water supply forecasts for various reservoirs within the Columbia and Snake River Basins during WY 2002.**

Site	June Final		July Early	
	Runoff Volume (Kaf)	% of Avg	Runoff Volume (Kaf)	% of Avg
Mica (April-Sept)	12100	97	12200	98
Hungry Horse (April-Sept)	2180	103	2280	107
Libby (April-Sept)	7710	116	7830	118
Grand Coulee (Jan-July)	65300	104	66900	106
The Dalles (Jan-July)	100000	93	103000	96
Brownlee (April-July)	3320	53	3150	50
Dworshak (April-July)	3050	115	3450	130
Lower Granite (Jan-July)	23100	77	24000	80
Heise (ID) (April-July)	2810	79	2370	67
Weiser (ID) (April-July)	2970	54	2770	48

Of the ten locations listed in Table 2, seven sites reported increasing forecasts between the June Final and July Early water supply forecasts, three sites reported decreasing forecasts.

Flows in the Columbia Basin continue to be relatively high. Storage reservoirs along the Columbia and Snake Rivers have been operating to meet BiOp flow requirements and to refill.

The Grand Coulee Reservoir has refilled slightly over the past week; beginning the week at 1285.3 feet (6-28-02) and ending the week at 1286.7 feet AMSL (7-4-02). Presently, Grand Coulee is 3.3 feet from its full pool elevation of 1290.0 feet AMSL. Total outflows at Grand Coulee over the last week (6-28-02 to 7-4-02) have averaged approximately 209 Kcfs.

The Libby reservoir has gained 2.1 feet over the last week; outflows have varied between 32.4 and 40.0 Kcfs. Libby is currently (midnight, 7-4-02) at an elevation of 2456.9 feet AMSL, 2.1 feet from the full pool elevation of 2459.0 feet AMSL.

From 6-28-02 to 7-4-02, the Dworshak reservoir remained at a stable elevation. Outflows at Dworshak have varied between 9.1 and 19.5 Kcfs. Currently (midnight, 7-4-02) Dworshak is at an elevation of 1599.1 feet AMSL; 0.9 feet below the full pool elevation of 1600 feet AMSL. Operations at Dworshak over the next few days include maintaining full pool and passing inflows.

Over the past week, the Brownlee reservoir has remained approximately constant. Currently (midnight, 7-4-02), Brownlee was at an elevation of 2074.2 feet AMSL; 2.8 feet below its full pool elevation of 2077.0 feet AMSL. Outflows at Brownlee have averaged approximately 10.4 Kcfs between 6-28-02 and 7-4-02.

From 6-28-02 to 7-4-02, the Hungry Horse Reservoir refilled 1.9 feet. Over the last week, outflows have averaged approximately 7.1 Kcfs. Currently (midnight, 7-4-02), Hungry Horse is at an elevation of 3558.3 feet AMSL; 1.7 feet below its full pool elevation of 3560.0 feet AMSL.

The BiOp spring flow objective period has concluded at all projects. The spring flow objectives were 97 kcfs at Lower Granite between 4/3/02 and 6/20/02, 246 kcfs at McNary between 4/10/02 and 6/30/02, and 135 kcfs at Priest Rapids from 4/10/02 and 6/30/02. From April 3rd to June 20th, 2002, outflows at Lower Granite averaged 83.4 Kcfs; from April 10th to June 20th, 2002, outflows at McNary were averaged 269.3 Kcfs; from April 10th to June 20th, 2002, outflows at Priest Rapids were averaged 180.6 Kcfs. Therefore, spring flow objectives were met on a seasonal basis at both McNary and Priest Rapids, but not met at Lower Granite..

The BiOp summer flow objective season began at Lower Granite on 6-21-02 and at McNary on 7-1-02. The summer objectives are 51 Kcfs at Lower Granite and 200 Kcfs at McNary. To date, summer flows have averaged 77.3 Kcfs at Lower Granite and 318.9 Kcfs at McNary. Summer BiOp flow objectives are being met at both Lower Granite and McNary

Currently, as of July 4th, 2002, the entire Upper Snake River System is at 56% of capacity. Individually, American Falls is at 43% of capacity, Palisades is at 52% of capacity, Jackson Lake is

at 80% of capacity, Island Park is at 80% of capacity, Lake Walcott is at 101% of capacity, Milner is at 96% of capacity, and Grassy Lake is at 93% of capacity.

**Spill:** Dworshak spill ended on July 2, and the project is now passing inflow, which is below turbine capacity. In general, flows and spill have been lower in the Snake River this past week. Spill at Lower Granite averaged 35% of daily flows this past week. At Little Goose Dam spill began again on June 27th after having none from the 22nd through the 26th. Spill averaged 32% of daily flows at Little Goose, while at Lower Monumental spill did not occur because flows did not exceed hydraulic capacity, and at Ice Harbor spill averaged 80% of daily flows.

In the lower Columbia River, spill averaged 47% of average daily flow at McNary Dam, 39% of average daily flow at John Day, 41% at The Dalles and 45% at Bonneville Dam. Grand Coulee is spilling to the TDGS cap with average daily spill of 24.5 kcfs.

Total dissolved gas levels at all federal and Mid-Columbia hydro projects remain high with many projects in excess of water quality waiver standards. Fish have been observed with minor signs of GBT this past week at a few of the monitoring locations. At Lower Monumental 4 of 17 steelhead examined were observed with signs of GBT on July 1. Sampling for GBT ended in the Snake River this week, with Wednesday's sampling at Little Goose. Sampling ends when numbers of steelhead and yearling chinook decrease to the point where fewer than 50 can be captured for examination. Subyearling chinook are endangered so they are not captured for GBT exams. Typically spill decreases and also, TDGS levels fall below the waiver limits of 115% forebay/120% tailwater by July 1. Sampling for GBT will continue at McNary, Bonneville and Rock Island dams through August 31.

**Smolt Monitoring:** The numbers of subyearling chinook migrating past Snake River projects increased in the last week. While Lower Columbia projects saw the largest numbers moving past John Day and Bonneville dams as large hatchery releases, made in late June, from Ringold and Priest Rapids made their way past McNary Dam and through the lower river.

At Lower Granite Dam the number of subyearling chinook increased from last week with the average daily index rising to 20,200 this week compared to 10,700 last week. At Rock Island Dam the subyearling chinook index increased compared to last week, with 400 average daily index this week compared to 280 daily last week. In the lower Columbia, McNary continues to have large numbers of subyearling chinook pass with an average daily index of 174,000 but this is a decrease from 387,000 per day last week. At John Day Dam passage index for subyearling chinook was up to 163,000 this week versus 105,000 last week. And at Bonneville Dam subyearling chinook numbers continued to increase dramatically with an average daily index this week of 247,000 versus 104,000 last week.

**Adult Fish Passage:** This year's count of adult summer chinook at Bonneville Dam is about 1.9 and 5.6 times greater than the respective year 2001 and 10-year average through July 4. At Bonneville Dam, the summer chinook counts averaged 2,306 per day for the week with the cumulative count through July 4 at 99,346. At McNary Dam, the counts of adult summer chinook averaged 3,181 per day through the week with the total count exceeding 60,500 through July 4 (June 28 count missing). The Snake River count of adult summer chinook at Ice Harbor Dam totaled 23,430 through the 4th of July. Numbers are starting to taper off; however, this season's count is 1.8 and 5.2 times greater than the respective 2001 and 10-year average. In the Mid-Columbia, the count of adult summer chinook at Priest Rapids Dam was 24,960 through July 2; about 1.7 and 5.3 times greater than the respective 2001 and 10-year average.

At Bonneville Dam, sockeye salmon counts for the week ending July 4 ranged from near 1,500 to 2,900 per day with the season total at 39,326. The 2002 sockeye count is about 37% and 96% of the respective 2001 and 10-year average count. These sockeye are progressing upriver; most sockeye are destined for Lake Wenatchee and Lake Osoyoos. About 4,800 sockeye have passed Priest Rapids Dam through July 2. Small numbers of sockeye have been counted at the Snake River projects during the past two weeks with 20 sockeye counted at Lower Monumental and 19 at Little Goose Dam by July 4. These sockeye should be destined for the upper Salmon River area (Redfish L, Alturas L, or Pettit L).

Steelhead passage at Bonneville Dam averaged 1,549 per day through the past week with a total of 32,510 counted through July 4. Estimated wild steelhead in the passage total was 12,490 (based on visual missing adipose fin on the steelhead). Adult steelhead are moving upstream into the Snake River projects now as well as starting to increase at Priest Rapids and upstream Mid-Columbia projects. Steelhead counts are less than last season's record run, but remain above the 10-year average at Bonneville Dam.

**Hatchery Releases:** For the past two weeks, approximately 17.4 million juvenile chinook were directly or volitionally released from State, Federal or Tribal facilities in the Columbia River basin. For the upcoming two weeks, about 4.7 million chinook are scheduled for release from hatcheries in the Columbia River basins.

*Snake River* - All subyearling fall chinook in the Snake River basin have been released for the 2002 Migration Year.

*Mid-Columbia [above McNary Dam]* - The final releases of subyearling summer and fall chinook have been completed for the season. The final release of subyearling summer chinook was completed from Turtle Rock H. on July 2 (evening).

*Lower Columbia [Bonneville Dam to McNary Dam]*- About four million subyearling fall chinook will be released into the Klickitat River beginning June 3 and lasting through about July 26. Three separate releases are scheduled with the initial release planted on June 3, the second release on July 1-5, and the final release from July 19-26. All other subyearling fall chinook have been released earlier this spring/summer.

**Hatchery Release Totals by River Zone for 2002 Migration Season:**

	<b>Spr Chin</b>	<b>SumChin</b>	<b>Fall Chin</b>	<b>Steelhd</b>	<b>Coho</b>	<b>Sockeye</b>	<b>Total</b>
<b>Snake</b>	10,184,960	1,677,497	3,669,782	9,481,688	840,000	182,835	26,036,762
<b>MidCol</b>	3,926,275	3,527,243	11,565,100	1,311,704	2,124,000	308,042	22,762,364
<b>LowCol</b>	5,759,463		26,299,935	621,855	6,120,857		38,802,110

**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
06/21/02	183.0	9.9	200.9	9.5	229.4	76.0	234.6	80.9	236.0	36.3	258.9	120.3	256.0	143.1
06/22/02	148.8	0.1	150.9	0.0	185.3	27.9	194.8	44.1	200.6	31.4	220.6	88.5	220.8	121.7
06/23/02	123.6	0.2	116.4	0.0	147.4	13.2	157.8	1.4	171.8	24.2	209.9	73.8	213.8	115.3
06/24/02	184.1	0.2	180.7	4.3	185.6	14.0	176.7	13.3	181.1	40.4	185.3	65.8	192.2	102.3
06/25/02	188.9	0.2	192.7	8.9	216.0	37.7	214.9	49.7	215.8	45.2	211.4	79.8	198.4	110.3
06/26/02	191.3	0.2	192.2	6.2	208.8	50.6	207.3	51.0	211.6	42.3	226.4	90.2	223.7	127.7
06/27/02	206.2	14.9	211.3	19.6	232.6	94.5	235.5	88.2	239.4	43.1	256.6	119.2	252.4	147.9
06/28/02	220.7	26.9	221.5	22.8	245.2	105.7	244.9	103.1	248.9	44.6	270.6	133.9	268.6	159.8
06/29/02	181.9	13.4	188.4	9.5	217.9	90.8	219.2	84.6	227.1	37.9	245.0	123.4	246.2	154.5
06/30/02	186.7	17.5	179.8	15.4	197.0	50.8	194.3	46.2	202.1	33.5	213.3	89.6	208.6	116.4
07/01/02	221.0	29.2	221.1	39.4	241.0	118.3	242.8	93.2	241.9	43.2	265.9	138.9	258.6	156.1
07/02/02	237.9	29.7	228.8	30.8	250.7	139.5	250.9	101.4	249.6	37.5	272.7	150.9	273.1	160.0
07/03/02	221.4	29.8	225.0	25.3	249.3	121.2	248.4	96.9	249.6	45.8	272.5	149.3	265.8	152.1

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/21/02	17.5	8.0	10.5	11.4	85.9	20.4	85.0	3.2	88.3	0.0	88.0	60.2
06/22/02	17.7	8.2	11.4	11.7	79.7	4.9	79.3	0.0	80.6	0.0	83.5	63.2
06/23/02	19.6	10.1	11.7	12.4	87.1	11.3	85.1	0.0	87.3	0.0	91.4	63.0
06/24/02	19.6	10.1	11.7	15.0	89.5	25.4	86.8	0.0	90.1	0.0	92.3	61.7
06/25/02	19.6	10.1	12.0	14.9	91.5	25.2	87.3	0.0	92.1	0.0	94.4	60.8
06/26/02	19.6	10.1	11.0	13.1	83.1	8.0	82.4	0.0	83.4	0.0	84.7	52.6
06/27/02	17.7	8.2	10.1	12.7	85.5	29.0	83.7	15.7	84.8	0.0	83.9	61.2
06/28/02	17.8	8.3	11.2	16.2	84.4	36.3	78.0	30.6	79.2	0.0	82.2	65.6
06/29/02	18.7	9.1	9.4	11.0	81.7	19.5	80.2	16.1	83.2	0.0	87.2	70.0
06/30/02	19.5	10.0	9.3	8.6	80.2	21.5	79.4	18.6	79.1	0.0	81.0	62.5
07/01/02	16.0	6.5	8.7	8.5	68.7	36.9	64.2	31.1	66.4	0.0	68.7	52.5
07/02/02	11.5	2.1	9.0	9.6	59.0	20.5	57.1	16.2	60.3	0.0	66.4	56.6
07/03/02	9.5	0.0	---	---	53.3	14.4	49.9	14.7	50.6	0.0	50.7	39.9

**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		
06/21/02	350.6	176.6	363.9	105.4	354.4	114.2	350.7	156.9	65.9	121.3
06/22/02	323.1	149.8	313.4	69.5	312.3	110.0	323.2	132.0	70.5	114.0
06/23/02	305.2	135.0	298.2	101.8	291.1	110.5	301.7	98.1	72.9	124.0
06/24/02	300.0	129.0	324.9	95.4	322.7	115.7	326.1	113.2	77.9	128.2
06/25/02	295.7	121.9	286.7	82.8	279.6	108.0	291.6	93.7	70.2	121.1
06/26/02	308.1	135.7	293.9	83.3	278.0	75.1	288.5	93.1	66.3	122.4
06/27/02	312.6	140.0	316.2	86.8	303.6	103.0	310.7	116.4	66.5	121.4
06/28/02	344.0	181.4	337.8	149.9	327.6	133.7	324.0	148.0	56.0	113.7
06/29/02	344.2	173.3	355.7	131.5	354.0	166.0	356.4	167.0	70.5	112.2
06/30/02	304.8	132.0	301.1	139.2	292.0	98.5	310.7	112.4	71.0	121.8
07/01/02	308.6	139.5	317.0	125.8	316.4	173.0	313.1	166.8	36.9	102.7
07/02/02	332.1	157.4	327.4	101.2	315.6	125.6	314.3	150.8	55.5	105.0
07/03/02	201.8	149.5	313.5	78.1	303.3	117.3	299.3	139.5	53.8	99.3

## 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>Lower Granite Dam</b>											
	06/25/02	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/02/02	Steelhead	15	0	0	0.00%	0.00%	0	0	0	0
<b>Little Goose Dam</b>											
	06/26/02	Steelhead	36	1	1	2.77%	0.00%	1	0	0	0
	07/03/02	Steelhead	4	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	07/01/02	Steelhead	17	4	4	23.52%	0.00%	4	0	0	0
<b>McNary Dam</b>											
	06/27/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	07/01/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	06/27/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	07/01/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	06/27/02	Subyearling Chinook	54	2	2	3.70%	0.00%	2	0	0	0
	07/01/02	Subyearling Chinook	29	4	3	10.34%	0.00%	3	0	0	0
	07/04/02	Subyearling Chinook	100	6	6	6.00%	0.00%	6	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	#	<u>24 h</u>	<u>12 h</u>		High	#
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr
6/21	99	99	100	24	131	131	132	24	118	119	119	21	117	117	117	24	117	117	118	23	
6/22	99	99	99	24	131	132	132	24	119	119	120	24	117	117	117	24	117	117	118	23	
6/23	99	99	99	24	131	131	132	24	119	119	119	24	116	117	117	24	117	117	117	23	
6/24	99	99	102	24	131	132	132	24	119	119	119	24	116	117	117	24	116	116	117	23	
6/25	99	99	99	24	131	132	132	24	119	120	120	24	117	117	117	24	116	117	118	23	
6/26	99	99	99	22	133	134	135	24	120	121	121	24	118	119	119	24	117	118	119	23	
6/27	100	101	105	19	132	133	134	24	122	122	122	24	119	119	119	24	118	118	119	23	
6/28	105	105	106	18	133	134	134	24	122	122	123	24	119	119	119	24	118	118	118	24	
6/29	105	105	106	23	133	134	134	24	122	123	123	24	119	119	119	24	118	118	118	24	
6/30	104	104	104	19	133	134	134	24	121	121	122	24	119	120	120	24	117	117	118	23	
7/1	104	104	105	20	133	133	134	24	121	121	121	24	119	119	119	24	117	117	118	23	
7/2	104	105	105	18	132	133	134	24	121	121	121	24	119	119	119	24	118	119	119	23	
7/3	105	105	106	23	131	132	132	24	122	122	122	24	119	119	120	24	118	119	119	23	
7/4	105	105	106	24	131	132	132	24	121	121	122	24	118	119	119	24	117	117	118	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	#	<u>24 h</u>	<u>12 h</u>		High	#
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr
6/21	117	118	120	23	116	116	117	24	124	129	133	24	124	126	128	24	125	126	128	24	
6/22	117	117	118	23	116	116	116	24	120	123	131	24	123	126	128	24	123	125	127	24	
6/23	117	117	118	23	114	115	115	23	116	117	117	23	119	122	124	24	119	122	123	24	
6/24	116	116	117	23	114	114	115	24	115	115	116	24	114	114	114	24	114	115	116	24	
6/25	117	117	119	19	115	115	116	24	119	122	125	24	113	113	115	24	115	116	118	24	
6/26	117	118	118	23	116	117	117	24	122	126	134	24	117	118	121	24	119	121	123	24	
6/27	118	119	120	23	117	117	117	24	129	133	137	24	121	124	127	24	123	125	127	24	
6/28	119	120	120	24	116	116	117	22	129	133	137	22	125	127	129	24	125	127	128	24	
6/29	118	119	120	24	115	116	117	24	128	132	134	24	125	126	129	24	125	126	128	24	
6/30	117	118	119	23	114	115	116	24	120	124	131	24	123	125	126	24	123	125	126	24	
7/1	123	127	136	23	115	116	117	23	131	135	139	23	118	120	123	24	121	124	127	24	
7/2	122	124	129	23	118	118	119	22	134	136	140	22	128	132	133	24	128	130	131	24	
7/3	123	126	129	23	118	118	119	22	132	135	138	22	131	132	134	19	130	131	132	23	
7/4	121	122	122	23	116	117	117	24	121	124	130	24	126	129	131	24	126	128	130	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	#	<u>24 h</u>	<u>12 h</u>		High	#
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr
6/21	124	124	125	24	125	126	126	24	123	124	125	24	125	128	129	24	125	126	126	24	
6/22	123	124	125	24	124	125	125	24	124	125	128	24	122	124	125	24	122	123	124	24	
6/23	118	119	120	24	120	121	122	23	121	122	123	24	120	120	121	24	119	120	120	24	
6/24	113	114	114	24	117	118	119	24	120	121	123	24	119	119	120	24	118	119	119	24	
6/25	115	116	117	24	119	120	121	24	119	119	121	24	119	121	127	24	119	121	123	24	
6/26	118	120	121	24	121	122	123	24	119	121	124	24	120	123	127	24	120	123	124	24	
6/27	120	122	123	24	122	124	124	24	118	119	120	24	123	127	129	24	118	120	122	24	
6/28	123	124	125	24	125	126	126	24	119	120	121	24	126	128	130	24	121	124	126	24	
6/29	123	124	125	24	125	126	127	24	121	121	122	24	126	129	130	24	121	123	124	24	
6/30	121	122	123	24	123	124	124	24	120	120	120	24	121	123	127	24	120	121	123	24	
7/1	119	121	123	24	122	124	126	24	118	119	119	24	125	129	131	24	120	122	124	23	
7/2	125	127	128	24	126	128	128	24	121	122	124	24	128	129	131	24	126	127	128	24	
7/3	128	129	130	24	128	129	130	23	---	---	---	0	---	---	---	0	---	---	---	0	
7/4	125	126	126	24	126	127	127	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>Clrwtr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg			High	hr	Avg	Avg
6/21	125	126	126	24	118	119	120	21	116	117	117	21	106	107	107	21	104	104	105	21
6/22	124	124	125	24	118	119	119	24	117	117	119	24	107	107	108	23	104	104	105	24
6/23	122	123	123	24	116	116	117	24	119	119	119	24	108	108	109	24	103	104	105	24
6/24	121	122	122	24	116	117	117	23	118	118	119	24	108	109	109	24	104	105	105	24
6/25	122	123	124	24	116	117	117	24	117	117	118	24	108	109	109	24	104	104	105	24
6/26	123	124	124	24	117	118	119	24	117	117	118	24	108	109	110	24	104	105	106	24
6/27	123	124	124	24	116	117	117	24	116	116	117	24	107	108	109	24	104	104	105	24
6/28	124	125	125	24	115	116	117	24	116	117	118	24	---	---	---	0	103	104	104	24
6/29	124	125	125	24	115	116	116	24	116	117	117	24	---	---	---	0	103	103	104	24
6/30	122	123	123	24	116	117	117	24	117	118	118	24	108	109	110	24	103	103	104	24
7/1	122	123	124	24	115	116	117	24	111	115	117	24	106	107	109	24	103	104	105	24
7/2	125	125	126	24	117	119	120	24	106	107	107	24	103	103	104	24	103	104	105	24
7/3	---	---	---	0	118	118	119	24	104	104	105	23	103	103	104	23	103	104	105	24
7/4	---	---	---	0	116	117	117	24	104	104	105	24	102	103	103	24	102	103	104	24

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

Date	<u>Clrwtr-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>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg			High	hr	Avg	Avg
6/21	105	106	106	21	104	105	107	21	113	118	121	21	115	115	117	21	114	115	116	21
6/22	104	105	106	24	106	107	109	24	107	108	111	24	117	118	119	24	117	117	117	24
6/23	105	106	107	24	105	106	106	24	107	108	108	24	113	114	118	24	112	114	117	24
6/24	106	107	108	24	105	106	107	24	113	118	121	24	110	111	113	24	109	111	112	24
6/25	106	107	108	24	106	107	108	24	114	118	121	24	109	110	113	24	107	107	107	24
6/26	106	107	108	24	108	109	111	24	108	111	114	24	111	113	118	24	108	109	111	24
6/27	106	107	108	24	107	108	108	24	116	120	122	24	114	114	115	24	113	114	115	24
6/28	105	106	107	24	106	107	109	24	118	121	122	24	109	111	112	24	114	116	123	24
6/29	105	106	107	24	105	105	106	24	111	116	118	24	109	109	110	24	111	114	117	24
6/30	105	106	107	24	103	103	104	24	111	115	119	24	110	111	112	24	112	113	117	24
7/1	105	106	107	24	103	103	103	24	118	120	120	23	110	111	111	24	116	117	117	24
7/2	101	103	105	23	104	106	107	24	112	118	119	24	108	109	110	24	111	115	115	24
7/3	99	101	102	24	105	105	106	24	109	113	116	24	107	108	109	24	112	116	119	24
7/4	99	100	101	24	105	106	106	24	112	118	120	24	108	109	111	24	113	118	119	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>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg			High	hr	Avg	Avg
6/21	111	113	117	21	110	112	113	21	110	110	112	21	114	115	116	21	116	117	119	21
6/22	112	113	115	24	112	112	113	24	111	112	112	24	115	116	117	24	117	118	119	24
6/23	114	114	115	24	113	114	115	24	110	111	114	24	115	117	119	24	117	117	118	24
6/24	115	115	115	24	115	115	117	24	111	112	114	24	115	117	119	24	116	116	120	24
6/25	113	113	114	24	112	112	113	24	113	114	116	24	115	117	120	24	115	116	117	24
6/26	111	112	113	24	110	111	112	24	115	115	117	23	115	116	120	24	116	117	119	23
6/27	109	109	110	24	108	109	110	24	113	114	115	24	115	117	122	24	116	116	117	24
6/28	108	109	111	24	108	110	111	24	111	111	112	24	115	116	117	24	114	115	116	24
6/29	112	112	113	24	112	112	113	24	108	109	110	24	116	117	118	24	113	113	114	24
6/30	112	112	113	24	112	112	114	24	107	108	108	24	115	116	116	24	113	113	114	20
7/1	110	111	112	24	110	111	112	24	109	109	110	24	114	115	117	24	112	113	114	24
7/2	111	113	115	24	110	112	112	24	111	112	115	24	114	115	117	24	114	114	116	24
7/3	115	116	117	24	114	115	116	24	112	113	113	24	112	114	114	24	115	115	116	24
7/4	115	115	116	24	114	115	115	24	110	110	111	24	112	113	114	24	114	114	114	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	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
6/21	116	118	119	21	123	123	124	21	111	113	115	23	118	119	120	21	112	113	114	23
6/22	119	120	122	24	120	121	121	24	115	116	116	23	117	119	119	24	112	113	114	23
6/23	118	118	119	24	119	120	123	24	115	115	116	23	119	120	120	23	111	112	113	23
6/24	116	117	118	24	119	120	122	24	115	115	115	23	120	120	120	24	113	114	115	22
6/25	116	118	120	24	117	118	119	24	115	116	118	23	119	119	120	24	114	115	115	19
6/26	117	119	120	24	119	120	123	21	114	115	116	23	119	120	120	24	114	114	115	23
6/27	116	117	117	24	119	119	120	24	114	114	115	23	118	120	120	24	111	112	113	23
6/28	114	114	115	24	122	123	125	24	113	113	114	24	120	122	124	24	115	117	121	24
6/29	113	113	113	24	121	122	125	24	111	112	113	24	119	122	124	24	115	116	118	24
6/30	112	113	113	24	118	119	120	24	109	109	110	23	118	118	119	24	111	112	114	19
7/1	113	115	116	24	119	121	123	24	110	110	110	23	119	120	121	24	113	114	117	22
7/2	115	116	117	24	120	122	124	24	111	112	113	23	120	120	121	24	112	114	117	23
7/3	115	116	116	24	119	119	120	20	111	111	111	23	116	119	120	24	110	111	112	23
7/4	114	114	114	24	119	119	119	20	110	111	111	23	119	119	120	24	111	113	114	19

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

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>CamasWashugal</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	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/21	117	118	119	24	116	117	118	23	120	120	121	23	118	118	119	24
6/22	118	119	119	24	115	115	116	23	118	118	120	23	117	117	118	24
6/23	117	118	118	24	111	112	113	23	113	114	116	23	113	114	115	24
6/24	118	119	120	24	113	114	114	23	114	115	116	23	113	114	115	24
6/25	119	119	120	24	116	117	117	19	115	115	117	19	116	117	119	24
6/26	118	120	120	24	118	118	119	23	116	117	119	23	117	119	120	24
6/27	117	118	119	24	114	115	116	23	114	115	116	23	115	116	116	24
6/28	119	121	123	24	114	114	115	24	117	120	124	24	115	117	120	24
6/29	120	121	122	24	115	116	117	24	118	119	120	24	116	119	121	24
6/30	116	117	118	24	116	116	116	23	115	115	117	23	116	116	116	24
7/1	120	121	122	24	113	113	115	23	119	122	123	23	116	118	119	24
7/2	118	119	121	24	116	116	117	23	119	122	126	23	117	120	122	24
7/3	117	118	120	24	113	114	116	23	117	121	126	23	116	118	120	24
7/4	116	118	119	24	112	112	112	19	114	114	117	23	113	114	117	24

## HATCHERY RELEASE SUMMARY LAST TWO WEEKS

### Hatchery Release Summary

From: 6/21/02 to 7/4/02

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
WDFW	East Bank	CH0	SU	2002	214,600	07-02-02	07-02-02	Turtle Rock H	Mid-Columbia River
WDFW	East Bank	CH0	SU	2002	481,285	07-02-02	07-02-02	Turtle Rock H	Mid-Columbia River
WDFW	Klickitat	CH0	FA	2002	4,000,000	06-03-02	07-26-02	Klickitat H	Klickitat River
WDFW	Lyons Ferry	CH0	FA	2002	200,000	06-24-02	06-26-02	Lyons Ferry H	Snake River
WDFW	Priest Rapids	CH0	FA	2002	6,782,000	06-11-02	06-21-02	Priest Rapids H	Mid-Columbia River
WDFW	Ringold Springs	CH0	FA	2002	3,000,000	06-17-02	06-25-02	Ringold Springs H	Mid-Columbia River
<b>WDFW Total</b>					<b>14,677,885</b>				
<b>Grand Total</b>					<b>14,677,885</b>				

### Hatchery Release Summary

From: 7/5/02 to 7/18/02

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
WDFW	Klickitat	CH0	FA	2002	4,000,000	06-03-02	07-26-02	Klickitat H	Klickitat River
<b>WDFW Total</b>					<b>4,000,000</b>				
<b>Grand Total</b>					<b>4,000,000</b>				

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

## Two-Week Summary of Passage Indices

\* 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: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmppsubmitdata.asp>

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.

<b>COMBINED YEARLING CHINOOK</b>											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/21/2002	---	---	---	---	641	764	1,050	73	425	1,457	2,283
06/22/2002	---	---	---	---	717	643	650	73	401	1,131	1,570
06/23/2002	---	---	---	---	855	640	150	52	1,259	1,154	807
06/24/2002	---	---	---	---	972	272	300	6	285	821	1,188
06/25/2002	---	---	---	---	1,209	364	50	28	768	705	127
06/26/2002	---	---	---	---	1,004	396	300	35	1,153	599	1,170
06/27/2002	---	---	---	---	249	285	74	36	369	906	701
06/28/2002	---	---	---	---	494	333	50	13	2,152	371	1,305
06/29/2002	---	---	---	---	534	93	42	18	427	690	298
06/30/2002	---	---	---	---	338	185	126	5	771	194	279
07/01/2002	---	---	---	---	1,372	292	73	5	1,306	42	517
07/02/2002	---	---	---	---	0	0	110	0	717	71	1,281
07/03/2002	---	---	---	---	391	31	39	6	1,660	82	430
07/04/2002	---	---	---	---	71	42	14	16	1,559	12	420
07/05/2002	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,847</b>	<b>4,340</b>	<b>3,028</b>	<b>366</b>	<b>13,252</b>	<b>8,235</b>	<b>12,376</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>632</b>	<b>310</b>	<b>216</b>	<b>26</b>	<b>947</b>	<b>588</b>	<b>884</b>
<b>YTD</b>	<b>38,199</b>	<b>29,095</b>	<b>8,013</b>	<b>7,847</b>	<b>2,458,326</b>	<b>2,842,984</b>	<b>2,219,528</b>	<b>28,939</b>	<b>3,515,000</b>	<b>2,102,974</b>	<b>3,322,883</b>

<b>COMBINED SUBYEARLING CHINOOK</b>											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/21/2002	---	---	---	---	3,564	8,690	5,050	126	164,187	91,670	54,644
06/22/2002	---	---	---	---	3,507	8,391	4,050	145	267,018	108,567	69,787
06/23/2002	---	---	---	---	7,735	4,583	1,400	239	291,212	68,924	71,127
06/24/2002	---	---	---	---	10,080	1,960	834	321	211,339	68,733	106,589
06/25/2002	---	---	---	---	19,070	1,648	1,100	432	589,014	91,296	111,070
06/26/2002	---	---	---	---	18,386	6,630	4,999	376	594,094	94,828	151,963
06/27/2002	---	---	---	---	12,838	6,356	3,289	337	588,754	208,310	159,319
06/28/2002	---	---	---	---	7,652	5,763	1,534	251	234,227	333,940	195,193
06/29/2002	---	---	---	---	10,979	3,587	3,899	128	234,011	214,933	209,705
06/30/2002	---	---	---	---	33,164	15,567	6,794	175	211,976	186,712	401,196
07/01/2002	---	---	---	---	61,136	18,768	10,911	178	166,629	99,654	335,113
07/02/2002	---	---	---	---	17,495	5,508	8,798	313	128,416	103,011	171,044
07/03/2002	---	---	---	---	7,514	5,490	24,897	1,100	150,956	125,569	216,711
07/04/2002	---	---	---	---	3,673	3,964	10,018	703	91,681	76,005	200,997
07/05/2002	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>216,793</b>	<b>96,905</b>	<b>87,573</b>	<b>4,824</b>	<b>3,923,514</b>	<b>1,872,152</b>	<b>2,454,458</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15,485</b>	<b>6,922</b>	<b>6,255</b>	<b>345</b>	<b>280,251</b>	<b>133,725</b>	<b>175,318</b>
<b>YTD</b>	<b>0</b>	<b>4</b>	<b>26</b>	<b>3,488</b>	<b>306,140</b>	<b>178,963</b>	<b>115,568</b>	<b>8,559</b>	<b>4,785,550</b>	<b>2,246,711</b>	<b>4,847,425</b>

## Two-Week Summary of Passage Indices

	<b>COMBINED COHO</b>										7/05/02
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/21/2002	---	---	---	---	179	483	500	177	637	1,262	1,712
06/22/2002	---	---	---	---	307	231	300	225	801	1,016	2,569
06/23/2002	---	---	---	---	321	400	0	116	899	738	941
06/24/2002	---	---	---	---	190	79	33	87	95	436	2,377
06/25/2002	---	---	---	---	363	110	0	48	256	334	1,520
06/26/2002	---	---	---	---	251	166	67	50	116	197	1,404
06/27/2002	---	---	---	---	0	131	48	37	0	80	1,869
06/28/2002	---	---	---	---	0	40	21	47	196	106	1,566
06/29/2002	---	---	---	---	200	106	78	60	214	88	895
06/30/2002	---	---	---	---	135	264	175	119	193	49	558
07/01/2002	---	---	---	---	171	162	64	172	56	0	259
07/02/2002	---	---	---	---	111	38	55	219	143	37	427
07/03/2002	---	---	---	---	0	62	31	246	342	0	0
07/04/2002	---	---	---	---	42	28	23	103	236	29	420
07/05/2002	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,270</b>	<b>2,300</b>	<b>1,395</b>	<b>1,706</b>	<b>4,184</b>	<b>4,372</b>	<b>16,517</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>162</b>	<b>164</b>	<b>100</b>	<b>122</b>	<b>299</b>	<b>312</b>	<b>1,180</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>123,265</b>	<b>103,414</b>	<b>64,806</b>	<b>85,386</b>	<b>196,635</b>	<b>312,897</b>	<b>2,325,972</b>

	<b>COMBINED STEELHEAD</b>										
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/21/2002	---	---	---	---	4,154	2,465	7,300	60	425	1,847	2,140
06/22/2002	---	---	---	---	5,196	2,737	4,050	43	200	983	4,281
06/23/2002	---	---	---	---	2,714	1,140	3,050	28	360	476	4,303
06/24/2002	---	---	---	---	2,917	1,250	3,014	12	382	450	3,803
06/25/2002	---	---	---	---	5,803	1,001	1,200	5	855	196	1,900
06/26/2002	---	---	---	---	3,451	1,794	1,833	24	4,264	394	1,521
06/27/2002	---	---	---	---	2,991	797	978	27	1,476	342	1,518
06/28/2002	---	---	---	---	1,975	493	523	14	782	105	2,870
06/29/2002	---	---	---	---	1,869	608	4,394	20	641	690	895
06/30/2002	---	---	---	---	1,691	740	1,839	14	0	273	4,464
07/01/2002	---	---	---	---	1,801	584	531	7	457	343	4,396
07/02/2002	---	---	---	---	1,661	40	648	16	526	6	4,694
07/03/2002	---	---	---	---	102	250	921	17	293	27	430
07/04/2002	---	---	---	---	297	161	798	14	189	46	420
07/05/2002	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,622</b>	<b>14,060</b>	<b>31,079</b>	<b>301</b>	<b>10,850</b>	<b>6,178</b>	<b>37,635</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,616</b>	<b>1,004</b>	<b>2,220</b>	<b>22</b>	<b>775</b>	<b>441</b>	<b>2,688</b>
<b>YTD</b>	<b>2,833</b>	<b>32,043</b>	<b>3,494</b>	<b>11,810</b>	<b>2,598,012</b>	<b>2,269,842</b>	<b>1,777,117</b>	<b>28,584</b>	<b>792,043</b>	<b>545,207</b>	<b>1,452,196</b>

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

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.

## Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE							MCN	JDA	BO2	
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)				RIS (INDEX)
06/21/2002	---	---	---	---	51	179	100	23	637	1,360	999
06/22/2002	---	---	---	---	51	128	50	31	801	1,525	2,283
06/23/2002	---	---	---	---	256	100	50	14	360	761	1,076
06/24/2002	---	---	---	---	47	75	67	9	668	676	1,782
06/25/2002	---	---	---	---	60	49	0	25	341	442	2,913
06/26/2002	---	---	---	---	0	164	33	10	346	253	936
06/27/2002	---	---	---	---	62	45	14	29	185	281	467
06/28/2002	---	---	---	---	82	173	21	9	587	369	783
06/29/2002	---	---	---	---	167	61	25	5	214	88	298
06/30/2002	---	---	---	---	158	150	32	16	0	161	837
07/01/2002	---	---	---	---	171	162	64	12	339	0	1,293
07/02/2002	---	---	---	---	111	80	46	9	478	164	2,986
07/03/2002	---	---	---	---	0	62	78	7	146	164	430
07/04/2002	---	---	---	---	28	71	22	36	236	12	1,677
07/05/2002	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,244</b>	<b>1,499</b>	<b>602</b>	<b>235</b>	<b>5,338</b>	<b>6,256</b>	<b>18,760</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>107</b>	<b>43</b>	<b>17</b>	<b>381</b>	<b>447</b>	<b>1,340</b>
<b>YTD</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>261</b>	<b>76,644</b>	<b>65,165</b>	<b>38,363</b>	<b>20,158</b>	<b>1,401,419</b>	<b>931,254</b>	<b>841,815</b>

**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

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.

**Cumulative Adult Passage at Mainstem Dams Through: 07/04**

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	268,813	6,477	391,367	14,172	104,143	5,654	93,346	5,136	51,499	8,934	17,840	2,734	0	0	0	0	0	0
TDA	180,861	3,884	303,912	9,953	68,558	3,895	77,280	3,376	44,960	5,745	14,132	1,795	0	0	0	0	0	0
JDA	139,890	2,403	264,177	6,208	58,196	3,052	69,876	2,839	38,444	4,043	12,897	1,374	0	0	0	0	0	0
MCN	128,890	3,806	258,689	6,683	54,462	2,970	60,572	3,187	36,848	4,007	11,640	1,227	0	0	0	0	0	0
IHR	85,207	1,825	171,173	3,026	32,988	1,807	23,430	1,828	12,771	1,466	4,463	617	0	0	0	0	0	0
LMN	76,304	1,531	180,787	1,784	32,792	1,811	19,973	1,091	14,645	1,026	4,400	579	0	0	0	0	0	0
LGS	77,232	1,815	174,823	2,990	31,528	1,921	17,344	1,587	11,436	1,455	3,864	660	0	0	0	0	0	0
LWG	75,025	2,132	171,958	3,135	30,329	1,865	17,705	1,235	9,387	1,761	3,630	641	0	0	0	0	0	0
PRD	34,064	196	50,379	987	14,082	343	24,960	254	16,668	788	5,719	248	0	0	0	0	0	0
RIS	24,734	892	39,785	1,761	10,698	482	7,979	200	12,603	2,145	3,730	623	0	0	0	0	0	0
RRH	11,204	215	15,895	543	3,286	112	3,688	99	6,035	723	1,291	145	0	0	0	0	0	0
WEL	7,587	39	9,989	892	1,774	153	2,738	20	3,203	284	519	60	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2002		2001		10-Yr Avg.		10-Yr Avg.			10-Yr Avg.			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2002	2001	Avg.	2002	2001	Avg.	2002
BON	0	0	2	0	0	0	39,326	106,221	41,016	32,510	38,048	17,086	12,490
TDA	0	0	0	0	0	0	28,580	92,804	31,856	12,927	17,767	6,692	5,996
JDA	0	0	0	0	0	0	27,131	94,564	33,102	16,348	16,404	7,277	6,133
MCN	0	0	0	0	0	0	19,659	80,786	26,982	9,153	11,441	4,718	3,327
IHR	0	0	0	0	0	0	23	23	7	6,347	6,575	3,188	1,854
LMN	0	0	0	0	0	0	20	17	10	6,348	5,632	2,848	2,524
LGS	0	0	0	0	0	0	19	24	10	7,091	4,100	1,744	2,905
LWG	0	0	0	0	0	0	12	14	8	13,052	7,251	5,053	3,661
PRD	0	0	6	7	0	0	4,824	77,222	23,673	206	538	211	***
RIS	2	0	24	0	1	0	487	53,085	13,186	109	383	181	82
RRH	13	0	24	0	1	0	139	29,273	6,908	194	264	113	97
WEL	0	0	0	0	0	0	81	19,520	4,119	112	117	37	63

RIS and RRH counts are through 06/30 and are from Chelan County PUD - except for Wild ST which are from the COE.

WEL counts are through 7/03 and are from Douglas County PUD.

JDA is missing 06/25/02. MCN is missing 6/28. PRD counts are through 07/02 and are from Grant County PUD.

\*\*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.

## Two Week Transportation Summary

**06/22/02 TO 07/05/02**

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	150,425	6,500	1,700	910	27,185	186,720
	Sum of NumberBarged	147,605	6,919	1,785	868	28,613	185,790
	Sum of NumberBypassed	88	0	0	0	0	88
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	2,468	27	5	63	82	2,645
<b>LGS</b>	Sum of NumberCollected	78,971	4,021	2,096	1,268	13,110	99,466
	Sum of NumberBarged	85,717	5,241	2,397	1,418	14,233	109,006
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	87	16	12	39	57	211
<b>LMN</b>	Sum of NumberCollected	87,573	3,028	1,395	602	31,079	123,677
	Sum of NumberBarged	68,896	4,229	2,014	611	38,214	113,964
	Sum of NumberBypassed	17,146	0	0	0	98	17,244
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	138	80	8	21	648	895
<b>MCN</b>	Sum of NumberCollected	2,121,705	7,083	2,175	2,800	5,962	2,139,725
	Sum of NumberBarged	10,502	0	0	0	0	10,502
	Sum of NumberBypassed	2,110,396	7,079	2,175	2,797	5,953	2,128,400
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	807	4	0	3	9	823
Total Sum of NumberCollected		2,438,674	20,632	7,366	5,580	77,336	2,549,588
Total Sum of NumberBarged		312,720	16,389	6,196	2,897	81,060	419,262
Total Sum of NumberBypassed		2,127,630	7,079	2,175	2,797	6,051	2,145,732
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		3,500	127	25	126	796	4,574

## YTD Transportation Summary

**TO: 07/05/02**

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	201,717	1,534,884	80,016	50,654	1,694,305	3,561,576
	Sum of NumberBarged	196,246	1,482,983	79,841	48,798	1,623,600	3,431,468
	Sum of NumberBypassed	89	38,152	5	7	65,895	104,148
	Sum of NumberTrucked	29	9,847	20	343	3,383	13,622
	Sum of TotalProjectMortalities	2,775	3,852	120	1,489	1,217	9,453
<b>LGS</b>	Sum of NumberCollected	144,327	1,906,691	78,975	46,923	1,559,937	3,736,853
	Sum of NumberBarged	141,369	1,903,999	78,394	46,260	1,556,727	3,726,749
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of NumberTrucked	0	1,034	4	74	1,024	2,136
	Sum of TotalProjectMortalities	164	1,628	557	546	2,073	4,968
<b>LMN</b>	Sum of NumberCollected	115,523	2,212,315	61,701	37,965	1,736,240	4,163,744
	Sum of NumberBarged	91,490	2,119,785	59,659	36,875	1,698,318	4,006,127
	Sum of NumberBypassed	17,184	68,125	1,994	213	31,953	119,469
	Sum of NumberTrucked	0	20,104	0	13	356	20,473
	Sum of TotalProjectMortalities	160	4,287	25	849	4,826	10,147
<b>MCN</b>	Sum of NumberCollected	2,555,574	2,202,253	108,021	902,591	462,837	6,231,276
	Sum of NumberBarged	10,502	0	0	0	109	10,611
	Sum of NumberBypassed	2,544,093	2,201,295	107,997	901,760	462,459	6,217,604
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	980	958	24	831	269	3,062
Total Sum of NumberCollected		3,017,141	7,856,143	328,713	1,038,133	5,453,319	17,693,449
Total Sum of NumberBarged		439,607	5,506,767	217,894	131,933	4,878,754	11,174,955
Total Sum of NumberBypassed		2,561,366	2,307,572	109,996	901,980	560,307	6,441,221
Total Sum of NumberTrucked		29	30,985	24	430	4,763	36,231
Total Sum of TotalProjectMortalities		4,079	10,725	726	3,715	8,385	27,630

