



*Fish Passage Center*

# Weekly Report #02 - 21

August 2, 2002

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**SUMMARY OF EVENTS:**

- The BiOp summer flow objectives are 51 Kcfs at Lower Granite and 200 Kcfs at McNary. To date, summer flows have averaged 49.1 Kcfs at Lower Granite and 228.4 Kcfs at McNary; therefore, flow objectives are being met on a seasonal basis only at McNary. Weekly average flows between 7-26-02 and 8-1-02 at Lower Granite and McNary were 28.2 and 166.3 Kcfs; therefore, flow objectives are not being met at either project on a weekly basis.
- Combined storage in the Upper Snake River System is at 36% of capacity.

**Water:** Water Year 2002 continues to be approximately average in terms of cumulative precipitation. Weekly precipitation totals have been updated through the 31st of July (Table 1). Precipitation throughout July has been well below normal, ranging between 21% and 68% of average within the Columbia Basin.

Flows within the Columbia Basin have been decreasing. Storage reservoirs along the Columbia and Snake Rivers are generally at or near full and operators are either passing inflows or beginning to draft.

The Grand Coulee Reservoir has drafted 1.2 feet over last week; beginning the week at 1287.5 feet (7-26-02) and ending at 1286.3 feet (8-1-02). Total outflows have averaged 120.2 Kcfs over the past week (7-26-02 to 8-1-02).

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

Location	July 2002		Cumulative 10/1/01 – 7/31/02	
	Observed (inches)	% Avg	Observed (inches)	% Avg
Columbia Above Coulee	1.21	68	22.14	99
Snake R. Above Ice Harbor	0.38	41	13.83	86
Columbia Above The Dalles	0.73	59	19.99	96
Kootenai	1.28	67	20.85	91
Clark Fork	0.65	54	15.86	103
Flathead	0.98	61	21.02	103
Pend Oreille/Spokane	0.73	53	31.70	111
Central Washington	0.15	40	7.33	88
Snake R. Plain	0.23	38	7.06	69
Clearwater	0.52	36	29.22	103
SW Washington Cascades/Cowlitz	0.33	24	71.69	107
Willamette Valley	0.17	21	56.12	99

The Libby reservoir has drafted 2.2 feet over the past week (7-26-02 to 8-1-02); reservoir elevations have ranged from 2457.0 to 2454.8 feet. Outflows have ranged between 22.5 Kcfs and 18.8 Kcfs over the last week. Currently (8-1-02), Libby is at an elevation of 2454.8 feet.

The Dworshak reservoir continues to draft. Over the last week, total outflows at Dworshak have fluctuated between 13.2 and 13.6 Kcfs (7-26-02 to 8-1-02) to supplement flows and temperatures at Lower Granite. Operations at Dworshak continue to involve spilling between 3.8 and 3.9 Kcfs of reservoir water. Currently (midnight, 8-1-02) Dworshak is at an elevation of 1576.7 feet, drafting 7.1 feet over the last week.

Over the past week, the Brownlee reservoir has remained relatively steady, beginning and ending the week at 2071.9 feet. During the week, outflows have varied between 6.5 and 9.3 Kcfs.

The Hungry Horse Reservoir continues to draft; beginning the week at an elevation of 3558.6 feet and ending the week at 3557.0 feet. Total outflows at Hungry Horse have ranged between 4.0 and 6.0 Kcfs over the last week (7-26-02 to 8-1-02). Currently (midnight, 8-1-02) Hungry Horse is at an elevation of 3557.0 feet.

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 49.1 Kcfs at Lower Granite and 228.4 Kcfs at McNary. Summer BiOp flow objectives are being met at McNary, but not Lower Granite, on a seasonal basis. Over the past week (7-26-02 to 8-1-02), flows have averaged 28.2 Kcfs at Lower Granite and 166.3 Kcfs at McNary. Therefore, on a weekly basis, flow objectives are not being met at either McNary or Lower Granite.

Currently, as of August 1st, 2002, the entire Upper Snake River System is at 36% of capacity. Most reservoirs on the Upper Snake River have been drafting. Individually, American Falls is at 22% of capacity, Palisades is at 27% of capacity, Jackson Lake is at 67% of capacity, Island Park is at 48% of capacity, Lake Walcott is at 96% of capacity, Milner is at 99% of capacity, and Grassy Lake is at 87% of capacity.

**Spill:** Dworshak Reservoir continues to draft water for flow augmentation and temperature regulation. Spill levels have averaged 3.9 Kcfs over the past week. Tailwater total dissolved gas levels have remained below 107%. No spill has occurred at the Snake River transportation collector projects this past week. At Ice Harbor Dam spill averaged 81% of daily flows over the past week.

Lower River spill as part of the Biological Opinion spill program is being provided at John Day, The Dalles and Bonneville dams. Spill at McNary Dam is water in excess of hydraulic capacity at that project. Spill averaged 8% of average daily flow at McNary Dam, 29% of average daily flow at John Day Dam, 39% of average daily flow at The Dalles Dam and 63% of average daily flow at Bonneville Dam.

The total dissolved gas levels remain below the water quality waivers. Fish are currently being monitored for signs of GBT at Rock Island, McNary and Bonneville dams. Some fish have been observed with minor signs of GBT this past week at Rock Island Dam this past week.

**Smolt Monitoring:** At Lower Granite Dam this past week the, number of subyearling chinook decreased compared to last week with the average daily index at 4,700 this week compared to 19,200 last week. At Rock Island Dam the subyearling chinook index decreased compared to last week, with 385 average daily index this week compared to 460 daily last week. In the lower Columbia, passage of subyearlings at McNary dropped off considerably, with an average daily index of 28,000, compared to 69,000 per day last week. At John Day Dam passage index for subyearling chinook was down sharply also, with the index averaging 8,100 this week versus 22,800 last week. And at Bonneville Dam subyearling chinook numbers decreased as well with an average daily index this week of 26,000 versus 39,400 last week.

**Adult Fish Passage:** Over the next few weeks, the chinook passing the projects will automatically be changing to fall chinook starting August 1 at Bonneville Dam and every two to four days later at each subsequent upstream project. The prognosis for the fall chinook run indicates that this year's return should be very good with greater than 670,000 projected to return to the Columbia River.

At Bonneville Dam, counts of adult summer chinook averaged 679 per day for the week with the cumulative count through July 31 at 127,442. This year's count of adult summer chinook is about 1.7 and 4.8 times greater than the respective year 2001 and 10-year average. At McNary Dam, the adult summer chinook count averaged 725 per day through the week with a total count of 104,985 through August 1. The Snake River count of adult summer chinook at Ice Harbor Dam totaled 26,391 through August 1, with daily counts averaging less than 50 per day at the Snake River dams. In the Mid-Columbia, the cumulative count of adult summer chinook at Priest Rapids Dam was 83,801 through July 31, about 1.8 times and 5.1 times greater than the respective 2001 and 10-year average. At Rock Island Dam about 67,000 have been counted through July 28 with 45,600 counted above Wells Dam through July 29.

At Bonneville Dam, the sockeye passage season is nearly complete with the season total at 49,556 through August 1. The 2002 sockeye count is about 43% of the 2001 count and 99% of the 10-year average count. Of the 49,600 over Bonneville Dam, about 45,300 sockeye have passed Priest Rapids Dam to date. The number of sockeye counted at Rocky Reach Dam (15,504 through July

30) will be destined for Lake Osoyoos. Based on the Rock Island count and subtracting off the Rocky Reach count should give an estimated number of sockeye returning to Lake Wenatchee. In the Snake River, at least 49 adult sockeye have been counted at Lower Granite Dam through August 1. These sockeye should be destined for the upper Salmon River area (Redfish Lake, Alturas Lake, or Pettit Lake).

Steelhead passage at Bonneville Dam averaged 5,102 per day through the past week with a total of 150,160 counted through August 1. This total is 64% and 193% of the respective 2001 and 10-year average counts to date. Estimated wild steelhead in the passage total was 60,685 (based on visual missing adipose fin on the steelhead). Adult steelhead are moving upstream into the Snake River with 500-600 per day passing Ice Harbor Dam through the reporting week. Water temperatures reduced from the previous week at Lower Granite Dam and as a result passage numbers increased through this week. In the Mid-Columbia, the counts of steelhead at Priest Rapids Dam ranged from 140-240 per day and total 3,311 through July 31. The passage of steelhead into the Snake and Mid-Columbia Rivers remains about double the 10-year average to date.

**Hatchery Releases:** All hatchery releases for the 2002 fish migration season are completed. The FPC will be updating and finalizing hatchery release groups during the next few months. Preliminary hatchery release totals are listed in the Table below the Snake, Mid-Columbia, and Lower Columbia River Zones.

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

	Spr Chin	SumChin	F Chin	Steelhd	Coho	Sockeye	Total
<b>Snake</b>	10,226,650	1,677,497	3,665,801	9,481,688	840,000	182,835	26,074,471
<b>MidCol</b>	3,926,275	3,527,243	10,913,482	1,312,693	2,065,603	308,042	22,053,338
<b>LowCol</b>	5,754,845		26,343,158	620,029	6,116,269		38,834,301
<b>Total</b>	19,907,770	5,204,740	40,922,441	11,414,410	9,021,872	490,877	86,962,110

**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
07/19/02	182.5	0.2	184.9	0.7	199.1	12.5	200.3	36.9	200.3	40.5	208.0	73.0	204.3	109.6
07/20/02	158.4	0.2	164.3	0.0	180.3	14.1	181.3	28.6	181.7	38.2	193.2	68.5	194.4	105.3
07/21/02	140.2	0.2	146.0	0.0	156.2	9.7	160.2	22.0	164.1	34.6	187.3	65.9	193.8	96.8
07/22/02	174.5	0.2	171.4	0.0	175.5	10.0	169.4	28.3	168.6	38.5	164.8	58.1	158.3	85.2
07/23/02	156.0	0.1	162.5	0.0	173.2	10.0	169.6	26.2	169.8	37.5	182.1	63.9	187.0	100.2
07/24/02	142.2	0.3	143.7	0.0	153.8	10.0	155.9	24.0	156.1	36.5	169.7	59.3	163.3	87.7
07/25/02	131.4	0.3	131.5	0.0	138.6	10.0	144.9	24.5	145.2	36.6	162.8	57.2	163.5	86.8
07/26/02	111.5	0.2	114.4	0.0	119.3	8.9	122.2	20.5	125.4	31.1	134.6	47.0	132.0	64.1
07/27/02	95.1	0.2	99.4	0.0	103.5	7.9	103.0	19.1	102.5	29.5	104.6	36.7	106.6	55.6
07/28/02	97.0	0.2	98.8	0.0	105.7	7.8	107.0	17.4	107.9	24.0	117.7	41.5	115.4	61.0
07/29/02	136.0	0.2	127.5	0.0	129.2	13.0	129.0	19.9	127.1	32.9	143.5	49.4	153.9	74.3
07/30/02	142.5	0.2	143.6	0.0	147.7	16.4	143.2	22.3	141.9	32.3	146.7	52.1	140.8	73.1
07/31/02	133.4	0.1	140.5	0.0	151.7	16.3	149.2	25.3	147.9	33.2	161.8	56.6	161.6	87.4
08/01/02	127.2	0.1	128.4	0.0	137.1	8.9	138.5	20.3	137.8	26.6	137.1	47.9	135.4	68.5

**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
07/19/02	13.7	4.0	7.4	7.3	32.2	0.0	32.4	0.0	32.8	0.0	34.9	27.1		
07/20/02	13.6	4.0	8.1	7.6	30.9	0.0	31.2	0.0	32.1	0.0	35.9	28.7		
07/21/02	13.6	4.0	8.6	7.3	33.2	0.0	33.2	0.0	32.2	0.0	32.7	27.0		
07/22/02	13.7	4.1	8.2	7.5	30.4	0.0	32.5	0.0	34.5	0.0	35.3	21.6		
07/23/02	13.9	4.2	8.7	10.4	31.4	0.0	30.6	0.0	30.3	0.0	31.6	25.0		
07/24/02	13.6	3.9	9.2	10.8	31.5	0.0	31.7	0.0	33.7	0.0	37.1	30.6		
07/25/02	13.6	3.9	8.3	7.8	31.4	0.0	32.2	0.0	31.7	0.0	34.7	28.5		
07/26/02	13.6	3.9	8.8	7.2	30.2	0.0	30.5	0.0	32.2	0.0	34.7	28.8		
07/27/02	13.6	3.9	7.4	7.4	27.0	0.0	25.7	0.0	24.6	0.0	26.6	20.6		
07/28/02	13.6	3.9	8.0	7.6	29.0	0.0	30.1	0.0	31.3	0.0	34.6	28.7		
07/29/02	13.6	3.9	7.9	7.4	28.3	0.0	29.3	0.0	29.1	0.0	31.5	25.7		
07/30/02	13.2	3.9	8.1	10.3	26.1	0.0	27.3	0.0	28.4	0.0	33.8	27.9		
07/31/02	13.6	3.8	7.5	7.7	31.6	0.0	30.6	0.0	31.3	0.0	32.2	26.3		
08/01/02	13.6	3.8	---	---	25.3	0.0	26.3	0.0	25.8	0.0	27.2	21.1		

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
07/19/02	205.3	36.0	212.4	61.4	216.7	86.2	223.3	95.0	34.3	87.3
07/20/02	232.3	60.7	221.8	65.6	211.6	79.7	222.5	98.2	23.0	94.6
07/21/02	225.9	56.2	225.5	46.6	222.3	87.2	227.2	164.6	---	74.8
07/22/02	226.6	66.4	230.1	58.5	233.5	93.1	232.2	151.6	0.2	73.7
07/23/02	209.8	53.3	202.7	54.3	191.4	76.3	187.9	143.4	0.3	37.5
07/24/02	195.7	36.7	199.9	50.1	199.9	79.6	205.7	134.2	3.5	61.3
07/25/02	191.4	26.5	183.4	65.3	182.6	71.9	202.3	91.5	6.1	98.0
07/26/02	158.1	4.0	151.1	44.6	150.6	59.4	169.3	91.9	0.0	70.6
07/27/02	161.7	6.7	159.8	28.9	154.0	57.8	171.7	138.5	0.0	26.5
07/28/02	153.5	9.4	141.4	42.7	143.0	51.0	162.0	138.6	0.0	16.4
07/29/02	169.5	14.4	176.9	63.9	178.1	66.5	165.6	95.1	1.1	63.9
07/30/02	180.8	24.2	187.5	55.3	184.0	69.5	198.1	95.9	0.6	94.8
07/31/02	175.1	28.3	168.6	49.6	162.1	62.4	167.5	97.1	0.1	63.7
08/01/02	201.8	4.4	162.9	47.3	163.9	63.7	175.9	99.7	0.2	69.3

## 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>McNary Dam</b>											
	07/25/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	07/29/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	08/01/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	07/25/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	07/30/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	08/01/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	07/25/02	Subyearling Chinook	100	1	1	1.00%	0.00%	1	0	0	0
	07/29/02	Subyearling Chinook	100	3	3	3.00%	0.00%	3	0	0	0
	08/01/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0

### Hatchery Releases

There are no hatchery releases for the last two weeks or for the next two weeks.

## 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>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/19	107	108	108	24	126	127	127	24	120	120	120	24	117	117	117	24	117	117	118	24
7/20	107	107	108	24	124	125	127	24	120	120	120	24	117	117	118	24	116	116	117	24
7/21	106	106	106	23	123	123	124	24	120	120	121	24	117	118	118	24	116	116	116	23
7/22	106	107	107	24	121	121	123	11	120	121	121	21	117	117	118	24	117	117	118	23
7/23	106	107	107	24	---	---	---	0	121	121	122	21	117	118	118	24	118	118	118	23
7/24	106	106	107	24	---	---	---	0	121	121	121	24	118	118	119	24	117	117	118	23
7/25	107	107	108	24	---	---	---	0	121	121	122	24	118	119	119	24	117	118	118	23
7/26	107	107	108	24	---	---	---	0	122	122	122	24	119	119	119	24	118	118	118	24
7/27	107	107	108	24	---	---	---	0	121	121	122	24	119	119	120	24	117	117	118	23
7/28	107	107	108	23	---	---	---	0	121	121	121	24	118	119	120	24	116	116	117	23
7/29	107	107	108	24	---	---	---	0	121	121	121	24	118	118	119	24	116	116	117	23
7/30	107	107	108	24	117	117	123	8	121	121	121	24	118	119	119	24	117	117	118	23
7/31	107	107	108	23	114	115	115	24	120	120	120	24	118	118	119	24	116	116	117	23
8/1	106	106	107	22	114	114	115	24	120	120	121	24	117	118	119	24	116	117	117	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>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/19	116	117	117	24	116	116	117	24	117	117	119	24	114	115	117	24	116	117	118	24
7/20	116	116	117	24	115	115	116	24	116	117	121	24	113	113	114	24	115	115	117	24
7/21	116	116	117	23	115	115	116	24	116	116	116	24	114	114	115	23	115	116	116	23
7/22	117	117	118	23	116	116	117	23	116	117	117	23	114	114	114	22	115	116	116	22
7/23	118	118	119	23	117	117	117	24	117	117	118	24	114	114	115	24	116	116	116	24
7/24	117	117	118	23	117	117	117	20	117	117	117	20	115	115	116	20	116	116	117	20
7/25	117	118	119	23	117	117	117	24	117	117	118	24	115	116	116	24	116	116	117	24
7/26	118	118	119	24	116	117	117	24	117	117	118	24	114	115	115	24	115	115	116	24
7/27	117	118	119	23	115	115	116	24	116	116	117	24	113	114	114	23	115	115	115	23
7/28	116	116	118	23	114	115	115	24	115	115	116	24	113	113	113	24	115	115	115	24
7/29	116	116	116	23	113	114	114	22	115	115	117	22	111	112	112	24	113	115	115	24
7/30	115	116	117	23	114	115	115	22	116	117	118	22	111	112	112	24	111	111	111	24
7/31	116	116	117	23	113	114	114	24	115	116	119	24	112	112	113	24	111	112	112	24
8/1	115	116	116	23	115	115	116	24	115	116	117	24	114	115	115	23	111	112	112	23

### 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>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/19	115	116	117	24	119	120	120	24	116	116	117	24	118	118	119	24	115	116	117	24
7/20	114	115	115	24	118	119	120	23	115	115	119	11	118	118	118	11	115	116	118	24
7/21	114	115	116	23	118	119	119	23	116	117	119	24	118	118	118	24	117	117	118	24
7/22	114	114	115	22	118	119	120	22	118	119	119	24	117	119	119	24	118	118	119	24
7/23	114	115	116	24	119	119	120	24	118	119	120	24	118	118	119	24	118	118	119	24
7/24	115	115	116	20	119	119	120	20	117	118	119	24	118	118	119	24	116	117	118	24
7/25	115	115	116	24	118	119	120	24	116	117	118	24	117	118	118	24	115	116	117	24
7/26	113	114	115	24	117	118	118	23	113	114	115	24	116	117	117	24	113	113	115	24
7/27	112	112	113	23	116	117	117	23	111	112	112	24	115	116	116	24	111	112	113	24
7/28	111	111	112	24	115	115	116	23	110	110	110	24	115	115	116	24	109	110	110	24
7/29	112	113	113	24	117	118	118	24	109	109	110	24	115	116	116	24	112	113	114	24
7/30	112	112	113	24	116	117	118	24	110	111	111	24	116	116	117	24	113	113	114	24
7/31	112	112	113	24	116	117	117	24	111	112	114	24	115	116	116	24	112	113	115	24
8/1	113	114	116	23	117	118	119	22	---	---	---	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	Priest R. Dnst				Pasco				Dworshak				Clrwrtr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/19	120	120	121	24	110	111	112	24	107	107	108	24	---	---	---	0	102	103	104	24
7/20	120	120	121	24	110	111	112	24	107	107	108	24	---	---	---	0	102	103	105	24
7/21	120	121	121	24	110	112	112	24	107	107	108	24	106	108	108	24	102	104	105	24
7/22	121	122	122	24	112	113	114	23	107	108	108	20	107	108	109	20	102	104	105	24
7/23	121	122	123	24	110	111	111	24	108	108	109	24	107	108	110	24	102	103	105	24
7/24	120	120	121	24	110	111	112	24	107	107	108	24	107	108	109	24	101	102	103	24
7/25	120	120	121	24	110	111	111	24	107	107	108	24	107	108	109	24	102	102	103	24
7/26	116	117	119	24	109	110	110	24	106	107	107	24	---	---	---	0	102	102	103	24
7/27	115	116	117	24	105	106	107	24	106	106	106	23	106	107	108	23	102	102	103	24
7/28	113	113	114	4	103	103	104	24	105	106	106	24	106	107	108	24	102	103	104	24
7/29	117	117	118	10	103	103	104	24	106	106	107	24	106	107	108	24	102	103	104	24
7/30	116	119	120	24	105	105	106	21	106	107	109	24	106	108	109	24	102	104	105	24
7/31	117	118	120	21	104	105	105	24	105	105	106	24	105	106	107	24	102	103	104	23
8/1	---	---	---	0	106	107	108	24	105	106	106	24	105	107	107	23	102	104	106	24

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

Date	Clrwrtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/19	101	102	103	24	106	107	108	24	102	102	102	24	106	106	107	24	105	105	105	24
7/20	102	104	105	24	106	107	107	24	102	102	103	24	106	107	107	24	105	105	106	24
7/21	102	104	106	24	108	109	110	24	102	103	103	24	107	108	110	24	104	105	105	24
7/22	102	104	106	20	109	110	111	18	102	103	103	18	108	109	112	21	104	104	104	21
7/23	103	104	106	24	109	109	110	24	101	102	102	24	110	111	112	24	102	103	103	23
7/24	102	104	106	24	107	108	109	24	101	102	103	24	107	110	111	24	102	102	103	24
7/25	102	103	105	24	107	108	109	23	102	102	102	24	103	104	106	24	101	102	102	24
7/26	102	104	105	24	105	105	107	24	102	102	102	24	101	102	103	24	101	102	106	24
7/27	102	103	105	23	103	104	104	24	102	102	102	24	101	101	101	24	100	101	101	24
7/28	102	104	105	24	103	103	104	24	101	102	102	24	101	101	101	24	100	100	101	24
7/29	102	104	106	24	103	103	104	24	101	101	101	24	101	101	103	24	100	100	101	24
7/30	103	105	108	24	103	104	105	24	101	101	102	24	102	103	119	24	100	101	101	24
7/31	101	102	104	24	102	103	104	24	100	101	101	23	103	103	115	14	100	100	100	24
8/1	101	103	105	24	105	107	108	24	101	102	102	24	102	103	104	24	101	102	102	24

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

Date	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/19	108	108	109	24	107	107	107	24	109	109	110	24	111	113	113	24	113	114	116	24
7/20	108	108	110	24	106	107	109	24	108	109	110	24	110	112	113	24	113	115	117	20
7/21	108	109	111	24	106	107	108	24	107	108	109	24	110	111	112	24	112	113	116	24
7/22	110	111	112	24	106	107	109	24	108	109	111	21	110	111	112	21	113	114	115	24
7/23	110	110	111	24	106	107	108	24	107	108	109	24	110	111	112	24	115	116	118	24
7/24	108	110	112	24	106	106	107	24	107	108	109	24	110	112	113	23	115	116	119	24
7/25	106	106	108	24	105	105	105	24	107	107	108	24	110	112	113	24	116	117	118	24
7/26	104	105	106	22	103	104	104	23	106	107	108	24	110	112	113	24	113	114	115	24
7/27	104	104	105	24	103	103	104	24	105	106	106	24	109	110	111	24	111	112	113	24
7/28	104	104	104	24	102	103	104	24	104	105	105	24	111	111	112	24	110	111	112	23
7/29	103	103	104	24	101	102	103	24	104	104	105	24	109	111	112	24	110	112	115	24
7/30	103	103	104	24	102	102	104	24	103	104	104	24	110	112	113	24	109	111	112	24
7/31	101	102	102	24	101	101	102	24	102	103	104	24	109	111	112	24	107	108	112	24
8/1	103	104	106	24	102	103	103	24	103	104	104	24	109	110	111	24	108	110	111	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>	<u>24h</u>	<u>AVG</u>	<u>High</u>	<u>#</u>	
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
7/19	112	113	113	24	114	114	115	24	107	107	107	24	117	118	119	24	107	107	108	24
7/20	113	114	115	24	115	116	118	24	106	106	108	24	117	118	119	24	107	108	109	23
7/21	113	114	115	24	114	115	115	23	107	108	110	23	110	113	117	21	109	109	110	23
7/22	114	115	116	24	115	116	116	24	109	110	110	23	112	115	118	21	110	114	116	23
7/23	115	116	118	24	116	117	118	16	108	108	109	23	112	116	117	24	109	111	112	23
7/24	115	116	117	24	115	115	118	21	109	110	111	23	113	117	118	24	109	112	114	23
7/25	114	115	116	24	114	115	118	24	110	110	111	23	116	118	119	24	108	109	111	21
7/26	112	113	113	24	112	112	113	24	108	109	109	24	115	115	116	24	106	107	109	24
7/27	110	110	111	24	110	111	111	24	106	106	106	23	111	115	118	24	104	105	105	23
7/28	108	109	109	24	109	110	112	24	104	104	105	23	111	117	119	24	104	104	105	23
7/29	108	109	113	24	109	111	112	24	103	103	103	23	116	117	118	24	105	107	109	23
7/30	109	109	110	24	111	111	111	24	102	102	103	23	116	117	118	24	106	107	109	23
7/31	107	109	110	24	111	112	117	24	101	102	104	23	115	116	118	24	104	105	106	22
8/1	109	110	112	24	108	108	109	24	102	102	103	23	115	115	115	24	107	107	108	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>	<u>24h</u>	<u>12h</u>	<u>#</u>	
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/19	115	115	115	24	110	110	111	24	113	115	118	24	110	112	115	24
7/20	114	115	115	24	108	109	109	24	113	116	120	24	111	114	117	24
7/21	115	116	116	24	110	111	112	23	121	122	123	23	113	118	119	24
7/22	116	118	119	24	114	115	115	23	121	121	122	23	119	120	122	24
7/23	115	116	118	20	113	114	114	22	119	120	120	23	117	118	119	24
7/24	116	117	117	24	110	111	111	23	117	118	119	23	116	116	117	24
7/25	115	116	118	24	108	108	109	23	113	115	116	23	113	113	114	24
7/26	114	115	116	24	106	106	107	24	112	113	116	23	109	111	113	23
7/27	112	113	113	24	104	105	106	23	117	118	118	23	110	113	116	24
7/28	111	112	112	24	104	104	105	23	119	119	120	23	115	116	117	24
7/29	112	113	115	24	104	105	105	23	113	116	118	23	115	116	117	24
7/30	114	115	115	24	105	105	106	23	113	115	118	23	110	112	114	24
7/31	113	113	114	24	105	106	107	23	114	116	119	23	108	112	115	24
8/1	115	115	116	24	107	107	108	23	115	118	121	23	112	115	118	24



## 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/currentsmptsubmitdata.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)
07/19/2002	---	---	---	---	20	17	60	2	1	35	0
07/20/2002	*	---	---	---	0	0	240	3	0	3	0
07/21/2002	*	---	---	---	0	100	120	0	135	3	0
07/22/2002		---	---	---	0	0	29	0	78	3	0
07/23/2002	*	---	---	---	0	220	20	0	0	3	0
07/24/2002		---	---	---	0	0	80	1	11	3	0
07/25/2002	*	---	---	---	0	14	250	4	0	0	29
07/26/2002	*	---	---	---	20	0	50	1	0	0	6
07/27/2002	*	---	---	---	0	5	140	0	0	0	0
07/28/2002		---	---	---	0	10	20	3	0	0	0
07/29/2002		---	---	---	0	0	40	0	0	0	0
07/30/2002		---	---	---	0	0	0	0	8	0	0
07/31/2002	*	---	---	---	5	0	10	0	0	10	0
08/01/2002		---	---	---	15	0	0	0	18	0	0
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>366</b>	<b>1,059</b>	<b>14</b>	<b>251</b>	<b>60</b>	<b>35</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>4</b>	<b>26</b>	<b>76</b>	<b>1</b>	<b>18</b>	<b>4</b>	<b>3</b>
<b>YTD</b>	<b>38,199</b>	<b>29,095</b>	<b>8,013</b>	<b>7,847</b>	<b>2,459,161</b>	<b>2,843,792</b>	<b>2,221,688</b>	<b>28,976</b>	<b>3,519,109</b>	<b>2,104,898</b>	<b>3,328,043</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)
07/19/2002	---	---	---	---	8,660	10,628	7,040	400	111,108	27,896	86,036
07/20/2002	*	---	---	---	11,120	10,568	8,160	560	62,852	22,477	52,683
07/21/2002	*	---	---	---	59,457	7,931	3,160	367	95,844	22,738	71,126
07/22/2002		---	---	---	16,300	4,814	2,657	462	87,807	22,535	23,519
07/23/2002	*	---	---	---	16,300	9,653	5,810	571	43,604	30,099	17,985
07/24/2002		---	---	---	10,400	4,231	13,600	493	44,805	13,504	6,341
07/25/2002	*	---	---	---	12,300	4,150	9,400	381	36,127	20,590	17,936
07/26/2002	*	---	---	---	12,020	2,274	4,900	305	20,779	10,547	26,861
07/27/2002	*	---	---	---	9,520	3,858	8,700	315	19,238	15,440	45,416
07/28/2002		---	---	---	2,460	3,650	4,580	388	27,154	8,997	6,213
07/29/2002		---	---	---	1,310	3,015	1,500	400	23,692	6,363	4,713
07/30/2002		---	---	---	2,480	1,193	1,020	408	45,099	4,093	23,642
07/31/2002	*	---	---	---	2,165	862	1,030	488	32,000	3,733	47,203
08/01/2002		---	---	---	2,630	1,429	850	391	27,003	7,696	24,924
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>167,122</b>	<b>68,256</b>	<b>72,407</b>	<b>5,929</b>	<b>677,112</b>	<b>216,708</b>	<b>454,598</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>11,937</b>	<b>4,875</b>	<b>5,172</b>	<b>424</b>	<b>48,365</b>	<b>15,479</b>	<b>32,471</b>
<b>YTD</b>	<b>0</b>	<b>4</b>	<b>26</b>	<b>3,488</b>	<b>676,953</b>	<b>320,944</b>	<b>288,502</b>	<b>20,693</b>	<b>7,518,261</b>	<b>3,280,256</b>	<b>6,854,451</b>

## Two-Week Summary of Passage Indices

Date	COMBINED COHO										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/19/2002	---	---	---	---	0	8	0	14	0	0	0
07/20/2002 *	---	---	---	---	0	0	20	36	250	3	242
07/21/2002 *	---	---	---	---	82	0	40	14	0	0	0
07/22/2002	---	---	---	---	0	0	29	22	195	216	0
07/23/2002 *	---	---	---	---	0	40	60	15	83	190	0
07/24/2002	---	---	---	---	50	14	160	25	28	3	0
07/25/2002 *	---	---	---	---	0	29	150	22	113	0	29
07/26/2002 *	---	---	---	---	20	0	0	14	113	0	0
07/27/2002 *	---	---	---	---	0	0	20	10	0	35	0
07/28/2002	---	---	---	---	0	0	0	10	26	0	0
07/29/2002	---	---	---	---	0	5	20	7	53	0	0
07/30/2002	---	---	---	---	0	5	0	7	93	0	47
07/31/2002 *	---	---	---	---	5	0	10	1	70	10	0
08/01/2002	---	---	---	---	5	0	0	4	0	23	0
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>162</b>	<b>101</b>	<b>509</b>	<b>201</b>	<b>1,024</b>	<b>480</b>	<b>318</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>12</b>	<b>7</b>	<b>36</b>	<b>14</b>	<b>73</b>	<b>34</b>	<b>23</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>124,043</b>	<b>104,129</b>	<b>65,994</b>	<b>86,186</b>	<b>201,803</b>	<b>314,974</b>	<b>2,331,494</b>

Date	COMBINED STEELHEAD										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/19/2002	---	---	---	---	80	8	140	2	0	18	0
07/20/2002 *	---	---	---	---	160	21	160	7	125	0	0
07/21/2002 *	---	---	---	---	164	20	40	1	134	0	0
07/22/2002	---	---	---	---	100	40	342	1	19	22	0
07/23/2002 *	---	---	---	---	50	50	350	3	20	0	0
07/24/2002	---	---	---	---	50	32	480	7	35	0	0
07/25/2002 *	---	---	---	---	160	85	300	1	19	67	0
07/26/2002 *	---	---	---	---	100	8	250	4	56	0	54
07/27/2002 *	---	---	---	---	100	15	140	3	0	0	0
07/28/2002	---	---	---	---	0	10	220	1	0	0	0
07/29/2002	---	---	---	---	30	5	40	6	11	0	0
07/30/2002	---	---	---	---	40	20	0	3	9	0	0
07/31/2002 *	---	---	---	---	75	4	70	1	23	10	0
08/01/2002	---	---	---	---	75	8	110	5	27	11	0
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,184</b>	<b>326</b>	<b>2,642</b>	<b>45</b>	<b>478</b>	<b>128</b>	<b>54</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>85</b>	<b>23</b>	<b>189</b>	<b>3</b>	<b>34</b>	<b>9</b>	<b>4</b>
<b>YTD</b>	<b>2,833</b>	<b>32,043</b>	<b>3,494</b>	<b>11,810</b>	<b>2,602,698</b>	<b>2,273,119</b>	<b>1,791,970</b>	<b>28,694</b>	<b>794,424</b>	<b>545,784</b>	<b>1,455,004</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											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/19/2002	---	---	---	---	40	80	0	17	402	0	0	
07/20/2002	*	---	---	---	0	41	0	16	375	205	1,208	
07/21/2002	*	---	---	---	0	0	0	10	535	45	244	
07/22/2002		---	---	---	0	26	0	11	311	120	0	
07/23/2002	*	---	---	---	0	30	20	12	208	3	102	
07/24/2002		---	---	---	0	71	20	8	163	203	0	
07/25/2002	*	---	---	---	120	107	100	14	245	67	0	
07/26/2002	*	---	---	---	40	8	50	10	1	71	2	
07/27/2002	*	---	---	---	0	15	0	8	53	0	0	
07/28/2002		---	---	---	40	15	0	22	154	33	0	
07/29/2002		---	---	---	10	10	0	0	85	25	0	
07/30/2002		---	---	---	0	10	0	8	204	0	95	
07/31/2002	*	---	---	---	5	0	0	7	139	18	0	
08/01/2002		---	---	---	0	6	0	8	117	0	0	
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>255</b>	<b>419</b>	<b>190</b>	<b>151</b>	<b>2,992</b>	<b>790</b>	<b>1,651</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>18</b>	<b>30</b>	<b>14</b>	<b>11</b>	<b>214</b>	<b>56</b>	<b>118</b>	
<b>YTD</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>261</b>	<b>77,431</b>	<b>66,541</b>	<b>38,956</b>	<b>20,520</b>	<b>1,407,432</b>	<b>933,343</b>	<b>847,790</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: 08/01**

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	127,442	7,948	76,156	14,723	26,786	4,828	642	41	625	58	264	58
TDA	181,176	3,870	303,912	9,953	68,558	3,895	112,076	5,637	70,321	10,647	22,090	3,407	0	0	0	0	0	0
JDA	139,887	2,403	264,177	6,208	58,196	3,052	103,892	5,257	62,474	9,619	20,329	2,852	0	0	0	0	0	0
MCN	129,357	3,872	258,689	6,683	54,462	2,970	104,985	6,376	64,698	8,765	20,392	2,668	0	0	0	0	0	0
IHR	85,207	1,826	171,173	3,026	32,988	1,807	26,391	2,410	15,095	2,374	5,292	856	0	0	0	0	0	0
LMN	76,304	1,537	180,787	1,784	32,792	1,811	23,507	1,602	18,984	1,490	5,513	775	0	0	0	0	0	0
LGS	77,232	1,815	174,823	2,990	31,528	1,921	20,585	2,221	15,645	2,709	5,059	978	0	0	0	0	0	0
LWG	75,025	2,132	171,958	3,135	30,329	1,865	21,869	1,900	13,506	3,727	4,981	1,080	0	0	0	0	0	0
PRD	34,083	196	50,379	987	14,107	363	83,801	1,126	46,077	2,369	16,202	820	0	0	0	0	0	0
RIS	24,734	892	39,785	1,761	10,725	505	66,842	2,086	36,581	8,683	12,609	2,281	0	0	0	0	0	0
RRH	11,204	215	15,895	543	3,314	135	58,752	1,951	27,416	3,315	6,954	820	0	0	0	0	0	0
WEL	7,587	39	9,989	892	1,799	176	45,613	202	20,512	2,019	4,038	517	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2002		2001		10-Yr Avg.		2002	2001	10-Yr Avg.	2002	2001	10-Yr Avg.	Wild 2002
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	4	0	11	2	10	2	49,556	114,869	50,202	150,160	235,077	77,670	60,685
TDA	0	0	0	0	0	0	40,477	102,498	39,974	78,493	121,618	34,166	35,455
JDA	0	0	46	3	1	0	41,839	107,718	43,138	57,879	69,064	23,341	25,308
MCN	0	0	0	0	0	0	39,006	97,003	39,732	37,615	59,812	17,809	15,096
IHR	0	0	0	0	0	0	57	37	13	18,624	23,614	8,843	6,192
LMN	0	0	0	0	0	0	43	32	21	17,122	24,725	7,949	6,559
LGS	0	0	0	0	0	0	31	71	24	12,695	14,143	4,438	5,301
LWG	0	0	0	0	0	0	49	36	23	17,764	14,164	7,054	5,847
PRD	15	0	14	25	6	3	45,336	109,328	47,907	3,311	4,779	1,527	***
RIS	4	0	29	0	5	0	37,107	102,755	41,214	1,502	2,813	926	410
RRH	14	0	28	0	3	0	15,504	64,957	25,753	1,470	1,914	611	425
WEL	0	0	0	0	0	0	9,083	71,560	24,411	921	907	329	406

PRD is through 07/31; RRH is through 07/30; WEL is through 07/29; RIS is through 07/28.

MCN is missing 07/30

RIS, RRH, PRD and WEL data for the last week is from the PUDs.

\*\*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

		07/20/02 TO 08/02/02					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	167,122	60	162	255	1,184	168,783
	Sum of NumberBarged	183,836	45	157	226	1,158	185,422
	Sum of NumberBypassed	118	0	0	0	0	118
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	2,584	0	0	29	11	2,624
<b>LGS</b>	Sum of NumberCollected	68,256	366	101	419	326	69,468
	Sum of NumberBarged	71,290	362	99	360	300	72,411
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	615	4	2	75	32	728
<b>LMN</b>	Sum of NumberCollected	72,407	1,059	509	190	2,642	76,807
	Sum of NumberBarged	74,358	1,051	518	180	2,672	78,779
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1,157	28	11	10	131	1,337
<b>MCN</b>	Sum of NumberCollected	539,958	190	834	2,385	382	543,749
	Sum of NumberBarged	455,447	169	749	2,101	330	458,796
	Sum of NumberBypassed	72,826	6	75	259	38	73,204
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	11,670	15	10	24	14	11,733
Total Sum of NumberCollected		847,743	1,675	1,606	3,249	4,534	858,807
Total Sum of NumberBarged		784,931	1,627	1,523	2,867	4,460	795,408
Total Sum of NumberBypassed		72,944	6	75	259	38	73,322
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		16,026	47	23	138	188	16,422

### YTD Transportation Summary

TO: 08/02/02

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	555,799	1,535,640	80,753	51,338	1,698,561	3,922,091
	Sum of NumberBarged	545,559	1,483,768	80,598	49,444	1,627,736	3,787,105
	Sum of NumberBypassed	212	38,152	5	7	65,895	104,271
	Sum of NumberTrucked	29	9,847	20	343	3,383	13,622
	Sum of TotalProjectMortalities	7,438	3,858	125	1,544	1,252	14,217
<b>LGS</b>	Sum of NumberCollected	277,423	1,907,358	79,602	48,130	1,562,561	3,875,074
	Sum of NumberBarged	275,026	1,904,685	79,035	47,371	1,559,409	3,865,526
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of NumberTrucked	0	1,034	4	74	1,024	2,136
	Sum of TotalProjectMortalities	984	1,639	563	682	2,123	5,991
<b>LMN</b>	Sum of NumberCollected	288,457	2,214,475	62,889	38,558	1,751,093	4,355,472
	Sum of NumberBarged	256,537	2,121,896	60,842	37,453	1,713,249	4,189,977
	Sum of NumberBypassed	29,272	68,125	1,994	208	31,958	131,557
	Sum of NumberTrucked	0	20,104	0	13	356	20,473
	Sum of TotalProjectMortalities	1,817	4,350	53	884	5,423	12,527
<b>MCN</b>	Sum of NumberCollected	4,535,529	2,204,883	111,704	907,067	464,564	8,223,747
	Sum of NumberBarged	1,245,504	649	1,901	3,499	953	1,252,506
	Sum of NumberBypassed	3,261,192	2,203,242	109,765	902,697	463,311	6,940,207
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	28,800	992	38	870	300	31,000
Total Sum of NumberCollected		5,657,208	7,862,356	334,948	1,045,093	5,476,779	20,376,384
Total Sum of NumberBarged		2,322,626	5,510,998	222,376	137,767	4,901,347	13,095,114
Total Sum of NumberBypassed		3,290,676	2,309,519	111,764	902,912	561,164	7,176,035
Total Sum of NumberTrucked		29	30,985	24	430	4,763	36,231
Total Sum of TotalProjectMortalities		39,039	10,839	779	3,980	9,098	63,735

