



## Fish Passage Center

# Weekly Report #08 - 25

August 22, 2008

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### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 9% and 55% of average at individual sub-basins over the first eighteen days of August. Precipitation above The Dalles has been 54% of average over August. Over the entire water year, precipitation has generally been near average.

**Table 1. Summary of August 1-18 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 1-18		Water Year 2008 October 1, 2007 to August 18, 2008	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.39	40	21.80	94
Snake River Above Ice Harbor	0.23	47	15.60	94
Columbia Above The Dalles	0.38	54	20.56	95
Kootenai	0.43	44	20.24	85
Clark Fork	0.17	23	16.17	100
Flathead	0.16	17	20.39	95
Pend Oreille/ Spokane	0.07	9	28.25	96
Central Washington	0.09	42	5.89	69
Snake River Plain	0.16	47	8.11	77
Salmon/Boise/ Payette	0.22	55	18.58	99
Clearwater	0.16	23	27.81	96
SW Washington Cascades/Cowlitz	0.40	44	61.50	91
Willamette Valley	0.18	29	57.30	100

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 60.7 Kcfs between June 21<sup>st</sup>, 2008 and August 21<sup>st</sup>, 2008. Flows at Lower Granite averaged 35.2 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 180.1 Kcfs over the summer flow period (July 1-August 14) and averaged 124.4 Kcfs last week.

Grand Coulee Reservoir is at 1282.4 feet (8-21-08) and has drafted 0.6 feet over the last week. Outflows at Grand Coulee have ranged between 55.6 and 101.1 Kcfs over the last week. Inflows last week have ranged between 76.3 Kcfs and 90.6 Kcfs. The end of August draft elevation is 1280 feet at Grand Coulee this year.

The Libby Reservoir is currently at elevation 2442.3 feet (8-21-08) and drafted 0.5 feet last week. Inflows at Libby have ranged between 5.8 Kcfs and 7.1 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 reduced to 8 Kcfs on August 12<sup>th</sup>, 2008 and will likely stay at this level throughout the remainder of August.

Hungry Horse is currently at an elevation of 3548.5 ft (8-21-08) and has drafted 3.1 feet last week. Outflows are currently 6.5 Kcfs; inflows ranged between 0.54 Kcfs and 2.61 Kcfs last week.

Dworshak is currently at an elevation of 1550.4 feet (8-21-08) and has drafted 10.9 feet last week. Outflows at Dworshak are approximately 14.4 Kcfs; inflows have ranged between 2.7 and 4.3 Kcfs last week. Malfunction of the regulating gates at Dworshak Dam will limit the ability to draft Dworshak to elevation 1535 by August 31<sup>st</sup>, 2008. Outflows from Dworshak were near 14 Kcfs through this week but spill is expected to end today dropping outflows to approximately 10 Kcfs

for the remainder of August.

The Brownlee Reservoir is at an elevation of 2054.7 feet (August 21<sup>st</sup>, 2008), and has drafted 1.6 feet last week. Outflows at Brownlee Dam have been 10.5 to 14.0 Kcfs over the last week. Inflows at Brownlee Dam have been 10.6 to 12.2 Kcfs over the last week.

**Spill:** The summer spill season was initiated on June 21, 2008 in the Snake River. 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 outflows were 14.4 Kcfs over the past week, which is above hydraulic capacity, resulting in 4.2 – 4.5 Kcfs spill. Lower Granite, Little Goose and Lower Monumental dams have all generally spilled to the Court Order over the past week. Ice Harbor Dam has generally met the court ordered levels of 45 Kcfs daytime spill and gas cap nighttime spill (study was concluded on July 17<sup>th</sup>) except when daytime spill is below 45 Kcfs due to low flows and powerhouse minimum flows. Ice Harbor Dam has minimum spill of 15.2 Kcfs.

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 is to continue alternating between 40%/40% versus 60%/60% spill through the end of August, in 2-day blocks. Spill at McNary, John Day, and The Dalles dams have 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. Spill was reduced to less than 75 Kcfs on the evening of August 17, after the August 15-17 total dissolved gas at Camas/Washougal exceeded the 115% measurement due to the high ambient temperatures. Spill returned to 7k Kcfs day/gas cap night by the evening of August 19<sup>th</sup>.

Total dissolved gas did not exceed the 120% tailrace or 115% forebay limits this past week, except for the Camas Washougal monitor. On August 15-17<sup>th</sup>, when the 12-hour average TDG at the Camas Washougal monitor was 115.8%, 116.7% and 116.6% for each of the three days, respectively. However, there have been no further exceedences at the Camas Washougal monitor since August 17<sup>th</sup>. It is important to note that the Camas/Washougal TDG readings generally exceeded the Bonneville Dam tailrace readings on these days.

Gas bubble trauma (GBT) monitoring at Lower Granite Dam has concluded for the year. Sampling occurred at all other Snake River monitoring sites and at and Bonneville dam in the lower Columbia. There were no detections of GBT at any of these projects this week. Sampling at Rock Island Dam has concluded for the season because too few fish are passing the project to adequately sample. McNary Dam has temporarily ceased sampling because of high temperatures and fish handling concerns.

**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 1,000 per day this past week compared to nearly 1,500 per day the previous week. PIT-tag data suggest that hatchery origin fish predominate and are primarily from releases from Big Canyon Creek. Passage indices continued to decline at Little Goose Dam but the indices were still higher than those seen at Lower Granite indicating that a large portion of fish were passing the upper project in spill.

At Rock Island Dam indices for subyearling Chinook dropped from 120 per day three weeks ago

to 30 per day this past week. At the lower Columbia River dams indices for subyearling Chinook were up at McNary Dam for the second week in a row. The subyearling Chinook index averaged over 12,000 fish per day this past week compared to less than 10,000 per day last week and 7,000 per day three weeks ago. While at John Day Dam sampling has been limited due to temperatures in excess of 70 degrees F. 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 671 to 1,174. The 2008 adult fall Chinook count of 13,822 is about 1.07 times greater than the 2007 count but has 1750 fewer fish than the 10 year average to-date. The fall Chinook jack count of 3,147 is about 1.67 times greater than the 2007 count and about 1.63 times greater than the 10 year average to-date. The adult fall Chinook count total at The Dalles Dam is 7,083, which is about 51.2% of the Bonneville passage total to date.

As of August 21<sup>st</sup>, 209,861 steelhead have passed Bonneville Dam. The 2008 count is 99.3% of the 2007 count of 211325 and 1.05 times greater than the 10 year average of 198,267 to-date. The 2008

wild steelhead count at Bonneville Dam is 74,330 fish. The daily steelhead counts at The Dalles Dam ranged between 443 and 979 for the week with a cumulative count of 102,987. About 49.1% of the steelhead counted at Bonneville Dam have passed The Dalles Dam. The majority of the 53,276 steelhead at McNary Dam have moved up into the Snake River with the cumulative count at Ice Harbor now at 34,139 for the season (as of August 20<sup>th</sup>). The 2008 Lower Granite Dam steelhead count of 21,228 is 1.47 times greater than the 2007 count and 1.62 times greater than the 10 year average to-date. As of August 17<sup>th</sup>, the cumulative count at Priest Rapids Dam is 7,687 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>. As of August 20<sup>th</sup>, the 2008 A-run adult steelhead count at Bonneville was 91,158 which was about 1.51 times greater than the 2007 count of 60,344 and was about 1.07 times greater than the 10 year average count of 85,180.

The coho salmon count at Bonneville Dam was 207 adults and 32 jacks as of August 21<sup>st</sup>. To date, 5 chum and 60 pink salmon have been observed at Bonneville Dam.

**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
08/08/2008	76.2	0.1	84.7	0.0	89.3	12.3	86.1	7.7	88.5	18.8	69.2	18.9	58.7	20.2
08/09/2008	74.5	0.1	82.5	0.0	83.9	16.8	76.3	11.7	77.7	12.6	81.5	25.7	70.8	23.6
08/10/2008	79.9	0.2	71.5	0.0	81.9	12.0	85.0	6.7	87.3	14.1	96.2	20.0	97.3	23.5
08/11/2008	99.7	0.1	95.9	0.0	93.4	10.6	84.9	7.4	85.5	17.6	101.7	18.7	99.8	23.3
08/12/2008	71.7	0.1	85.0	0.0	92.1	8.4	95.9	9.1	93.7	18.6	99.3	19.5	95.9	22.8
08/13/2008	91.8	0.1	81.9	0.0	85.3	8.3	85.2	7.1	83.5	18.0	87.8	18.5	87.3	22.5
08/14/2008	99.1	0.1	99.9	0.0	98.9	8.9	94.4	7.0	95.0	18.8	94.7	19.3	91.4	22.8
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

**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
08/08/2008	13.7	3.8	11.5	15.6	43.7	18.3	41.9	12.3	39.2	17.4	43.0	32.7
08/09/2008	13.5	3.6	11.5	15.3	36.1	18.6	34.5	10.3	32.9	17.0	32.6	22.6
08/10/2008	13.5	3.6	11.4	10.5	38.9	18.6	37.0	11.0	35.4	17.4	39.1	29.0
08/11/2008	13.8	3.9	11.0	12.6	36.2	18.6	34.3	10.3	32.8	17.0	33.9	23.8
08/12/2008	14.2	4.3	11.4	13.6	35.4	18.4	32.7	9.6	31.6	17.5	34.0	23.9
08/13/2008	14.5	4.6	11.0	11.4	37.6	18.3	37.7	11.2	34.0	17.3	37.8	27.7
08/14/2008	14.5	4.5	11.4	12.7	32.7	18.4	32.7	9.8	29.8	17.4	30.1	20.2
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	15.4	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	13.4	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	13.0	36.3	18.6	34.9	10.5	33.4	17.4	37.1	26.9
08/21/2008	14.4	4.2	---	---	34.9	18.8	31.3	9.5	30.2	17.4	31.7	21.7

**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
08/08/2008	141.9	77.1	126.4	38.1	123.1	49.4	134.7	81.3	0.0	41.4
08/09/2008	105.3	49.2	103.0	30.9	106.1	42.2	123.8	81.0	0.0	31.0
08/10/2008	125.6	69.9	111.1	33.2	99.6	39.7	124.4	80.7	0.0	31.7
08/11/2008	137.6	82.7	125.0	37.5	125.9	50.4	136.3	81.5	5.2	37.7
08/12/2008	143.7	63.6	131.1	39.2	121.3	48.5	138.3	80.4	10.1	35.9
08/13/2008	130.2	52.3	130.7	39.2	130.1	51.9	145.2	78.5	9.7	45.1
08/14/2008	130.6	69.6	131.6	39.3	124.5	49.8	121.4	78.4	0.0	31.1
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

## 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>											
	08/12/08	Chinook + Steelhead	10	0	0	0.00%	0.00%	0	0	0	0
	08/19/08	Chinook + Steelhead	21	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	08/17/08	Chinook + Steelhead	12	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	08/12/08	Chinook + Steelhead	104	0	0	0.00%	0.00%	0	0	0	0
	08/15/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/19/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	08/14/08	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	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>24 h</u>		<u>12 h</u>	#
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/8	106	106	107	24	106	106	107	23	110	111	112	24	114	114	116	23	112	113	113	24
8/9	106	106	107	24	106	106	107	23	110	110	111	24	113	115	119	23	111	112	112	24
8/10	106	106	106	24	105	105	106	23	108	109	109	24	112	113	114	23	111	111	112	24
8/11	105	105	106	24	105	105	106	20	108	108	108	24	111	112	114	20	110	110	111	24
8/12	105	106	106	24	105	106	107	23	108	109	110	24	111	112	117	23	110	110	111	24
8/13	105	105	106	24	105	106	107	22	108	109	110	24	110	111	116	22	110	111	111	24
8/14	105	105	105	24	105	106	107	21	108	109	109	24	109	110	113	21	109	110	110	24
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

### 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>24 h</u>		<u>12 h</u>	#
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/8	113	113	114	24	113	114	114	24	115	116	116	24	114	115	115	24	111	112	113	24
8/9	112	113	114	24	112	113	113	24	116	117	119	24	114	114	114	24	110	112	115	24
8/10	111	111	113	24	110	111	111	24	113	114	115	24	112	112	113	24	110	111	111	24
8/11	110	111	111	24	110	111	111	24	112	113	114	24	111	112	112	24	110	111	112	24
8/12	110	111	112	24	110	111	112	24	113	113	114	24	112	112	112	24	111	112	113	24
8/13	110	111	112	24	110	112	113	24	112	113	114	24	112	112	113	24	110	111	111	24
8/14	110	111	111	24	110	112	113	24	113	114	114	24	111	112	112	24	110	111	112	24
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

### 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>24 h</u>		<u>12 h</u>	#
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/8	114	114	114	24	118	118	119	23	109	111	113	24	116	116	117	24	114	114	115	24
8/9	112	112	113	24	116	117	120	24	109	109	110	24	115	116	121	24	112	113	113	24
8/10	112	113	113	24	116	117	119	24	108	109	110	24	115	115	115	24	110	111	112	24
8/11	111	112	112	24	116	117	118	24	106	108	108	24	113	113	114	24	112	112	113	24
8/12	112	112	113	24	116	117	118	24	107	109	111	24	114	114	115	24	112	113	114	24
8/13	111	112	112	24	116	117	119	23	109	109	111	24	114	114	116	24	112	113	113	24
8/14	111	112	112	24	115	116	118	22	108	111	113	24	115	116	117	24	112	113	115	24
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	---	---	---	0	---	---	---	0	---	---	---	0
8/21	110	110	111	24	124	127	129	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>Clwrtr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</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>				
8/8	113	114	114	24	110	110	111	24	108	108	109	24	107	107	109	24	102	103	104	24
8/9	112	113	113	24	107	108	109	24	107	108	108	24	106	107	108	24	101	102	103	24
8/10	112	113	113	24	106	107	108	24	106	107	107	23	106	106	107	24	101	102	103	24
8/11	113	113	114	24	108	109	110	24	107	108	108	24	106	107	108	24	101	102	104	24
8/12	113	113	114	24	109	110	111	24	108	109	109	24	107	108	109	24	102	103	104	24
8/13	113	113	113	24	109	110	110	24	108	108	108	24	106	107	108	24	101	102	103	24
8/14	113	114	114	24	109	110	111	24	107	108	108	24	106	107	108	23	101	102	103	24
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	---	---	---	0	104	104	105	24	109	109	109	24	107	107	107	24	101	101	102	24
8/21	---	---	---	0	102	103	104	24	109	109	109	24	106	107	108	24	101	102	102	24

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

Date	<u>Clwrtr-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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</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>				
8/8	104	106	108	24	103	104	104	24	110	111	111	24	111	111	112	24	109	110	110	24
8/9	105	107	108	24	103	104	104	24	111	112	113	24	110	110	111	24	111	112	113	24
8/10	104	106	107	24	101	101	101	24	111	111	112	24	109	109	109	24	112	112	113	24
8/11	104	106	108	24	101	101	101	24	111	112	112	24	108	109	109	24	110	111	112	24
8/12	105	107	108	24	101	101	101	24	111	112	112	24	108	108	108	24	110	111	111	24
8/13	105	107	108	24	100	100	101	24	111	111	112	24	107	107	108	24	108	108	109	24
8/14	105	107	108	24	99	100	100	24	111	111	112	24	107	108	110	24	107	108	108	24
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

### 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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</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>				
8/8	111	111	111	24	116	116	116	24	114	114	114	24	114	114	115	24	---	---	---	0
8/9	108	108	109	24	115	116	116	24	112	112	113	24	113	113	114	24	---	---	---	0
8/10	107	107	107	24	116	116	116	24	109	110	110	24	114	114	115	24	---	---	---	0
8/11	107	107	107	24	116	116	116	24	109	109	109	24	114	114	115	24	---	---	---	0
8/12	106	107	107	24	116	116	116	24	109	109	109	24	114	115	115	24	---	---	---	0
8/13	107	108	109	24	115	116	117	24	109	110	110	24	113	113	114	24	---	---	---	0
8/14	108	109	110	24	116	116	117	24	110	111	112	24	113	114	114	24	---	---	---	0
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

## 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				
8/8	109	110	110	24	115	116	117	24	105	105	106	24	114	114	115	24	108	108	109	24
8/9	108	109	109	24	115	115	116	24	104	104	105	24	113	114	114	24	105	106	107	24
8/10	106	107	107	24	114	115	116	24	104	104	104	24	113	114	114	24	104	104	105	24
8/11	105	106	106	24	114	114	114	24	104	105	105	24	114	114	115	24	106	107	107	24
8/12	105	106	107	24	115	116	117	24	105	105	105	24	114	115	115	24	108	108	109	24
8/13	106	107	108	24	117	117	117	24	104	104	105	24	114	115	116	24	106	107	107	24
8/14	108	109	110	24	115	116	117	24	105	106	107	24	114	115	115	24	107	108	108	24
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

**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>#</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				
8/8	114	114	115	24	109	109	110	24	---	---	---	0	113	114	115	24	115	116	117	24
8/9	112	113	113	24	106	107	107	24	---	---	---	0	112	113	114	24	115	116	117	24
8/10	111	111	111	24	105	105	106	24	---	---	---	0	113	115	115	24	115	116	118	24
8/11	112	113	113	24	106	107	108	24	---	---	---	0	115	116	117	24	115	116	118	24
8/12	113	113	114	24	107	108	108	24	---	---	---	0	114	115	115	24	115	116	117	24
8/13	113	113	114	24	107	108	108	24	---	---	---	0	113	114	115	24	115	115	115	6
8/14	113	114	115	24	107	108	108	24	---	---	---	0	113	114	115	24	114	115	117	16
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



## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/22/2008 10:01

### 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/currentsmpsubmitdata.asp>

COMBINED YEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/08/2008	*	---	---	---	0	0	0	0	0	0	0	
08/09/2008		---	---	---	0	0	17	0	0	0	0	
08/10/2008		---	---	---	0	0	0	0	0	0	0	
08/11/2008		---	---	---	0	0	0	0	0	26	0	
08/12/2008		---	---	---	0	0	4	0	0	26	0	
08/13/2008		---	---	---	0	0	0	0	0	0	0	
08/14/2008		---	---	---	0	0	0	2	9	24	0	
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	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>26</b>	<b>2</b>	<b>36</b>	<b>100</b>	<b>0</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>9</b>	<b>11</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>11</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>1,971,517</b>	<b>22,433</b>	<b>1,360,627</b>	<b>1,694,099</b>	<b>1,291,078</b>

COMBINED SUBYEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/08/2008	*	---	---	---	2,480	4,020	675	74	11,495	5,164	4,639	
08/09/2008		---	---	---	2,928	5,874	304	43	8,945	4,953	1,122	
08/10/2008		---	---	---	1,738	2,223	183	74	2,436	3,475	1,959	
08/11/2008		---	---	---	700	1,062	364	72	2,654	3,789	2,189	
08/12/2008		---	---	---	749	526	242	73	7,948	4,594	3,154	
08/13/2008		---	---	---	785	311	199	41	9,965	9,317	3,972	
08/14/2008		---	---	---	854	573	177	45	28,585	6,910	4,611	
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	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>17,423</b>	<b>24,736</b>	<b>4,027</b>	<b>647</b>	<b>157,778</b>	<b>49,687</b>	<b>31,952</b>	
<b># Days:</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>9</b>	<b>11</b>	
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1,245</b>	<b>1,767</b>	<b>288</b>	<b>46</b>	<b>11,270</b>	<b>5,521</b>	<b>2,905</b>	
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>2</b>	<b>119</b>	<b>730,784</b>	<b>1,125,499</b>	<b>330,109</b>	<b>15,910</b>	<b>2,323,770</b>	<b>1,763,453</b>	<b>3,740,248</b>

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/08/2008 *	---	---	---	---	0	14	0	2	0	0	28
08/09/2008	---	---	---	---	4	0	0	0	13	0	0
08/10/2008	---	---	---	---	0	0	0	0	9	0	0
08/11/2008	---	---	---	---	0	0	0	0	0	0	0
08/12/2008	---	---	---	---	0	0	0	0	0	0	0
08/13/2008	---	---	---	---	0	0	0	0	0	0	0
08/14/2008	---	---	---	---	0	1	0	0	26	0	0
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 *	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>20</b>	<b>0</b>	<b>3</b>	<b>74</b>	<b>0</b>	<b>56</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>9</b>	<b>11</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>5</b>	<b>0</b>	<b>5</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>326</b>	<b>108,978</b>	<b>166,094</b>	<b>142,692</b>	<b>52,277</b>	<b>169,484</b>	<b>362,537</b>	<b>358,699</b>

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/08/2008 *	---	---	---	---	3	0	0	0	0	0	0
08/09/2008	---	---	---	---	0	0	8	0	0	0	0
08/10/2008	---	---	---	---	0	0	0	0	0	0	0
08/11/2008	---	---	---	---	0	0	0	0	0	0	0
08/12/2008	---	---	---	---	0	0	0	0	0	0	0
08/13/2008	---	---	---	---	0	3	0	0	0	19	0
08/14/2008	---	---	---	---	0	3	0	0	9	0	0
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 *	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>0</b>	<b>9</b>	<b>19</b>	<b>0</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>9</b>	<b>11</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>
<b>YTD</b>	<b>4,565</b>	<b>22,292</b>	<b>5,891</b>	<b>10,708</b>	<b>3,444,079</b>	<b>3,694,309</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)	
08/08/2008	*	---	---	---	---	17	7	0	0	0	0	0
08/09/2008		---	---	---	---	7	0	0	0	0	0	0
08/10/2008		---	---	---	---	0	0	0	0	0	0	0
08/11/2008		---	---	---	---	4	0	0	0	0	0	0
08/12/2008		---	---	---	---	0	0	0	1	0	0	0
08/13/2008		---	---	---	---	18	0	0	0	9	0	0
08/14/2008		---	---	---	---	10	4	0	0	0	0	0
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	*	---	---	---	---	---	---	---	---	---	---	---
<hr/>												
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>96</b>	<b>24</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>36</b>	<b>23</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>9</b>	<b>11</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>2</b>
<b>YTD</b>		<b>37</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>27,527</b>	<b>36,589</b>	<b>45,480</b>	<b>38,959</b>	<b>222,935</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:

8/22/08 9:58 AM

		08/08/08 TO 08/22/08						
		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
<b>LGR</b>	Sum of NumberCollected	8,741		1	6	49	5	8,802
	Sum of NumberBarged	5,711		1	3	28	2	5,745
	Sum of NumberBypassed	0		0	0	0	0	0
	Sum of Numbertrucked	2,941		0	3	9	3	2,956
	Sum of SampleMorts	58		0	0	12	0	70
	Sum of FacilityMorts	31		0	0	0	0	31
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	89		0	0	12	0	101
<b>LGS</b>	Sum of NumberCollected	17,274		2	15	17	6	17,314
	Sum of NumberBarged	11,040		0	12	9	6	11,067
	Sum of NumberBypassed	0		0	0	6	0	6
	Sum of Numbertrucked	6,168		2	3	2	0	6,175
	Sum of SampleMorts	25		0	0	0	0	25
	Sum of FacilityMorts	41		0	0	0	0	41
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	66		0	0	0	0	66
<b>LMN</b>	Sum of NumberCollected	1,892		12			5	1,909
	Sum of NumberBarged	1,164		10			4	1,178
	Sum of NumberBypassed	32		0			0	32
	Sum of Numbertrucked	684		2			1	687
	Sum of SampleMorts	6		0			0	6
	Sum of FacilityMorts	6		0			0	6
	Sum of ResearchMorts	0		0			0	0
	Sum of TotalProjectMorts	12		0			0	12
<b>MCN</b>	Sum of NumberCollected	77,655		20	35	5	5	77,720
	Sum of NumberBarged	52,138		5	30	5	5	52,183
	Sum of NumberBypassed	0		0	0	0	0	0
	Sum of Numbertrucked	26,889		11	5	0	0	26,905
	Sum of SampleMorts	219		0	0	0	0	219
	Sum of FacilityMorts	664		4	0	0	0	668
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	883		4	0	0	0	887
Total Sum of NumberCollected		105,562		35	56	71	21	105,745
Total Sum of NumberBarged		70,053		16	45	42	17	70,173
Total Sum of NumberBypassed		32		0	0	6	0	38
Total Sum of Numbertrucked		36,682		15	11	11	4	36,723
Total Sum of SampleMorts		308		0	0	12	0	320
Total Sum of FacilityMorts		742		4	0	0	0	746
Total Sum of ResearchMorts		0		0	0	0	0	0
Total Sum of TotalProjectMorts		1,050		4	0	12	0	1,066

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/22/08 9:58 AM

TO: 08/22/08

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	414,467	2,398,633	68,802	13,353	2,165,410	5,060,665
	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	2,941	0	3	9	3	2,956
	Sum of SampleMorts	398	154	2	18	50	622
	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	7,208	5,784	46	55	868	13,961
<b>LGS</b>	Sum of NumberCollected	741,585	1,706,946	95,865	21,819	2,309,425	4,875,640
	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	6,168	2	3	2	0	6,175
	Sum of SampleMorts	168	40	1	4	14	227
	Sum of FacilityMorts	1,755	3,451	4	24	458	5,692
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,923	3,491	5	28	472	5,919
<b>LMN</b>	Sum of NumberCollected	240,581	1,216,520	83,198	28,104	957,126	2,525,529
	Sum of NumberBarged	237,235	276,438	9,246	10,128	230,248	763,295
	Sum of NumberBypassed	2,231	940,234	73,949	17,975	726,648	1,761,037
	Sum of NumberTrucked	684	2	0	0	1	687
	Sum of SampleMorts	57	39	0	0	22	118
	Sum of FacilityMorts	374	798	3	1	207	1,383
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	431	837	3	1	229	1,501
<b>MCN</b>	Sum of NumberCollected	1,134,899	752,385	78,675	102,273	276,935	2,345,167
	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	26,889	11	5	0	0	26,905
	Sum of SampleMorts	482	112	3	23	25	645
	Sum of FacilityMorts	7,912	658	56	114	218	8,958
	Sum of ResearchMorts	87	58	3	5	20	173
	Sum of TotalProjectMorts	8,481	828	62	142	263	9,776
Total Sum of NumberCollected		2,531,532	6,074,484	326,540	165,549	5,708,896	14,807,001
Total Sum of NumberBarged		1,716,634	3,557,659	169,293	44,829	3,607,124	9,095,539
Total Sum of NumberBypassed		760,173	2,506,855	157,120	120,477	2,099,934	5,644,559
Total Sum of NumberTrucked		36,682	15	11	11	4	36,723
Total Sum of SampleMorts		1,105	345	6	45	111	1,612
Total Sum of FacilityMorts		11,721	7,748	107	176	1,701	21,453
Total Sum of ResearchMorts		5,217	2,847	3	5	20	8,092
Total Sum of TotalProjectMorts		18,043	10,940	116	226	1,832	31,157

**Cumulative Adult Passage at Mainstem Dams Through: 08/21**

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	08/21	125545	17552	67482	16860	151523	9831	78271	11621	47412	13539	71262	9127	13822	3147	12935	1882	15572	1935
TDA	08/21	95440	15801	53524	15567	106828	7522	65073	12206	40123	11318	61862	6875	7083	2456	6128	1156	7998	1284
JDA	08/21	81771	14925	44005	13864	89148	6122	63649	13680	35773	11582	57243	6930	4387	2448	3100	890	4400	1046
MCN	08/21	68085	12133	39497	12393	82136	6227	54735	11239	32393	9386	55163	6274	2767	634	2213	474	3115	605
IHR	08/20	53142	7757	28380	7371	54980	3897	23693	4964	7714	2523	11420	2100	568	55	334	25	205	28
LMN	08/21	54512	6885	28397	7102	52688	3599	27345	2890	11452	1419	11417	1651	388	109	247	30	168	42
LGS	08/21	50401	7805	23960	7227	50024	3685	21748	4811	7898	2861	9497	2073	268	38	118	16	103	17
LGR	08/21	50146	10946	22905	9085	50643	4197	22612	5072	7312	3285	9346	2279	172	29	55	10	42	11
PRD	08/17	12173	620	6708	489	17360	563	39305	3355	30644	1088	50486	2111	645	1498	599	71	901	119
RIS	08/20	12490	1119	5572	2066	13979	962	38171	3096	28222	6200	47383	5323	384	142	327	137	493	142
RRH	08/20	4065	371	2424	920	5404	397	29675	2127	21657	5110	35386	3711	140	54	201	56	171	53
WEL	08/20	2708	426	2041	752	3980	281	19972	1131	12556	3250	24675	1693	0	0	0	0	0	0
WFA	08/04	14143	383	22755	261	-	-	0	0	0	0	-	-	0	0	0	0	-	-

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	207	32	428	79	535	83	213587	24367	58550	209861	211325	198267	74330
TDA	9	4	45	5	37	6	177982	19124	49462	102987	67780	73575	41488
JDA	40	20	14	2	15	1	193367	24202	54050	80899	44541	51403	30474
MCN	0	0	0	0	0	0	146920	18162	45004	53276	35072	37560	18072
IHR	-1	0	0	0	0	0	539	55	34	34139	12421	17922	9960
LMN	0	0	0	0	0	0	722	43	33	34186	13930	15730	11704
LGS	0	0	0	0	0	0	593	37	37	20299	7229	10097	6798
LGR	0	0	0	0	0	0	884	53	42	21228	14482	13078	7470
PRD	4	0	2	1	7	0	192214	24634	56236	7687	3628	4644	0
RIS	0	0	0	0	1	0	193717	25085	52512	7375	3103	4029	3137
RRH	0	3	0	0	1	0	161302	20621	36790	5671	2067	2778	2063
WEL	0	0	0	0	0	0	165274	22139	36671	2548	1032	1541	1303
WFA	0	0	2	0	-	-	0	0	-	18229	18409	-	-

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: 08/22/08

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