



## Fish Passage Center

# Weekly Report #08 - 26

August 29, 2008

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### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 34% and 158% of average at individual sub-basins over August. Precipitation above The Dalles has been 112% of average over August. Over the entire water year, precipitation has generally been near average.

**Table 1. Summary of August 1-25 precipitation and cumulative October through August precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2008 August 1-25		Water Year 2008 October 1, 2007 to August 25, 2008	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.64	121	23.05	97
SNAKE RIVER ABOVE ICE HARBOR	0.43	62	15.79	94
Columbia Above The Dalles	1.07	112	21.25	97
Kootenai	1.79	131	21.59	89
Clark Fork	1.12	107	17.11	104
Flathead	1.24	96	21.47	99
Pend Oreille/Spokane	1.36	133	29.54	100
Central Washington	0.27	88	6.07	70
SNAKE RIVER PLAIN	0.16	34	8.11	76
Salmon/Boise/Payette	0.30	52	18.65	98
Clearwater	1.50	155	29.15	100
SW Washington Cascades/Cowlitz	1.96	158	63.06	92
Willamette Valley	1.34	156	58.56	102

The summer Biological Opinion flow at Lower Granite Dam is determined by the June Final Water Supply Forecast and is 52.5 Kcfs this year. Flows at Lower Granite Dam averaged 58.0 Kcfs between June 21<sup>st</sup>, 2008 and August 28<sup>th</sup>, 2008. Flows at Lower Granite averaged 33.5 Kcfs last week.

The summer Biological Opinion flow at McNary Dam is 200 Kcfs and began on July 1, 2008. Flows at McNary Dam have averaged 174.6 Kcfs over the summer flow period (July 1-August 28) and have averaged 133.6 Kcfs last week.

Grand Coulee Reservoir is at 1280.4 feet (8-28-08) and has drafted 1.4 feet over the last week. Outflows at Grand Coulee have ranged between 71.2 and 106 Kcfs over the last week. Inflows last week have ranged between 80.4 Kcfs and 88.2 Kcfs. The end of August draft elevation is 1280 feet at Grand Coulee this year.

The Libby Reservoir is currently at elevation 2442.2 feet (8-28-08) and drafted 0.3 feet last week. Inflows at Libby have ranged between 6.0 Kcfs and 11.9 Kcfs over the last week. A Libby/Canadian Storage Exchange has been agreed upon this year which will leave approximately 60 Ksf of water in Libby reservoir over August and release approximately 60 Ksf more water from Canadian projects over the same period. To facilitate this operation, outflows from Libby were increased slightly from 8 Kcfs and are currently 9.2 Kcfs. Outflows at Libby will likely stay at this level throughout the remainder of August.

Hungry Horse is currently at an elevation of 3542.4 ft (8-28-08) and has drafted 2.6 feet last week. Outflows are currently 6.5 Kcfs; inflows ranged between 0.7 Kcfs and 2.2 Kcfs last week. The BOR expects Hungry Horse to be approximately one-foot above the end of August draft elevation of 3540 feet by August 31<sup>st</sup>, 2008.

Dworshak is currently at an elevation of 1540.1 feet (8-28-08) and has drafted 9.0 feet last week. Outflows at Dworshak are approximately 12.5 Kcfs; inflows have ranged between 1.7 and 3.6 Kcfs last week. At the August 27<sup>th</sup>, 2008 TMT Meeting the COE stated

that they will likely be one-half to one-foot above the 1535 ft elevation at Dworshak by the end of August. Outflows from Dworshak will remain near 12.5 Kcfs through August.

The Brownlee Reservoir is at an elevation of 2054.8 feet (August 28<sup>th</sup>, 2008), and has refilled 0.2 feet last week. Outflows at Brownlee Dam have been 8.8 to 12.5 Kcfs over the last week. Inflows at Brownlee Dam have been 10.0 to 11.2 Kcfs over the last week.

**Spill:** The summer spill season was initiated on June 21, 2008 in the Snake River and will continue through August 31, 2008. The Court Order calls for the following spill levels at the Federal Snake River Projects:

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	30%/30% vs 45 Kcfs/Gas Cap Study

Dworshak Dam outflow was approximately 12.5 Kcfs over the past week, which is above hydraulic capacity, resulting in 2.5 Kcfs spill through the regulating outlets. Lower Granite Dam spilled to the Court Order over the past week. There was concern this past week that the Lower Snake projects would have trouble meeting the minimum generation flows, minimum spill and minimum operating pool elevations. The 30% spill from Little Goose Dam was the most variable factor and was responsible for affecting Lower Monumental and Ice Harbor spill. SOR 2008-6 was submitted by the State, Tribal and Federal fishery agencies requesting spill at Little Goose Dam to be a constant 11 Kcfs. The SOR is presently being implemented in an effort to minimize the excursions from the Court Order.

Summer spill in the Lower Columbia River was initiated on July 1, 2008. The Court Order calls for the following summer spill levels at the Federal Lower Columbia River Projects:

Project	Day/Night Spill
McNary	60%/60% vs 40%/40%
John Day	30%/30% vs 40%/40% test days
The Dalles	40%/40%
Bonneville	75 Kcfs/Gas Cap (after completion of 85 Kcfs Test)

Summer spill at McNary was initiated on June 21, 2008 to facilitate the conduct of a research study comparing spill levels of 40%/40% versus 60%/60%. Although the study has been completed, spill at McNary Dam continues alternating between 40%/40% versus 60%/60% spill through the end of August, in 2-day blocks. Spill at McNary did not always achieve the 60% levels during the past week due to low flows and minimum generating requirements. Spill at John Day and The Dalles dams has generally met the Court Ordered levels over the past week. The summer spill levels at Bonneville Dam are now 75 Kcfs during daytime hours and gas cap spill at night. The spill cap, and thus night-time spill at Bonneville Dam has ranged from 75 to 120 Kcfs this past week dependent on flows and minimum generation.

Total dissolved gas did not exceed the 120% tailrace or 115% forebay limits this past week, except for the Camas Washougal monitor. On August 22nd, the 12-hour average TDG at the Camas Washougal monitor was 116.2%.

Sampling occurred at Little Goose, Lower Monumental, McNary and Bonneville dams this past week. There were no detections of GBT at any of these Snake or Lower Columbia projects this week.

**Smolt Monitoring:** Subyearling Chinook continue to pass in relatively large numbers at Lower Granite and McNary dams. At Lower Granite Dam in the Snake River the daily passage indices for subyearling Chinook averaged about 800 per day this past week compared to 1,000 per day the previous week. PIT-tag data suggest that hatchery origin fish predominate—especially releases from Big Canyon Creek. Passage indices continued to decline at Little Goose Dam. Indices were lower than those seen at Lower Granite this past week which a reversal from what had been occurring. It may be that the increased spill proportion over the past week at Little Goose Dam has caused a decrease in collection efficiency at that project.

At Rock Island Dam indices for subyearling Chinook dropped to less than 20 per day this past week compared to 30 per day last week. At the lower Columbia River dams indices for subyearling Chinook were down at McNary Dam this week. The subyearling Chinook index averaged over 8,000 fish per day this past week compared to less than 12,000 per day last week and 10,000 per day three weeks ago. At John Day

Dam sampling has been limited due to temperatures in excess of 70 degrees F and Sampling at Bonneville Dam is restricted to every other day due to high temperatures as well.

#### **Hatchery releases:**

**Snake River Zone:** The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. There were no scheduled releases of juvenile salmonids to this zone this week and no releases are scheduled over the next two weeks.

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. There were no releases of juvenile salmonids to the Mid-Columbia river zone this week. Furthermore, no releases are scheduled for this zone over the next two weeks.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were no scheduled releases of juvenile salmonids to this zone this week and no releases are scheduled over the next two weeks.

#### **Adult Fish Passage:**

Fall Chinook begin to pass Bonneville Dam on August 1<sup>st</sup>. Daily counts of adult fall Chinook ranged from 2,955 to 14,913. The 2008 Bonneville Dam adult fall Chinook count of 61,840 is about 2.53 times greater than the 2007 and is 1.54 times greater than the 10 year average. The fall Chinook jack count of 7,466 is about 2.44 times greater than the 2007 count is about 1.91 times greater than the 10 year average. The adult fall Chinook count total at The Dalles Dam is 23,635, about 38.2% of the Bonneville passage total to date.

As of August 27<sup>th</sup>, 230,117 steelhead had passed Bonneville Dam. The 2008 count was 95.5% of the 2007 count of 240,773 and 1.04 times greater than the 10 year average of 220,779. The 2008 wild steelhead count at Bonneville Dam was 79,098 fish. The daily steelhead counts at The Dalles Dam ranged between 758 and 1,371 for the week with a cumulative count of 109,040. About 47.3% of the steelhead counted at Bonneville Dam had passed The Dalles Dam. The majority of the 57,108 steelhead at McNary Dam have moved up into the Snake River with the cumulative

count at Ice Harbor now at 37,461 for the season. The 2008 count Lower Granite Dam steelhead count of 24,317 was 1.54 times greater than the 2007 count and 1.63 times greater than the 10 year average. The cumulative count at Priest Rapids Dam was at 8,837 steelhead for the season.

During this time of year, there are times when there are higher steelhead counts at upstream projects compared to downstream projects. The higher counts of steelhead at upstream sites compared to downstream sites in any particular year is because some steelhead spend the winter between sites, for instance between Ice Harbor and Lower Granite, and then start their migration upstream the following year. The summer steelhead run is delineated according to dates of passage past Bonneville Dam and is made up of two components. A-run steelhead pass Bonneville Dam from the first of June through August 25<sup>th</sup> and B-run steelhead pass Bonneville from August 26<sup>th</sup> through October. These fish spawn the following spring, so they over winter in the rivers. The higher counts at upstream dams are caused by the fish that over-wintered between dams, re-starting their upstream migration the following year. A-run summer steelhead pass Bonneville Dam through August 25<sup>th</sup>. The 2008 A-run adult steelhead count at Bonneville was 219,576 which was about 96.5% of the 2007 count of 227,398 and was about 1.05 times greater than the 10 year average count of 209,104. The 2008 B-run adult steelhead began August 26<sup>th</sup> at Bonneville Dam and was 6,767 as of August 27<sup>th</sup>. The 2008 B-run steelhead count is 68.6% of the 2007 count and 89.4% of the 10-year average.

The coho salmon count at Bonneville Dam was 2,851 adults and 260 jacks as of August 27<sup>th</sup>. To date, the 2008 Bonneville coho count is about 1.43 times greater than the 2007 count and is 78.8% of the 10 year average. To date, 5 chum and 60 pink salmon have been observed at Bonneville Dam.

Idaho Department of Fish & Game reports that 530 sockeye have successfully returned to Redfish Lake Creek and the Sawtooth Hatchery, the highest return since 1976.

**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
08/15/2008	83.3	0.1	90.5	0.0	92.0	8.5	92.0	7.0	92.1	19.3	94.2	19.8	88.0	24.2
08/16/2008	78.8	0.1	81.7	0.0	82.9	8.1	84.5	6.9	83.8	15.5	90.0	19.0	90.3	23.0
08/17/2008	55.6	0.1	50.5	0.0	53.2	6.9	54.1	6.3	56.9	2.8	93.9	7.5	93.5	22.8
08/18/2008	72.3	0.1	66.8	0.0	70.2	8.1	72.8	8.3	70.3	0.0	68.4	0.9	72.4	9.0
08/19/2008	78.5	0.1	87.7	0.0	88.8	8.8	89.5	7.6	87.0	0.0	77.5	1.6	66.1	0.6
08/20/2008	86.4	0.1	87.6	0.0	89.1	8.9	83.0	6.3	79.7	0.0	75.6	1.8	73.3	0.9
08/21/2008	101.1	0.1	98.7	0.0	97.2	8.8	93.7	6.9	89.3	0.0	89.8	2.4	83.1	1.0
08/22/2008	106.0	0.1	103.1	0.0	105.5	8.6	106.7	7.8	105.5	0.0	113.7	5.3	112.7	1.2
08/23/2008	98.7	0.1	100.1	0.0	102.4	8.0	103.8	6.8	100.8	0.0	104.3	5.4	98.6	1.0
08/24/2008	71.2	0.1	70.9	0.0	79.6	6.6	80.9	7.3	79.4	0.0	100.9	4.1	104.8	1.0
08/25/2008	90.7	0.1	91.2	0.0	88.7	8.1	90.4	8.4	88.9	0.0	97.3	2.0	101.6	1.0
08/26/2008	81.0	0.1	87.4	0.0	87.4	7.8	85.7	7.5	83.9	0.0	81.9	1.3	72.5	0.7
08/27/2008	80.9	0.1	78.0	0.0	77.3	1.3	78.2	8.0	78.0	0.0	82.4	1.9	78.0	1.7
08/28/2008	101.4	0.1	101.0	0.0	103.6	0.0	97.0	8.5	90.4	0.0	99.5	1.2	99.3	2.5

**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
08/15/2008	14.4	4.5	11.5	12.3	35.3	18.4	34.5	10.3	33.8	16.7	37.8	27.8
08/16/2008	14.4	4.4	11.7	10.6	35.5	18.4	32.8	9.7	29.7	17.4	31.6	21.9
08/17/2008	14.4	4.4	10.6	10.6	31.8	18.3	30.3	9.0	29.9	17.5	32.0	22.0
08/18/2008	14.4	4.3	11.7	10.6	35.2	18.3	31.8	9.5	30.2	17.4	32.7	22.9
08/19/2008	14.4	4.3	12.2	15.4	37.1	18.4	35.5	10.6	32.8	17.4	34.8	25.1
08/20/2008	14.4	4.2	10.9	15.4	36.3	18.6	34.9	10.5	33.4	17.4	37.1	26.9
08/21/2008	14.4	4.2	11.0	13.0	34.9	18.8	31.3	9.5	30.2	17.4	31.7	21.7
08/22/2008	13.8	3.6	10.7	12.5	38.1	18.6	36.5	10.9	35.7	17.5	39.0	29.0
08/23/2008	12.5	2.3	10.6	10.3	36.9	18.4	34.7	10.4	32.9	17.4	35.7	25.3
08/24/2008	12.5	2.3	10.0	8.9	32.1	18.2	31.2	9.4	29.6	17.4	31.7	21.4
08/25/2008	12.5	2.3	11.2	9.4	31.5	18.4	25.9	7.7	25.1	13.2	26.1	16.0
08/26/2008	12.5	2.2	10.4	12.9	32.8	18.6	30.0	10.1	29.8	16.4	33.7	23.3
08/27/2008	12.5	2.2	10.3	9.7	32.0	18.5	31.0	11.1	28.0	15.3	29.5	19.3
08/28/2008	12.6	2.2	---	---	31.4	18.4	28.5	11.1	29.4	17.4	31.5	21.2

**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
08/15/2008	139.8	83.9	130.6	39.3	123.8	49.6	133.6	77.9	0.0	43.9
08/16/2008	119.9	54.2	105.8	31.8	102.0	40.7	122.2	78.4	0.0	32.0
08/17/2008	122.5	49.5	110.2	33.2	106.7	42.7	117.0	74.1	0.0	31.0
08/18/2008	137.4	76.6	128.0	38.2	122.6	48.7	133.5	66.5	0.0	55.1
08/19/2008	110.6	55.5	108.1	32.5	109.2	43.6	124.4	72.1	0.0	40.4
08/20/2008	115.1	46.5	115.3	34.5	109.3	43.8	127.3	78.4	0.0	37.0
08/21/2008	125.2	50.1	114.5	34.4	114.1	45.9	123.5	80.8	0.1	30.8
08/22/2008	131.0	72.9	129.6	38.8	125.3	50.2	138.8	83.8	0.0	43.1
08/23/2008	144.8	87.2	136.0	41.0	127.8	50.7	131.6	84.7	0.0	35.1
08/24/2008	149.5	67.1	138.3	41.8	137.0	54.6	157.3	90.8	0.0	54.6
08/25/2008	142.8	57.4	133.1	40.2	131.3	52.4	141.8	90.6	19.8	19.5
08/26/2008	128.7	69.7	123.6	37.3	120.9	48.5	131.5	87.2	0.0	32.3
08/27/2008	117.4	60.8	111.4	33.3	106.4	42.5	122.6	79.3	0.0	31.4
08/28/2008	121.0	54.7	118.3	35.5	117.7	46.9	126.1	82.7	0.0	31.5

## 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>Little Goose Dam</b>											
	08/19/08	Chinook + Steelhead	21	0	0	0.00%	0.00%	0	0	0	0
	08/26/08	Chinook + Steelhead	24	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	08/25/08	Chinook + Steelhead	12	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	08/19/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/23/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/26/08	Chinook + Steelhead	38	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	08/25/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/28/08	Chinook + Steelhead	100	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>		#	<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>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
8/15	105	105	106	12	106	106	107	24	108	109	109	24	108	109	110	24	110	110	111	24
8/16	---	---	---	0	106	107	108	20	108	109	109	24	110	111	116	20	110	110	111	24
8/17	---	---	---	0	107	107	108	22	108	109	109	24	111	112	115	22	110	111	111	24
8/18	107	107	107	17	107	108	109	22	108	108	109	24	110	111	112	22	110	110	111	24
8/19	106	107	107	24	107	108	108	22	107	107	108	24	109	110	116	22	109	110	110	24
8/20	106	106	107	24	107	108	109	24	107	107	108	24	109	110	113	24	109	110	110	24
8/21	105	106	106	24	107	107	108	23	106	106	107	24	108	109	112	23	108	109	109	24
8/22	104	104	105	24	106	107	107	22	105	105	105	24	106	107	107	22	106	106	107	7
8/23	104	104	105	24	105	106	108	17	104	105	105	24	107	107	109	17	106	106	107	24
8/24	103	104	104	24	107	108	109	17	104	105	105	24	108	108	111	17	106	107	107	24
8/25	105	106	106	24	105	106	106	22	105	105	105	24	106	107	110	22	106	106	107	24
8/26	105	105	105	24	105	105	106	23	104	104	104	24	105	106	109	23	105	105	106	24
8/27	104	104	105	24	104	105	106	22	103	104	105	24	105	106	109	22	105	105	106	24
8/28	104	104	104	24	105	105	106	23	103	103	104	24	105	106	108	23	104	104	105	24

### 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>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
8/15	110	110	111	24	111	113	114	24	113	115	115	24	112	112	113	23	110	112	112	23
8/16	111	111	111	24	111	112	114	24	114	115	116	24	113	114	114	24	110	112	113	24
8/17	111	112	113	24	112	113	115	24	114	115	117	24	114	115	116	24	110	111	112	24
8/18	111	111	112	24	111	112	113	24	114	114	115	24	114	115	115	24	110	111	111	24
8/19	110	111	111	24	110	110	111	23	112	113	113	23	112	113	113	24	110	112	113	24
8/20	110	110	110	24	109	109	110	24	111	112	112	24	112	112	112	24	110	110	111	24
8/21	108	109	110	24	107	108	108	24	110	110	111	24	110	110	111	24	109	110	110	24
8/22	107	107	108	7	106	107	108	24	109	110	111	24	107	108	108	24	108	109	109	24
8/23	106	106	107	24	106	107	108	24	109	110	111	24	107	108	109	24	108	109	109	24
8/24	106	107	108	24	106	107	108	24	110	110	112	24	109	109	109	24	108	109	110	24
8/25	106	106	107	24	106	106	107	23	109	110	110	23	109	109	109	24	109	110	111	24
8/26	105	106	107	24	104	105	106	24	108	108	111	24	107	108	108	24	108	109	110	23
8/27	105	106	107	24	104	105	105	24	106	106	108	24	107	107	107	24	108	108	109	24
8/28	104	105	105	24	104	104	105	24	105	105	105	24	106	106	106	24	108	109	110	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>		#	<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>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
8/15	111	112	113	24	116	117	118	22	110	112	114	24	116	116	117	24	114	115	115	24
8/16	112	113	113	24	118	119	123	23	111	113	116	24	115	116	117	24	116	116	117	24
8/17	113	113	114	24	115	115	117	24	111	113	114	24	115	116	117	24	116	116	117	24
8/18	112	113	113	24	113	113	114	24	111	112	113	24	112	113	114	24	113	114	116	24
8/19	112	112	112	24	112	113	113	23	109	110	110	24	110	110	111	24	109	110	111	24
8/20	112	112	112	19	118	121	127	19	108	109	109	24	110	111	112	24	108	108	109	24
8/21	110	110	111	24	124	127	129	24	106	107	107	24	108	108	109	24	107	107	107	24
8/22	108	109	109	24	127	129	130	24	104	105	105	24	106	107	110	24	106	106	107	24
8/23	108	109	109	24	126	129	131	24	105	107	108	24	107	108	109	23	107	108	109	24
8/24	108	109	109	24	122	124	128	24	105	106	107	24	109	109	109	15	108	108	109	24
8/25	108	109	109	24	122	124	129	24	105	106	107	24	107	108	108	24	107	108	108	24
8/26	107	108	109	24	114	119	122	24	102	103	105	24	105	105	106	24	104	105	105	24
8/27	108	108	109	24	108	108	109	24	103	103	104	24	105	105	105	24	104	105	105	24
8/28	107	107	108	24	107	107	108	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>		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
8/15	115	115	116	24	109	111	111	24	107	108	108	24	106	108	108	24	101	102	102	24
8/16	115	116	117	24	110	111	112	24	108	108	108	24	---	---	---	0	101	102	103	24
8/17	115	116	117	24	111	112	113	24	108	109	109	24	107	108	109	24	101	102	104	24
8/18	113	114	116	24	110	111	111	24	109	109	109	24	---	---	---	0	101	102	103	24
8/19	109	109	110	24	105	106	107	24	108	109	109	24	107	107	108	24	101	102	102	24
8/20	108	108	109	24	104	104	105	24	109	109	109	24	107	107	107	24	101	101	102	24
8/21	106	107	107	24	102	103	104	24	109	109	109	24	106	107	108	24	101	102	102	24
8/22	106	106	106	24	102	104	104	24	107	108	108	24	105	106	107	24	101	103	104	24
8/23	107	108	108	24	104	105	105	24	107	107	107	24	---	---	---	0	102	103	105	24
8/24	108	108	109	24	105	106	106	24	107	107	108	24	106	107	108	24	102	103	104	24
8/25	107	108	108	24	104	104	105	24	107	107	108	24	106	107	108	24	101	102	103	24
8/26	105	106	106	24	103	104	104	24	106	107	107	24	105	106	107	24	101	102	104	24
8/27	105	105	106	24	102	103	104	24	106	107	107	24	105	105	106	24	101	102	103	24
8/28	---	---	---	0	102	103	104	24	106	106	106	24	105	106	107	24	101	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>		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
8/15	105	107	108	24	101	101	101	24	111	112	112	24	110	113	113	24	111	112	112	24
8/16	105	107	108	24	102	102	103	24	111	112	112	24	109	110	111	24	111	111	112	24
8/17	105	107	108	24	103	104	104	24	112	112	113	24	109	110	110	24	112	113	114	24
8/18	105	106	108	24	103	104	104	24	111	111	112	24	110	110	110	24	112	113	114	24
8/19	104	105	106	24	101	102	102	24	111	111	111	24	109	109	109	24	108	109	112	24
8/20	103	104	105	24	102	102	103	24	111	111	111	24	109	109	109	24	108	108	109	24
8/21	103	104	105	24	102	102	102	24	111	112	112	24	107	108	109	24	110	111	112	24
8/22	103	105	106	24	100	100	101	24	111	112	112	24	105	106	106	24	112	113	114	24
8/23	104	105	107	24	100	100	100	24	111	111	111	24	105	105	105	24	109	110	111	24
8/24	104	105	107	24	100	100	101	24	111	112	112	24	105	105	106	24	109	110	110	24
8/25	103	104	105	24	100	100	101	24	111	112	112	24	105	106	106	24	110	110	111	24
8/26	103	105	107	24	99	100	101	24	111	112	112	24	104	105	105	24	111	112	113	24
8/27	102	103	105	24	101	101	102	24	112	112	112	24	105	105	106	24	111	112	113	24
8/28	103	105	107	24	101	102	102	24	112	112	112	24	105	105	106	24	111	111	111	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>		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
8/15	110	110	111	24	115	116	116	24	112	112	113	24	113	114	115	24	---	---	---	0
8/16	110	110	111	24	116	116	117	24	113	113	114	24	113	113	114	24	---	---	---	0
8/17	110	110	110	24	116	116	117	24	114	114	115	24	113	114	114	24	---	---	---	0
8/18	109	110	110	24	115	116	116	24	114	114	115	24	113	113	114	24	---	---	---	0
8/19	108	108	109	24	115	115	116	24	113	113	114	24	113	113	113	24	---	---	---	0
8/20	108	108	108	24	115	115	116	24	111	112	112	24	113	114	114	24	---	---	---	0
8/21	107	107	108	24	115	115	115	24	109	110	111	24	112	113	113	24	---	---	---	0
8/22	105	105	106	24	115	115	115	24	106	106	106	24	113	113	114	24	---	---	---	0
8/23	105	105	105	24	115	116	116	24	106	106	107	24	113	114	114	24	---	---	---	0
8/24	105	105	105	24	115	115	116	24	107	107	107	24	113	113	113	24	---	---	---	0
8/25	105	106	106	24	114	115	116	24	107	107	107	24	111	112	113	24	---	---	---	0
8/26	105	106	106	24	115	115	116	24	107	108	108	24	112	113	114	24	---	---	---	0
8/27	105	106	106	24	114	115	116	24	108	108	108	24	113	113	116	24	---	---	---	0
8/28	104	105	105	24	115	115	116	24	107	107	108	24	113	114	114	24	---	---	---	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 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>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	<u>24h</u>		<u>12h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
8/15	109	109	110	24	114	114	115	24	106	107	107	24	114	115	115	24	109	109	110	24
8/16	109	110	111	24	116	118	118	24	107	108	108	24	114	115	115	24	110	110	111	24
8/17	111	111	112	24	118	118	119	24	108	109	111	24	114	114	115	24	109	109	110	24
8/18	110	111	111	24	115	117	118	24	106	106	107	24	114	114	114	24	107	107	109	24
8/19	108	108	109	24	115	117	117	24	103	106	106	23	114	114	114	24	105	105	106	24
8/20	108	108	109	24	116	117	117	24	104	106	106	24	114	115	117	24	106	107	108	24
8/21	105	106	107	24	115	116	116	24	104	105	106	24	114	114	114	24	106	106	107	24
8/22	102	102	103	24	114	114	115	24	103	104	104	24	123	131	135	24	104	105	106	24
8/23	102	103	103	24	114	114	115	24	104	104	104	24	131	133	134	24	108	108	109	24
8/24	102	103	103	24	115	116	117	24	103	104	104	24	132	132	133	24	108	109	109	24
8/25	104	104	105	24	116	116	117	24	102	102	103	24	122	130	131	24	106	107	107	24
8/26	103	103	104	24	114	115	115	24	101	101	102	24	114	114	115	24	104	104	105	24
8/27	103	103	104	24	115	115	116	24	101	101	101	24	113	114	114	24	105	105	106	24
8/28	102	102	102	24	114	115	116	24	101	101	102	24	113	114	115	24	104	105	105	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>				<u>Bonneville</u>				<u>Warrendale</u>				<u>Camas\Washougal</u>				<u>Cascade Island</u>			
	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	<u>24h</u>		<u>12h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
8/15	114	115	116	24	109	110	111	24	---	---	---	0	114	116	117	24	115	116	118	24
8/16	115	116	116	24	112	113	113	24	---	---	---	0	116	117	117	24	115	116	118	24
8/17	115	115	116	24	113	113	113	24	---	---	---	0	116	117	117	24	115	116	117	24
8/18	113	114	114	24	109	110	112	24	---	---	---	0	113	113	115	24	113	114	114	24
8/19	112	112	113	24	105	105	106	24	---	---	---	0	111	112	112	24	114	114	115	24
8/20	113	114	114	24	105	105	106	24	---	---	---	0	112	112	112	24	114	115	117	24
8/21	112	113	113	24	104	104	105	24	---	---	---	0	109	110	111	24	115	116	117	24
8/22	112	113	113	24	104	105	105	24	---	---	---	0	110	111	111	24	115	116	118	24
8/23	114	115	115	24	106	107	108	24	---	---	---	0	112	113	114	24	115	116	118	24
8/24	114	115	115	24	109	110	111	24	---	---	---	0	115	116	117	24	115	117	118	24
8/25	113	113	113	24	108	109	109	24	---	---	---	0	112	113	115	24	115	116	118	24
8/26	112	112	113	24	106	106	106	24	---	---	---	0	113	115	116	24	115	116	117	24
8/27	112	112	112	24	105	105	106	24	---	---	---	0	112	113	115	24	114	115	117	24
8/28	112	112	112	24	104	105	105	24	---	---	---	0	113	114	115	24	114	115	119	24

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/29/2008 11:41

### Two-Week Summary of Passage Indices

\* One or more of the sites on this date had an incomplete or biased sample.

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

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>

COMBINED YEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/15/2008	---	---	---	---	2	0	0	0	0	24	0
08/16/2008 *	---	---	---	---	0	1	0	0	0	---	0
08/17/2008 *	---	---	---	---	0	0	3	0	0	---	---
08/18/2008 *	---	---	---	---	0	0	0	0	18	---	0
08/19/2008 *	---	---	---	---	0	0	0	0	0	0	---
08/20/2008 *	---	---	---	---	0	1	2	0	9	---	0
08/21/2008 *	---	---	---	---	0	0	0	0	0	---	---
08/22/2008 *	---	---	---	---	0	0	2	1	0	0	0
08/23/2008 *	---	---	---	---	0	0	0	0	0	---	---
08/24/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/25/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2008 *	---	---	---	---	0	0	0	0	0	0	---
08/27/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/28/2008 *	---	---	---	---	---	0	---	0	0	---	---
08/29/2008	---	---	---	---	---	---	---	---	---	---	---
<hr/>											
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>27</b>	<b>24</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>0</b>
<b>YTD</b>	<b>56,037</b>	<b>78,597</b>	<b>19,672</b>	<b>13,632</b>	<b>3,584,858</b>	<b>2,743,412</b>	<b>1,971,519</b>	<b>22,434</b>	<b>1,360,627</b>	<b>1,694,099</b>	<b>1,291,078</b>

COMBINED SUBYEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/15/2008	---	---	---	---	870	1,266	249	36	21,101	6,430	2,308
08/16/2008 *	---	---	---	---	773	2,014	200	36	9,954	---	3,336
08/17/2008 *	---	---	---	---	949	2,079	581	38	8,539	---	---
08/18/2008 *	---	---	---	---	925	1,986	249	13	12,072	---	1,672
08/19/2008 *	---	---	---	---	1,493	788	307	41	20,913	5,055	---
08/20/2008 *	---	---	---	---	955	707	179	39	4,807	---	2,990
08/21/2008 *	---	---	---	---	1,224	1,307	118	22	8,364	---	---
08/22/2008 *	---	---	---	---	1,097	1,481	152	20	13,671	607	1,677
08/23/2008 *	---	---	---	---	600	647	62	23	9,244	---	---
08/24/2008 *	---	---	---	---	786	701	122	19	7,601	---	3,202
08/25/2008 *	---	---	---	---	646	483	399	19	7,298	---	2,333
08/26/2008 *	---	---	---	---	959	341	213	13	9,829	255	---
08/27/2008 *	---	---	---	---	878	345	53	15	8,508	---	999
08/28/2008 *	---	---	---	---	---	130	---	11	5,440	---	---
08/29/2008	---	---	---	---	---	---	---	---	---	---	---
<hr/>											
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12,155</b>	<b>14,275</b>	<b>2,884</b>	<b>345</b>	<b>147,341</b>	<b>12,347</b>	<b>18,517</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>935</b>	<b>1,020</b>	<b>222</b>	<b>25</b>	<b>10,524</b>	<b>3,087</b>	<b>2,315</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>119</b>	<b>735,750</b>	<b>1,129,627</b>	<b>331,110</b>	<b>16,030</b>	<b>2,385,361</b>	<b>1,763,708</b>	<b>3,748,459</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)
08/15/2008	---	---	---	---	2	1	0	0	13	0	0
08/16/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/17/2008 *	---	---	---	---	2	1	0	0	0	---	---
08/18/2008 *	---	---	---	---	0	0	0	1	0	---	0
08/19/2008 *	---	---	---	---	0	0	0	0	13	0	---
08/20/2008 *	---	---	---	---	2	0	0	0	0	---	28
08/21/2008 *	---	---	---	---	2	3	0	0	0	---	---
08/22/2008 *	---	---	---	---	0	1	0	0	0	0	0
08/23/2008 *	---	---	---	---	4	0	0	0	0	---	---
08/24/2008 *	---	---	---	---	2	0	0	0	0	---	0
08/25/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2008 *	---	---	---	---	0	1	0	1	0	0	---
08/27/2008 *	---	---	---	---	5	0	0	0	0	---	0
08/28/2008 *	---	---	---	---	---	0	---	0	0	---	---
08/29/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>28</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>326</b>	<b>108,989</b>	<b>166,096</b>	<b>142,692</b>	<b>52,278</b>	<b>169,484</b>	<b>362,537</b>	<b>358,699</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)
08/15/2008	---	---	---	---	0	3	0	0	0	0	0
08/16/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/17/2008 *	---	---	---	---	2	0	3	0	0	---	---
08/18/2008 *	---	---	---	---	2	0	0	0	0	---	0
08/19/2008 *	---	---	---	---	0	0	0	0	0	0	---
08/20/2008 *	---	---	---	---	2	0	0	0	0	---	0
08/21/2008 *	---	---	---	---	0	0	0	0	0	---	---
08/22/2008 *	---	---	---	---	0	0	0	0	0	0	0
08/23/2008 *	---	---	---	---	0	1	0	0	0	---	---
08/24/2008 *	---	---	---	---	0	0	0	0	0	---	0
08/25/2008 *	---	---	---	---	5	0	0	0	0	---	0
08/26/2008 *	---	---	---	---	2	1	0	0	0	0	---
08/27/2008 *	---	---	---	---	2	0	0	0	0	---	0
08/28/2008 *	---	---	---	---	---	0	---	0	0	---	---
08/29/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>4,565</b>	<b>22,292</b>	<b>5,891</b>	<b>10,708</b>	<b>3,444,088</b>	<b>3,694,311</b>	<b>1,546,172</b>	<b>22,778</b>	<b>507,334</b>	<b>1,132,951</b>	<b>450,264</b>

## 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)
08/15/2008	---	---	---	---	2	1	0	0	0	0	0
08/16/2008 *	---	---	---	---	0	0	0	1	0	---	23
08/17/2008 *	---	---	---	---	0	0	0	0	0	---	---
08/18/2008 *	---	---	---	---	2	6	0	0	0	---	0
08/19/2008 *	---	---	---	---	4	0	0	0	0	36	---
08/20/2008 *	---	---	---	---	20	3	0	0	0	---	0
08/21/2008 *	---	---	---	---	12	3	0	0	0	---	---
08/22/2008 *	---	---	---	---	22	1	0	0	9	0	0
08/23/2008 *	---	---	---	---	6	0	0	0	0	---	---
08/24/2008 *	---	---	---	---	35	0	0	0	26	---	0
08/25/2008 *	---	---	---	---	24	3	0	0	0	---	0
08/26/2008 *	---	---	---	---	20	4	0	0	0	0	---
08/27/2008 *	---	---	---	---	2	2	0	1	0	---	0
08/28/2008 *	---	---	---	---	---	6	---	1	0	---	---
08/29/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>29</b>	<b>0</b>	<b>3</b>	<b>35</b>	<b>36</b>	<b>23</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>3</b>
<b>YTD</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>27,636</b>	<b>36,605</b>	<b>45,480</b>	<b>38,961</b>	<b>222,970</b>	<b>331,851</b>	<b>145,376</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
- 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)}

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.

### Two Week Transportation Summary

Source: Fish Passage Center

Updated:

8/29/08 11:42 AM

		08/15/08 TO 08/29/08						
		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
<b>LGR</b>	Sum of NumberCollected	5,611	1	9	70	7	5,698	
	Sum of NumberBarged	793	1	1	6	0	801	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	5,180	0	8	48	6	5,242	
	Sum of SampleMorts	50	0	0	21	1	72	
	Sum of FacilityMorts	12	0	0	0	0	12	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	62	0	0	21	1	84	
<b>LGS</b>	Sum of NumberCollected	9,942	2	6	20	4	9,974	
	Sum of NumberBarged	1,271	0	2	4	4	1,281	
	Sum of NumberBypassed	0	0	0	6	0	6	
	Sum of Numbertrucked	8,921	2	5	6	2	8,936	
	Sum of SampleMorts	37	0	0	1	0	38	
	Sum of FacilityMorts	29	0	0	2	0	31	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	66	0	0	3	0	69	
<b>LMN</b>	Sum of NumberCollected	1,236	3			1	1,240	
	Sum of NumberBarged	187	0			0	187	
	Sum of NumberBypassed	24	0			0	24	
	Sum of Numbertrucked	1,098	3			1	1,102	
	Sum of SampleMorts	6	0			0	6	
	Sum of FacilityMorts	2	0			0	2	
	Sum of ResearchMorts	0	0			0	0	
	Sum of TotalProjectMorts	8	0			0	8	
<b>MCN</b>	Sum of NumberCollected	69,590	15	10	15		69,630	
	Sum of NumberBarged	12,054	0	5	0		12,059	
	Sum of NumberBypassed	0	0	0	0		0	
	Sum of Numbertrucked	54,351	11	5	15		54,382	
	Sum of SampleMorts	116	0	0	0		116	
	Sum of FacilityMorts	655	4	0	0		659	
	Sum of ResearchMorts	0	0	0	0		0	
	Sum of TotalProjectMorts	771	4	0	0		775	
<b>Total Sum of NumberCollected</b>		<b>86,379</b>	<b>21</b>	<b>25</b>	<b>105</b>	<b>12</b>	<b>86,542</b>	
<b>Total Sum of NumberBarged</b>		<b>14,305</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>4</b>	<b>14,328</b>	
<b>Total Sum of NumberBypassed</b>		<b>24</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>30</b>	
<b>Total Sum of Numbertrucked</b>		<b>69,550</b>	<b>16</b>	<b>18</b>	<b>69</b>	<b>9</b>	<b>69,662</b>	
<b>Total Sum of SampleMorts</b>		<b>209</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>1</b>	<b>232</b>	
<b>Total Sum of FacilityMorts</b>		<b>698</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>704</b>	
<b>Total Sum of ResearchMorts</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Total Sum of TotalProjectMorts</b>		<b>907</b>	<b>4</b>	<b>0</b>	<b>24</b>	<b>1</b>	<b>936</b>	

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/29/08 11:42 AM

TO: 08/29/08

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	416,725	2,398,633	68,807	13,403	2,165,414	5,062,982
	Sum of NumberBarged	401,738	1,966,900	66,905	12,865	1,786,609	4,235,017
	Sum of NumberBypassed	2,580	425,949	1,848	424	377,930	808,731
	Sum of NumberTrucked	5,180	0	8	48	6	5,242
	Sum of SampleMorts	417	154	2	29	51	653
	Sum of FacilityMorts	1,680	2,841	44	37	818	5,420
	Sum of ResearchMorts	5,130	2,789	0	0	0	7,919
	Sum of TotalProjectMorts	7,227	5,784	46	66	869	13,992
<b>LGS</b>	Sum of NumberCollected	744,445	1,706,946	95,867	21,830	2,309,427	4,878,515
	Sum of NumberBarged	728,067	1,314,157	93,092	21,716	1,590,212	3,747,244
	Sum of NumberBypassed	5,427	389,296	2,765	73	718,741	1,116,302
	Sum of NumberTrucked	8,921	2	5	6	2	8,936
	Sum of SampleMorts	189	40	1	5	14	249
	Sum of FacilityMorts	1,761	3,451	4	26	458	5,700
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,950	3,491	5	31	472	5,949
<b>LMN</b>	Sum of NumberCollected	241,011	1,216,521	83,198	28,104	957,126	2,525,960
	Sum of NumberBarged	237,235	276,438	9,246	10,128	230,248	763,295
	Sum of NumberBypassed	2,243	940,234	73,949	17,975	726,648	1,761,049
	Sum of NumberTrucked	1,098	3	0	0	1	1,102
	Sum of SampleMorts	61	39	0	0	22	122
	Sum of FacilityMorts	374	798	3	1	207	1,383
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	435	837	3	1	229	1,505
<b>MCN</b>	Sum of NumberCollected	1,165,084	752,385	78,675	102,288	276,935	2,375,367
	Sum of NumberBarged	349,594	164	50	120	55	349,983
	Sum of NumberBypassed	749,935	751,376	78,558	102,005	276,615	1,958,489
	Sum of NumberTrucked	54,351	11	5	15	0	54,382
	Sum of SampleMorts	531	112	3	23	25	694
	Sum of FacilityMorts	8,172	658	56	114	218	9,218
	Sum of ResearchMorts	87	58	3	5	20	173
	Sum of TotalProjectMorts	8,790	828	62	142	263	10,085
Total Sum of NumberCollected		2,567,265	6,074,485	326,547	165,625	5,708,902	14,842,824
Total Sum of NumberBarged		1,716,634	3,557,659	169,293	44,829	3,607,124	9,095,539
Total Sum of NumberBypassed		760,185	2,506,855	157,120	120,477	2,099,934	5,644,571
Total Sum of NumberTrucked		69,550	16	18	69	9	69,662
Total Sum of SampleMorts		1,198	345	6	57	112	1,718
Total Sum of FacilityMorts		11,987	7,748	107	178	1,701	21,721
Total Sum of ResearchMorts		5,217	2,847	3	5	20	8,092
Total Sum of TotalProjectMorts		18,402	10,940	116	240	1,833	31,531

**Cumulative Adult Passage at Mainstem Dams Through: 08/28**

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/27	125545	17552	67482	16860	151523	9831	78271	11621	47412	13539	71262	9127	61840	7466	24427	3051	40010	3907
TDA	08/27	95440	15801	53524	15567	106828	7522	65073	12206	40123	11318	61862	6875	23635	5600	10781	1690	17828	2052
JDA	08/27	81771	14925	44005	13864	89148	6122	63649	13680	35773	11582	57243	6930	11105	4325	5521	1327	9881	1605
MCN	08/28	68085	12133	39497	12393	82136	6227	54735	11239	32393	9386	55163	6274	5233	1677	4488	849	7204	1022
IHR	08/27	53142	7757	28380	7371	54980	3897	23693	4964	7714	2523	11420	2100	1341	187	933	83	583	79
LMN	08/28	54512	6885	28397	7102	52688	3599	27345	2890	11452	1419	11417	1651	1267	383	767	107	485	96
LGS	08/28	50401	7805	23960	7227	50024	3685	21748	4811	7898	2861	9497	2073	875	123	482	56	323	45
LGR	08/28	50146	10946	22905	9085	50643	4197	22612	5072	7312	3285	9346	2279	628	157	351	49	213	46
PRD	08/24	12173	620	6708	489	17360	563	39305	3355	30644	1088	50486	2111	1440	3034	1621	211	2443	315
RIS	08/27	12490	1119	5572	2066	13979	962	38171	3096	28222	6200	47383	5323	1076	416	1065	401	1579	429
RRH	08/27	4065	371	2424	920	5404	397	29675	2127	21657	5110	35386	3711	1058	338	889	254	1186	345
WEL	08/27	2708	426	2041	752	3980	281	20782	1315	13064	3499	25697	1916	0	0	0	0	0	0
WFA	08/21	14158	389	22818	280	-	-	0	0	0	0	-	-	0	0	27	8	-	-

DAM	Coho						Sockeye			Steelhead			
	2008		2007		10-Yr Avg.		2008	2007	10-Yr Avg.	2008	2007	10-Yr Avg.	Wild 2008
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	2851	260	1986	198	3616	274	213590	24369	58550	230117	240773	220779	79098
TDA	204	45	211	36	256	38	177983	19124	49462	109040	83346	85304	43073
JDA	70	51	72	9	75	8	193407	24207	54055	84501	56772	59369	31517
MCN	18	0	2	0	17	0	146922	18167	45006	57108	45318	43542	19229
IHR	-3	0	0	0	0	0	539	55	34	37461	16899	21770	10797
LMN	1	0	1	0	0	0	722	43	33	37966	16448	19000	12817
LGS	0	0	0	0	0	0	593	37	37	22595	8737	12568	7456
LGR	2	0	0	0	0	0	890	53	42	24317	15740	14880	8374
PRD	7	0	5	3	10	0	192215	24638	56259	8837	4826	5552	0
RIS	0	3	0	0	1	0	193724	25109	52551	8687	4378	4911	3718
RRH	1	5	0	1	1	0	161315	20657	36827	6621	2910	3508	2414
WEL	0	0	0	0	0	0	165296	22215	36753	3158	1513	2068	1546
WFA	0	0	6	2	-	-	0	0	-	18249	18840	-	-

BON and LGR have switched to video counts so the data is delayed.

\*PRD is not posting wild steelhead numbers.

These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART.

Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish.

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: 08/29/08

BON counts from January 1, 2008 to March 14, 2008 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2008	42	0	578	278
2007	22	0	1,677	517