



# Fish Passage Center

## Weekly Report #10 - 24

August 27, 2010

1827 NE 44th Ave., Suite 240  
 Portland, OR 97213  
 phone: 503/230-4099  
 fax: 503/230-7559

### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 4% and 111% of average at individual sub-basins over August. Precipitation above The Dalles has been 76% of average over August. Over the 2010 water year, precipitation has ranged between 84% and 100% of average.

**Table 1. Summary of August 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 2010 August 1-23		Water Year 2010 October 1, 2009 to August 23, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.10	87	20.61	88
Snake River Above Ice Harbor	0.51	81	16.03	96
Columbia Above The Dalles	0.68	76	20.22	93
Kootenai	1.10	88	20.41	84
Clark Fork	1.07	111	15.11	92
Flathead	1.05	88	21.61	100
Pend Oreille/ Spokane	0.36	38	27.53	93
Central Washington	0.03	11	8.65	100
Snake River Plain	0.31	71	9.57	90
Salmon/Boise/ Payette	0.32	62	18.40	97
Clearwater	0.69	77	27.56	95
SW Washington Cascades/Cowlitz	0.16	14	61.81	91
Willamette Valley	0.03	4	53.28	93

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. The July Final Runoff Volume Forecasts remained similar to the June Final Forecasts at Upper Columbia locations; however increased between 11-18% relative to the June Final forecasts at Snake River locations. The current forecast at The Dalles between January and July is 81900 Kaf (76% of average).

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

Location	June Final		July Final	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan- July)	69	74000	76	81900
Grand Coulee (Jan-July)	74	46400	76	47900
Libby Res. Inflow, MT (Apr-Aug)	71	4420	71	4440
Hungry Horse Res. Inflow, MT (Jan-July)	75	1660	81	1800
Lower Granite Res. Inflow (Apr- July)	68	14600	86	18600
Brownlee Res. Inflow (Apr-July)	58	3670	74	4680
Dworshak Res. Inflow (Apr-July)	63	1670	74	1950

\* Denotes COE Forecast

The Summer Biological Opinion flow period began on June 21 in the lower Snake River (Lower Granite). According to the June Final Water Supply

Forecast, the summer flow objective this summer is 50 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 49.0 Kcfs from June 21-August 25. Flows at Lower Granite have averaged 28.9 Kcfs over the last week.

The Summer Biological Opinion flow period began on July 1<sup>st</sup> at McNary Dam with a flow objective of 200 Kcfs. Flows from July 1<sup>st</sup> to August 25<sup>th</sup> averaged 160.1 Kcfs and 117.8 Kcfs last week.

Grand Coulee Reservoir is at 1279.2 feet (8-25-10) and drafted 2.5 feet over the last week. The end of August draft elevation at Grand Coulee is 1277.3 feet. Outflows at Grand Coulee have ranged between 47.4 and 96.2 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2442.6 feet (8-25-10) and has drafted 0.3 feet last week. Outflows at Libby Dam have been 7.0 Kcfs.

Hungry Horse is currently at an elevation of 3549.6 feet (8-25-10) and has drafted 1.6 ft last week. Outflows at Hungry Horse are currently 3.9 Kcfs.

Dworshak is currently at an elevation of 1540.5 feet (8-25-10) and has drafted approximately 8.0 feet last week. Outflows from Dworshak are currently 8 Kcfs and are expected to remain at this level through the remainder of August.

The Brownlee Reservoir was at an elevation of 2054.2 feet on August 25<sup>th</sup>, 2010 drafting 1.3 feet last week. Over the last week, outflows at Brownlee have ranged between 8.0-12.1 Kcfs.

**Spill:** On June 21<sup>st</sup> the Snake projects transitioned to the summer spill program. The following table shows the planned operations for summer 2010.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	<b>June 21-July 13:</b> 30%/30% vs. 45 Kcfs/Gas Cap <b>July 13-August 31:</b> 45 Kcfs/Gas Cap (approximate Gas Cap range = 75-95 Kcfs)

On August 26<sup>th</sup>, outflow at Dworshak Dam was reduced from powerhouse capacity to approximately 8.0 Kcfs. For most of this week, spill levels at Lower Granite Dam have been below the 18 Kcfs due to low

flows and powerhouse minimums. On Friday, August 20<sup>th</sup>, TMT members decided to modify spill operations at Little Goose Dam for the remainder of August. This decision was made in order to avoid the daily fluctuations in spill levels that were occurring under the 30% spill operation. Under this modified operation, the 30% requirement was changed to a set spill volume. This spill volume was set at approximately 11.2 Kcfs, which was first initiated at 13:00 on Friday, August 20<sup>th</sup>. On Monday, August 23<sup>rd</sup>, this set spill volume was reduced to approximately 9.3 Kcfs. Under these modified operations, spill at Little Goose Dam has been in excess of 30%. For most of this week, spill levels at Lower Monumental Dam have been below the 17 Kcfs due to low flows and powerhouse minimums. The Ice Harbor simulated test of 30% spill versus 45 Kcfs during daytime hours and gas cap spill during nighttime hours ended July 13<sup>th</sup>. After that, spill at Ice Harbor reverted back to the 45Kcfs/gas cap level. However, due to low flows, spill is presently occurring as all flow in excess of that needed to operate one turbine unit at this project.

Summer spill programs at McNary and Bonneville dams were initiated on June 21<sup>st</sup> and at John Day and The Dalles dams on July 1<sup>st</sup>. The following table shows the planned operations for summer 2010.

Project	Day/Night Spill
McNary	50%/50%
John Day	<b>Testing (July 1-July 22):</b> 30%/30% vs. 40%/40% <b>Post-Testing (July 23-August 31):</b> 30%/30% 40%/40%
The Dalles	
Bonneville	<b>Testing (June 16-July 20):</b> 85 Kcfs/121 Kcfs vs. 95 Kcfs/95 Kcfs <b>Post-Testing (July 21-August 31):</b> 75 Kcfs/Gas Cap

The planned spill level of 50% of instantaneous flows was met at McNary Dam this week. At John Day Dam, the spill test ended and spill occurred as 30% of instantaneous flow. The planned spill levels of 40% were met at The Dalles Dam over the past week. Due to low flows and powerhouse minimums, the 75Kcfs/gas cap spill levels at Bonneville Dam could not be met this week. Currently, Bonneville Dam is spilling everything in excess of powerhouse minimum, which has equated to approximately 70 Kcfs spill over the past

three days.

Total dissolved gas levels at all monitors were below the States' water quality waiver levels throughout the lower Snake and lower Columbia hydrosystem over the past week. The monitor in the Ice Harbor tailrace malfunctioned on August 22<sup>nd</sup> but was repaired by the next day.

At present, GBT monitoring is being implemented at Lower Monumental, McNary, Bonneville and Rock Island dams. No fish were observed with signs of GBT this past week.

**Smolt Monitoring:** Subyearling Chinook indices continued to decrease at all sites. McNary Dam had a one day spike in passage of subyearling Chinook on August 25, when the index reached 30,000. High temperatures have caused sampling to be modified at both John Day and Bonneville dams the past several weeks.

At Lower Granite Dam passage indices for subyearling Chinook decreased this past week with the index averaging 570 per day while last week the index averaged nearly 900 fish per day. Little Goose Dam also saw a decrease in the average subyearling passage index this past week when the index averaged 360 per day compared to 1,800 per day last week. Similarly, at Lower Monumental Dam passage indices were down this past week compared to the previous week.

At Rock Island Dam passage indices for subyearlings were lower for the second week in a row. The daily index averaged 54 this week compared to about 80 per day last week.

At McNary Dam subyearling Chinook predominated over the past week. Indices for subyearling Chinook averaged 10,500 per day this week compared to 12,000 per day average last week. This week's average was bolstered by a spike in the index to 30,000 on August 25. The number of smolts was an anomaly with no changes in operations or other conditions giving any indication as to why these fish arrived when they did. PIT-tag detections indicate a mixture of fish marked in the Snake River as well as Rock Island Dam have been passing the project over the past week.

John Day Dam and Bonneville Dam are on limited sampling due to temperatures in excess of 70 degrees F measured in the forebay of the dams.

### **Hatchery Release:**

**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 releases of juvenile salmonids scheduled for this zone this week. Furthermore, there are no releases of juvenile salmonids scheduled for this zone 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 scheduled for this zone this week. Furthermore, there are no releases of juvenile salmonids 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 releases of juvenile salmonids scheduled for this zone this week. There are also no releases of juvenile salmonids scheduled for this zone over the next two weeks.

### **Adult Fish Passage:**

Fall Chinook began to pass Bonneville Dam on August 1<sup>st</sup>. Daily counts of fall Chinook at Bonneville Dam ranged from 988 to 5,135. The 2010 adult fall Chinook count of 32,227 is about 59.6% of the 2009 count and about 95.5% of the 10 average. The 2010 Bonneville Dam fall Chinook jack count of 4,275 is about 24.5% of the 2009 count and 87.3% of the 10 year average. The 2010 McNary Dam adult fall Chinook count of 3,919 is about 37.6% of the 2009 count and about 73.4% of the 10 year average. The 2010 fall Chinook jack McNary Dam jack count of 644 is about 25.8% of the 2009 count and about 60.2% of the 10 year average.

Daily steelhead counts at Bonneville Dam for the past week ranged between 1,149 and 2,979. The Bonneville Dam 2010 steelhead count of 304,088 is about 68.5% of the 2009 count of 443,986. However, the 2010 steelhead count is about 1.18 times greater than the 10 year average of 257,696. At Willamette Falls Dam, the 2010 count for steelhead was 28,654, as of August 7th. This year's steelhead count is about 1.7 times greater than the 2009 count of 16,796 at Willamette Falls Dam for the same date range.

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 are considered those that pass Bonneville Dam from the first of June through August 25th and B-run steelhead pass Bonneville from August 26th through October. The 2010 A-run adult steelhead count at Bonneville of 296,440 is about 67.4% of the 2009 count of 439,478, while being about 1.17 times greater than the 10 year average count of 253,294.

In the Snake River, this year's Lower Granite steelhead count of 33,811 is about 1.55 times greater than the 2009 count and about 1.97 times greater than the 10 year average count of 17,162. The 2010 LGR wild steelhead count as of August 25th was 13,453. The 2010 Rock Island Dam adult steelhead count of 12,057 is about 1.77 times greater than the 2009 count and 2.11 times greater than the 10 year average.

The 2010 adult sockeye count at Bonneville Dam of 386,514 is about 2.17 times greater than the 2009 count and about 4.1 times greater than the 10 year average. The 2010 adult sockeye count at McNary Dam of 278,794 is about 2.29 times greater than the 2009 count and 4 times greater than the 10 year average. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River zone at Ice Harbor Dam, the 2010 adult sockeye count of 1,302 is about 1.50 times greater than the 2009 count of 867 and about 7.44 times greater than the 10 year average count of 175. The Lower Granite Dam 2010 adult sockeye count of 2,154 is about 1.77 times greater than the 2009 count of 1,215 and 8.9 times greater than the 10 year average of 242.

The 2010 adult coho count at Bonneville Dam is 1,255 adults and 107 jacks. The Bonneville 2010 adult coho count is about 8.4% of the 2009 count and about 38% of the 10 year average. The Bonneville 2010 coho jack count is about 6.5% of the 2009 count of 1,638 and about 30.1% of the 10 year average count of 355. As of August 25th at Bonneville Dam, the adult Shad count was 1,042,387 which was about 75.9% of the 2009 count of 1,373,721 and about 33.7% of the 10 year average count of 3,092,030.

**Hatchery Releases Last Two Weeks**

**There were no hatchery releases from 08/13/10-8/26/10.**

**Hatchery Releases Next Two Weeks**

**There are no hatchery releases planned from 08/27/10-9/10/10.**

**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
08/13/2010	82.8	0.2	88.9	0.0	94.5	7.3	94.5	8.1	95.1	20.3	101.4	19.2	99.0	26.8
08/14/2010	81.1	0.2	85.5	0.0	84.9	6.4	82.7	5.7	86.2	12.4	87.0	18.9	86.2	26.4
08/15/2010	69.0	0.2	61.2	0.0	66.2	5.1	68.9	6.7	71.4	14.4	73.2	19.4	73.6	26.8
08/16/2010	94.9	0.2	101.7	0.0	102.1	7.3	98.1	8.1	98.8	21.2	97.9	19.1	93.7	26.4
08/17/2010	103.6	0.2	103.6	0.0	107.6	8.3	108.4	8.0	112.2	21.0	111.3	19.6	109.2	25.6
08/18/2010	82.0	0.2	77.8	0.0	88.6	7.7	89.3	8.1	92.9	20.4	116.1	19.1	118.2	26.3
08/19/2010	80.1	0.2	79.2	0.0	78.3	5.9	76.5	7.5	77.6	19.7	73.7	18.4	71.8	25.1
08/20/2010	85.2	0.2	86.4	0.0	90.0	6.0	89.5	6.9	92.5	16.5	96.5	18.9	95.4	26.0
08/21/2010	47.4	0.2	46.6	0.0	56.5	4.5	58.9	0.0	61.2	0.0	73.3	18.8	75.0	25.7
08/22/2010	54.1	0.2	59.1	0.0	51.0	4.3	48.4	0.0	49.2	0.0	42.8	18.1	44.6	25.1
08/23/2010	90.3	0.2	92.1	0.0	95.0	6.4	94.7	0.0	96.5	0.0	94.0	12.1	84.3	25.7
08/24/2010	90.3	0.2	86.7	0.0	88.6	6.0	86.2	0.0	87.6	0.0	94.9	1.7	94.6	9.2
08/25/2010	96.2	0.2	98.2	0.0	97.6	7.2	97.8	0.0	99.1	0.0	92.6	1.9	86.2	1.0
08/26/2010	71.5	0.2	71.0	0.0	78.6	6.7	81.1	0.0	84.3	0.0	104.1	1.9	104.3	0.9

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/13/2010	10.8	0.8	9.8	8.7	31.5	18.6	30.2	9.7	29.4	16.0	29.9	20.1
08/14/2010	10.9	0.8	10.2	9.9	31.3	18.6	28.6	8.4	28.2	15.9	29.2	19.0
08/15/2010	10.7	0.6	9.7	8.7	28.0	15.3	28.1	8.2	26.1	13.8	26.4	16.4
08/16/2010	10.4	0.4	9.7	8.7	29.5	20.1	29.4	8.6	28.2	16.0	27.2	17.2
08/17/2010	10.1	0.0	9.6	13.0	30.2	19.8	29.5	8.8	29.9	17.5	29.9	20.1
08/18/2010	10.1	0.0	9.3	12.7	30.2	20.3	30.9	9.3	30.5	17.4	32.5	22.2
08/19/2010	10.1	0.0	9.3	12.7	31.5	21.9	31.8	9.5	30.0	17.4	30.0	19.8
08/20/2010	10.1	0.0	8.9	11.8	30.4	17.7	29.2	9.3	26.8	14.6	26.8	16.9
08/21/2010	10.2	0.0	8.5	11.9	31.0	18.2	33.4	11.2	32.3	17.4	33.5	23.7
08/22/2010	10.2	0.0	8.1	10.7	26.7	13.6	25.9	11.1	24.6	12.3	25.8	15.8
08/23/2010	10.3	0.0	8.4	8.8	27.0	14.2	28.5	10.2	26.7	14.6	27.5	17.9
08/24/2010	10.3	0.0	8.4	8.9	28.0	15.0	27.7	9.3	27.0	14.6	26.4	16.5
08/25/2010	10.3	0.0	8.7	9.0	27.4	14.7	27.3	9.3	25.3	13.0	26.0	16.1
08/26/2010	8.0	0.0	---	---	26.3	13.4	26.9	9.3	26.1	14.0	26.2	16.1

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/13/2010	125.5	62.1	122.7	36.9	116.9	46.7	125.4	82.4	0.0	30.6
08/14/2010	125.1	62.7	117.7	35.2	116.5	46.6	132.0	87.3	0.0	32.3
08/15/2010	116.8	57.9	107.2	32.1	98.5	39.4	132.9	88.0	0.0	32.5
08/16/2010	123.5	62.0	122.2	36.7	118.8	47.7	132.5	88.0	0.0	32.1
08/17/2010	143.0	71.5	130.0	38.9	119.2	47.8	128.5	83.6	0.0	32.5
08/18/2010	144.7	72.6	122.6	36.9	119.5	47.9	131.3	83.7	0.0	35.2
08/19/2010	124.0	62.4	124.6	37.3	120.0	48.1	135.5	79.9	0.0	43.2
08/20/2010	117.8	59.1	116.0	34.7	108.8	43.5	117.9	74.8	0.0	30.7
08/21/2010	120.6	60.4	105.5	31.7	100.5	40.3	118.3	75.1	0.0	30.8
08/22/2010	113.7	57.0	102.7	30.9	99.2	39.7	117.9	74.7	0.0	30.8
08/23/2010	109.8	54.9	108.8	32.6	105.9	42.4	118.3	74.7	0.0	31.2
08/24/2010	107.2	53.7	109.4	32.7	105.3	41.6	116.3	72.9	0.0	31.0
08/25/2010	131.8	65.9	117.3	35.3	111.6	44.2	113.4	70.1	0.0	30.9
08/26/2010	111.5	55.9	104.0	31.1	98.0	39.0	112.9	69.9	0.0	0.0

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>Lower Monumental Dam</b>											
	08/25/10	Chinook + Steelhead	31	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	08/16/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/19/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/23/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	08/17/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/25/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	08/18/10	Chinook + Steelhead	42	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	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
8/13	104.6	104.8	105.0	23	106.0	106.5	107.4	19	108.5	108.8	109.4	24	109.3	109.7	110.5	19	107.9	108.0	108.5	24
8/14	104.1	104.3	104.7	24	105.1	105.8	106.6	24	107.7	107.9	108.2	24	109.5	110.4	111.5	24	107.8	108.1	108.7	24
8/15	104.1	104.6	105.0	24	105.4	106.0	106.8	23	107.4	107.6	107.8	24	108.8	109.7	110.2	23	108.3	109.1	109.6	24
8/16	104.4	104.8	105.3	23	106.3	106.9	107.9	20	107.3	107.5	108.1	24	109.8	110.4	111.3	20	108.6	109.4	109.8	24
8/17	104.8	105.1	105.7	24	106.4	106.9	107.9	23	106.6	107.0	107.5	24	110.1	110.8	111.5	23	109.0	109.5	110.2	24
8/18	104.7	105.1	105.6	24	106.7	107.1	107.9	22	105.6	106.2	107.3	24	109.9	110.4	111.8	22	109.0	109.4	109.6	24
8/19	104.9	105.1	105.5	23	107.0	107.5	108.1	20	106.7	107.1	107.8	24	109.7	110.2	111.4	20	107.6	107.9	108.4	24
8/20	104.5	104.6	104.7	24	106.9	107.2	107.8	22	107.1	107.5	108.3	24	108.6	109.3	109.7	22	107.0	107.3	107.5	24
8/21	104.7	105.4	105.9	24	106.4	106.8	107.4	23	106.3	106.6	106.9	24	108.2	108.9	111.0	23	107.0	107.5	107.9	24
8/22	104.4	104.6	104.9	24	105.1	105.5	106.1	23	105.8	106.1	106.6	24	107.3	108.2	109.5	23	106.5	106.9	108.5	24
8/23	103.5	103.8	104.2	24	103.4	103.9	104.4	22	104.9	105.1	105.6	24	106.7	107.4	108.0	22	105.4	105.7	106.0	24
8/24	103.1	103.3	103.8	24	103.9	105.0	106.1	23	105.0	105.2	105.5	24	107.1	107.9	108.7	23	105.5	106.0	106.2	24
8/25	103.6	104.0	104.4	24	105.0	106.3	107.5	23	104.7	105.1	105.7	24	107.5	108.3	109.0	23	107.4	108.1	108.4	24
8/26	104.3	104.6	105.3	24	105.5	106.1	106.6	23	104.6	105.2	105.7	24	106.5	107.4	108.4	23	106.9	107.4	107.7	24

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

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
8/13	109.1	109.6	110.3	24	109.2	109.6	109.9	24	111.1	111.8	112.4	24	109.8	110.1	110.3	24	111.0	111.7	112.7	24
8/14	109.1	109.7	110.2	24	108.6	109.4	110.4	24	109.8	110.8	111.4	24	109.3	109.8	110.0	24	110.0	110.6	111.2	24
8/15	109.7	110.3	111.6	24	108.9	110.3	111.6	24	110.1	111.0	111.5	24	110.1	110.7	111.2	24	110.3	110.9	111.1	24
8/16	109.6	109.9	110.3	24	109.8	110.8	111.2	24	111.1	112.3	112.5	24	110.4	110.8	111.0	24	111.4	112.5	113.0	24
8/17	109.9	110.3	110.9	24	110.4	111.2	112.1	24	112.3	113.6	114.3	24	110.9	111.4	111.6	24	111.9	112.8	113.5	24
8/18	110.4	111.0	111.4	24	109.7	110.6	111.3	24	111.6	112.7	113.5	24	110.6	111.2	111.6	24	111.5	112.3	112.9	24
8/19	108.4	109.5	110.2	24	108.7	109.6	110.3	24	109.8	110.6	111.1	24	110.4	110.9	111.1	24	111.0	111.8	112.9	24
8/20	108.0	109.0	110.2	24	108.1	108.9	109.6	24	109.3	110.2	111.0	24	109.7	110.1	110.5	24	110.8	111.7	112.3	24
8/21	108.9	109.9	111.5	24	107.0	107.4	107.9	24	107.9	108.5	108.9	24	108.8	109.0	109.7	24	107.8	108.4	109.9	24
8/22	107.6	108.8	110.0	24	106.1	106.8	107.8	23	106.8	107.5	108.3	23	106.6	107.0	107.7	24	104.8	105.5	106.5	24
8/23	105.9	106.5	107.6	24	104.9	105.6	106.2	24	106.0	106.8	107.3	24	105.1	105.3	105.8	24	104.2	104.4	104.5	24
8/24	106.2	106.8	108.3	24	105.8	107.2	107.7	24	106.9	108.6	109.6	24	104.7	105.4	106.1	24	103.7	104.3	104.9	24
8/25	109.0	109.7	110.9	24	107.1	108.0	108.5	23	108.9	110.4	111.0	23	106.7	107.6	108.0	24	105.4	106.3	106.7	24
8/26	108.6	109.2	110.2	24	107.5	108.2	108.9	24	109.6	110.2	110.6	24	107.7	107.9	108.0	24	106.0	106.6	107.1	24

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

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
8/13	109.4	109.9	110.1	24	114.4	115.7	121.1	24	106.2	107.4	108.0	20	112.4	113.3	114.8	24	110.5	111.3	111.9	24
8/14	109.0	109.5	109.8	24	113.8	115.4	118.6	24	107.4	108.9	110.0	20	113.0	113.9	114.4	24	110.9	111.6	112.2	24
8/15	109.1	109.7	110.6	24	113.7	114.6	117.9	24	107.7	108.8	111.2	16	114.2	115.0	115.9	24	112.1	113.1	114.1	24
8/16	110.1	110.6	111.1	24	115.0	115.7	117.2	24	108.6	111.6	113.7	22	113.5	114.1	115.1	24	114.0	115.1	115.9	24
8/17	110.4	111.0	111.7	24	114.7	115.2	116.7	24	111.3	114.3	115.1	24	114.0	114.6	115.5	24	113.8	114.5	115.1	24
8/18	110.3	110.9	111.2	24	115.2	115.8	116.5	24	110.4	111.3	112.4	24	112.9	113.6	114.8	24	111.8	112.4	113.3	24
8/19	109.5	109.8	110.4	24	114.7	115.9	116.8	24	107.7	108.5	109.1	24	112.2	113.0	114.1	24	109.0	109.6	110.3	24
8/20	109.5	110.0	110.3	24	114.5	115.6	118.6	24	106.7	108.8	110.0	24	111.6	113.0	114.2	24	107.3	108.9	109.5	24
8/21	108.8	109.3	109.9	24	109.5	110.3	113.9	24	106.9	108.4	109.1	24	112.9	113.9	115.0	24	108.8	109.4	109.8	23
8/22	105.7	106.3	107.1	24	106.1	106.6	107.5	24	103.5	104.7	107.0	24	112.6	113.2	113.9	24	103.5	106.4	106.9	22
8/23	104.4	105.0	105.6	24	104.6	105.2	105.8	24	103.3	104.4	106.2	24	107.8	110.7	113.2	24	104.2	105.2	107.3	24
8/24	104.5	105.0	105.2	24	105.2	105.5	107.2	24	106.5	108.3	110.0	24	106.3	107.2	107.5	24	107.3	107.8	108.4	24
8/25	105.4	106.4	107.3	24	105.7	106.5	107.4	24	107.4	109.8	111.4	24	107.0	107.4	107.8	24	107.1	108.2	108.5	24
8/26	106.6	106.9	107.2	24	106.9	107.3	107.4	24	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwrtr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</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>				
8/13	111.9	112.8	113.2	24	107.2	108.0	108.3	24	99.2	99.4	99.8	24	101.4	102.4	103.4	23	101.2	102.2	103.5	24
8/14	112.2	113.1	113.5	24	107.1	107.1	107.3	3	99.0	99.3	99.6	24	101.1	102.3	103.3	24	100.7	102.0	103.4	24
8/15	112.0	113.7	114.5	24	---	---	---	0	135.6	172.5	980.0	24	101.1	102.2	103.2	23	100.3	101.5	102.7	24
8/16	113.3	115.1	115.5	24	---	---	---	0	98.6	99.4	105.0	24	101.1	102.3	103.3	24	99.7	100.8	101.9	24
8/17	113.8	115.0	115.4	24	111.1	111.2	112.2	13	97.7	98.1	98.4	24	100.4	101.8	102.8	23	99.8	100.9	102.3	24
8/18	113.3	113.8	114.3	24	108.6	109.3	110.1	24	98.0	98.2	98.5	24	100.6	101.7	102.8	23	99.0	99.6	100.3	24
8/19	111.4	112.1	112.8	24	107.0	107.9	108.6	24	98.0	98.3	98.5	24	100.5	101.7	102.8	23	98.6	99.5	100.4	24
8/20	110.4	111.3	111.7	24	107.0	107.8	108.2	24	98.2	98.5	98.8	24	100.4	101.7	102.7	23	98.6	99.5	100.5	24
8/21	110.6	111.1	111.4	24	106.0	106.6	107.2	24	98.3	98.5	98.9	24	100.4	101.5	102.8	23	98.2	99.0	100.0	24
8/22	108.8	109.2	109.6	23	104.4	104.9	105.8	24	97.4	97.6	97.9	24	99.3	99.9	101.2	23	97.5	98.1	99.0	24
8/23	108.1	108.6	109.0	24	102.6	103.2	103.6	24	96.5	96.7	97.0	24	98.7	99.8	100.8	23	97.5	98.6	99.4	24
8/24	108.7	109.6	110.0	24	104.4	106.0	106.7	24	97.1	97.4	97.7	24	99.3	100.6	101.5	24	98.5	99.6	100.5	24
8/25	107.0	108.0	108.7	24	106.5	107.3	107.8	24	97.2	97.2	97.6	10	99.9	101.2	102.3	23	98.8	99.8	101.2	24
8/26	---	---	---	0	104.7	105.5	106.9	24	---	---	---	0	100.7	102.2	103.8	24	98.2	99.0	100.4	24

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

Date	<u>Clrwrtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</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>				
8/13	102.7	104.4	105.7	24	100.7	101.1	101.8	24	115.1	115.3	115.5	24	109.4	109.9	111.1	24	107.8	108.4	110.2	24
8/14	102.7	104.6	106.1	23	99.7	99.8	100.1	24	114.7	115.0	115.3	24	109.9	110.4	110.8	24	107.2	107.6	108.1	24
8/15	102.7	104.7	106.1	24	99.6	99.7	99.9	24	113.7	114.1	114.5	24	108.5	108.8	109.5	24	106.9	107.6	108.2	24
8/16	102.8	104.9	106.4	24	100.2	100.7	101.0	24	116.5	118.7	119.7	24	108.8	109.0	109.4	24	107.0	107.7	108.2	24
8/17	102.7	104.6	106.0	24	101.0	101.3	101.8	24	115.6	117.4	118.0	24	110.2	110.6	111.1	24	107.4	107.8	108.2	24
8/18	102.5	103.7	105.0	22	101.1	101.3	101.5	24	116.0	117.5	118.2	24	110.4	110.7	111.1	24	107.4	107.8	108.2	24
8/19	102.5	104.4	105.7	24	101.4	101.8	102.1	24	117.0	118.8	119.4	24	109.9	110.1	110.3	24	107.4	107.9	108.5	24
8/20	102.4	104.3	105.6	24	102.1	102.4	103.0	24	114.9	115.3	115.5	24	108.8	109.0	109.5	24	107.5	108.1	108.8	24
8/21	102.2	103.9	105.3	24	101.9	102.0	102.4	24	115.0	115.3	115.5	24	108.3	108.6	108.9	24	107.5	108.0	108.4	24
8/22	100.8	101.8	102.8	24	100.2	100.7	101.5	24	113.3	113.6	114.1	24	108.0	108.2	108.4	24	105.7	106.1	106.6	24
8/23	101.5	103.4	104.8	23	99.1	99.3	99.5	24	113.5	113.9	114.3	24	105.7	106.1	107.4	24	106.6	107.2	107.7	24
8/24	102.1	104.1	105.6	23	99.9	100.2	100.5	24	113.7	114.1	114.6	24	105.5	105.8	106.0	24	106.8	107.4	107.9	24
8/25	102.4	104.4	105.8	23	100.4	100.6	101.2	24	113.4	113.7	114.1	24	106.2	106.6	107.2	24	106.7	107.2	107.8	24
8/26	102.3	104.0	105.7	23	99.9	100.3	100.4	24	113.4	114.0	114.4	24	106.9	107.2	107.7	24	106.7	107.1	107.6	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>				
8/13	107.2	107.4	107.9	24	114.1	115.2	115.9	24	109.6	109.8	110.0	24	113.3	113.8	114.2	24	---	---	---	0
8/14	105.8	106.1	106.9	24	114.4	115.3	115.7	24	109.2	109.3	109.4	24	113.0	113.9	114.3	24	---	---	---	0
8/15	105.6	106.0	106.4	24	113.0	114.1	114.6	24	109.0	109.1	109.3	24	110.6	111.1	111.9	24	---	---	---	0
8/16	105.9	106.2	106.4	24	114.4	115.1	115.7	24	109.1	109.3	109.5	24	111.1	112.0	112.7	24	---	---	---	0
8/17	106.5	107.1	107.9	24	122.2	129.8	140.6	24	109.5	109.7	110.1	24	113.2	113.7	114.3	24	---	---	---	0
8/18	106.3	106.6	107.0	24	115.5	115.9	116.3	24	109.6	109.8	110.3	24	113.3	113.7	114.0	24	---	---	---	0
8/19	105.5	105.6	105.9	24	115.1	115.6	116.1	24	109.2	109.3	109.4	24	113.3	113.8	114.3	24	---	---	---	0
8/20	105.3	105.6	106.0	24	114.9	116.3	116.7	24	109.3	109.7	110.0	24	112.0	112.9	113.5	24	---	---	---	0
8/21	105.3	105.7	106.1	24	115.7	115.9	116.2	24	109.3	109.4	109.6	24	113.4	114.0	114.7	24	---	---	---	0
8/22	104.0	104.1	104.3	24	112.3	113.5	115.4	24	107.9	108.4	109.0	24	112.9	112.9	113.0	3	---	---	---	0
8/23	102.5	102.8	103.6	24	113.6	114.8	115.2	24	105.6	105.9	106.3	24	111.6	111.9	112.7	15	---	---	---	0
8/24	102.9	103.1	103.3	24	112.9	113.5	114.2	24	106.1	106.6	107.0	24	110.5	111.1	111.6	24	---	---	---	0
8/25	103.4	103.6	103.8	24	112.7	113.0	113.5	24	107.5	107.9	108.6	24	110.2	110.8	111.2	24	---	---	---	0
8/26	103.6	104.0	104.5	24	113.1	113.5	113.8	24	108.4	108.8	108.9	24	109.8	110.2	110.9	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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	<u>AVG</u>	<u>High</u>	#
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>				
8/13	104.9	105.6	107.4	24	114.4	115.2	116.0	24	102.3	102.7	102.9	24	114.5	114.7	114.9	24	105.5	105.8	106.1	24		
8/14	104.7	105.2	106.3	24	115.0	115.8	116.4	24	102.0	102.5	103.1	24	114.0	114.5	114.7	24	106.0	106.5	107.0	24		
8/15	105.1	105.4	105.8	24	114.4	114.7	115.1	24	101.8	102.0	102.3	24	113.8	114.6	114.9	24	106.3	106.9	107.2	24		
8/16	106.0	106.7	107.4	24	115.3	116.4	117.1	24	102.2	102.4	102.9	24	114.3	114.9	115.2	24	106.9	107.5	107.8	24		
8/17	107.5	108.2	109.1	24	115.9	116.8	117.5	24	103.5	103.8	104.0	24	114.6	115.2	115.7	24	107.8	108.3	109.0	24		
8/18	108.7	108.9	109.5	24	116.2	116.6	116.8	24	103.8	104.4	107.6	24	113.7	114.5	115.3	24	105.7	106.3	106.9	24		
8/19	107.7	108.1	108.7	24	114.8	115.3	116.1	24	103.7	103.9	104.1	24	114.0	114.5	115.0	24	104.1	104.5	105.6	24		
8/20	106.8	106.9	107.1	24	114.8	115.4	116.3	24	103.6	104.0	104.3	24	113.9	114.6	114.8	24	104.0	104.2	104.5	24		
8/21	105.9	106.4	106.7	24	114.4	115.0	116.3	24	103.7	103.9	104.1	24	113.3	113.9	114.5	24	104.1	104.5	104.8	24		
8/22	103.5	103.7	104.3	24	112.9	113.3	114.2	24	101.9	102.3	102.8	24	112.8	113.3	113.8	24	102.4	102.7	103.3	24		
8/23	102.6	102.8	103.2	24	113.1	113.3	113.6	24	100.9	101.3	102.4	24	113.2	113.8	114.2	24	101.8	102.4	103.3	24		
8/24	103.8	104.2	104.4	24	113.3	113.7	114.3	24	101.7	102.3	103.4	24	113.9	114.1	114.5	24	106.1	107.5	107.8	24		
8/25	104.2	104.5	105.3	24	114.4	115.7	116.4	24	102.3	102.7	103.2	24	114.2	114.5	114.8	24	107.8	108.4	108.8	24		
8/26	104.7	105.3	105.5	24	113.2	113.9	114.3	24	101.6	102.1	102.7	24	113.0	113.4	113.9	24	106.9	107.8	108.4	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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	<u>AVG</u>	<u>High</u>	#
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>				
8/13	112.4	112.7	113.3	24	105.1	105.6	106.0	24	116.0	116.3	116.5	24	113.6	114.6	115.3	24	114.4	115.7	117.0	24		
8/14	112.8	113.6	114.4	24	105.9	106.3	106.7	24	115.3	115.9	116.9	24	111.1	111.9	113.5	24	114.7	116.1	117.7	24		
8/15	112.4	112.7	113.5	24	107.5	108.1	108.5	24	116.6	117.0	117.4	24	112.2	114.9	116.2	24	115.1	116.4	118.0	24		
8/16	113.5	114.5	115.4	24	109.9	110.9	111.3	24	116.9	117.3	117.9	24	115.4	117.1	118.0	24	115.3	116.7	118.3	24		
8/17	114.2	114.8	115.6	24	111.2	111.6	111.8	24	116.7	117.4	117.6	24	115.6	116.6	117.4	24	115.1	116.1	116.9	24		
8/18	112.5	113.0	113.8	24	106.8	107.6	109.4	24	115.0	115.3	116.1	24	112.4	113.6	115.0	24	114.9	115.9	117.0	24		
8/19	111.6	112.1	112.7	24	104.2	104.6	105.4	24	113.5	113.9	114.6	24	110.9	111.6	112.9	24	114.3	115.2	117.5	24		
8/20	111.6	112.2	112.4	24	103.1	103.3	103.6	24	114.2	114.6	115.2	24	110.3	111.8	112.6	24	113.2	113.3	113.4	24		
8/21	110.8	111.4	112.0	24	102.6	102.8	103.3	24	113.9	114.2	114.8	24	110.5	111.2	111.7	24	113.2	113.3	113.5	24		
8/22	109.5	109.8	110.2	24	101.0	101.3	102.0	24	113.4	113.8	114.2	24	109.4	110.2	110.5	24	113.0	113.1	113.1	24		
8/23	110.1	110.9	111.8	24	101.6	102.5	102.9	24	114.5	115.3	115.9	24	111.1	113.2	114.4	24	113.0	113.2	113.4	24		
8/24	112.3	113.3	113.7	24	102.9	103.4	103.8	24	114.0	114.8	115.3	24	109.7	111.6	114.5	24	112.9	113.1	113.3	24		
8/25	113.8	114.3	114.9	24	105.6	106.7	107.4	24	115.8	116.8	117.3	24	110.7	113.0	114.3	24	112.8	113.0	113.4	24		
8/26	112.4	113.4	114.6	24	106.9	107.5	107.8	23	114.7	115.2	116.2	24	112.2	113.1	114.5	24	112.8	113.1	113.4	24		

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/27/2010 7:33

### 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)
08/13/2010 *	---	---	---	---	0	6	8	0	0	0	---
08/14/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/15/2010 *	---	---	---	---	0	0	9	0	0	---	---
08/16/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/17/2010 *	---	---	---	---	0	0	0	0	0	0	---
08/18/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/19/2010 *	---	---	---	---	0	1	0	0	0	---	---
08/20/2010 *	---	---	---	---	3	3	0	0	0	0	0
08/21/2010 *	---	---	---	---	0	2	0	0	0	---	---
08/22/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/23/2010 *	---	---	---	---	0	0	2	0	0	---	---
08/24/2010 *	---	---	---	---	0	3	0	0	0	0	0
08/25/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2010 *	---	---	---	---	0	2	0	0	0	---	0
08/27/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>17</b>	<b>19</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>14</b>	<b>14</b>	<b>14</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>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>56,130</b>	<b>80,004</b>	<b>27,916</b>	<b>7,995</b>	<b>2,452,571</b>	<b>1,260,524</b>	<b>452,091</b>	<b>11,800</b>	<b>2,093,842</b>	<b>1,034,554</b>	<b>2,302,148</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)
08/13/2010 *	---	---	---	---	852	1,690	221	96	14,381	725	---
08/14/2010 *	---	---	---	---	1,037	1,140	173	113	11,033	---	3,174
08/15/2010 *	---	---	---	---	691	1,080	190	101	11,980	---	---
08/16/2010 *	---	---	---	---	388	5,210	177	69	12,779	---	3,896
08/17/2010 *	---	---	---	---	758	2,036	138	82	14,830	1,225	---
08/18/2010 *	---	---	---	---	1,195	1,086	524	58	12,873	---	2,696
08/19/2010 *	---	---	---	---	1,353	727	422	26	6,292	---	---
08/20/2010 *	---	---	---	---	1,394	1,248	246	64	5,317	890	2,535
08/21/2010 *	---	---	---	---	737	194	69	81	8,803	---	---
08/22/2010 *	---	---	---	---	469	213	159	54	8,661	---	1,165
08/23/2010 *	---	---	---	---	319	425	142	17	4,953	---	---
08/24/2010 *	---	---	---	---	320	112	75	69	8,502	1,052	586
08/25/2010 *	---	---	---	---	376	116	137	63	30,788	---	1,039
08/26/2010 *	---	---	---	---	380	213	89	32	6,615	---	2,240
08/27/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,269</b>	<b>15,490</b>	<b>2,762</b>	<b>925</b>	<b>157,807</b>	<b>3,892</b>	<b>17,331</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>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>734</b>	<b>1,106</b>	<b>197</b>	<b>66</b>	<b>11,272</b>	<b>973</b>	<b>2,166</b>
<b>YTD</b>	<b>0</b>	<b>42</b>	<b>28</b>	<b>1,275</b>	<b>1,022,835</b>	<b>1,307,193</b>	<b>770,339</b>	<b>23,199</b>	<b>3,805,227</b>	<b>2,205,222</b>	<b>5,088,988</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)
08/13/2010 *	---	---	---	---	5	0	0	2	0	0	---
08/14/2010 *	---	---	---	---	0	0	0	0	21	---	0
08/15/2010 *	---	---	---	---	5	0	0	1	21	---	---
08/16/2010 *	---	---	---	---	5	0	0	0	0	---	0
08/17/2010 *	---	---	---	---	0	0	0	1	0	0	---
08/18/2010 *	---	---	---	---	6	7	0	0	0	---	0
08/19/2010 *	---	---	---	---	3	0	0	0	0	---	---
08/20/2010 *	---	---	---	---	3	3	0	0	0	0	0
08/21/2010 *	---	---	---	---	0	0	0	0	0	---	---
08/22/2010 *	---	---	---	---	0	2	0	0	0	---	0
08/23/2010 *	---	---	---	---	0	0	0	0	0	---	---
08/24/2010 *	---	---	---	---	0	0	0	0	0	0	0
08/25/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2010 *	---	---	---	---	2	0	0	0	0	---	0
08/27/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>12</b>	<b>0</b>	<b>4</b>	<b>42</b>	<b>0</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>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>104</b>	<b>40,175</b>	<b>53,906</b>	<b>13,604</b>	<b>41,441</b>	<b>85,780</b>	<b>111,156</b>	<b>524,764</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)
08/13/2010 *	---	---	---	---	0	0	8	0	21	0	---
08/14/2010 *	---	---	---	---	0	6	0	0	0	---	0
08/15/2010 *	---	---	---	---	0	0	9	0	0	---	---
08/16/2010 *	---	---	---	---	5	34	0	0	0	---	0
08/17/2010 *	---	---	---	---	0	7	0	1	0	0	---
08/18/2010 *	---	---	---	---	3	0	0	1	0	---	0
08/19/2010 *	---	---	---	---	6	4	0	0	0	---	---
08/20/2010 *	---	---	---	---	0	0	0	0	0	22	0
08/21/2010 *	---	---	---	---	0	0	0	0	0	---	---
08/22/2010 *	---	---	---	---	2	0	0	2	0	---	0
08/23/2010 *	---	---	---	---	0	2	2	1	0	---	---
08/24/2010 *	---	---	---	---	0	0	0	0	0	0	0
08/25/2010 *	---	---	---	---	0	2	0	1	0	---	0
08/26/2010 *	---	---	---	---	0	0	0	1	0	---	0
08/27/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>55</b>	<b>19</b>	<b>7</b>	<b>21</b>	<b>22</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>4</b>	<b>8</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>0</b>
<b>YTD</b>	<b>4,385</b>	<b>27,688</b>	<b>4,051</b>	<b>11,795</b>	<b>2,045,799</b>	<b>1,594,179</b>	<b>427,856</b>	<b>17,307</b>	<b>448,224</b>	<b>594,822</b>	<b>942,451</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)
08/13/2010 *	---	---	---	---	0	0	0	0	0	11	---
08/14/2010 *	---	---	---	---	0	0	0	0	0	---	0
08/15/2010 *	---	---	---	---	0	0	0	0	0	---	---
08/16/2010 *	---	---	---	---	0	0	0	0	21	---	0
08/17/2010 *	---	---	---	---	3	0	0	0	21	29	---
08/18/2010 *	---	---	---	---	0	0	0	0	21	---	0
08/19/2010 *	---	---	---	---	3	0	0	0	0	---	---
08/20/2010 *	---	---	---	---	0	0	0	0	0	0	0
08/21/2010 *	---	---	---	---	3	0	0	0	0	---	---
08/22/2010 *	---	---	---	---	0	0	2	0	10	---	0
08/23/2010 *	---	---	---	---	0	0	0	0	0	---	---
08/24/2010 *	---	---	---	---	0	0	0	1	10	0	0
08/25/2010 *	---	---	---	---	0	0	0	1	21	---	0
08/26/2010 *	---	---	---	---	2	0	0	0	0	---	0
08/27/2010	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>104</b>	<b>40</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>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>7</b>	<b>10</b>	<b>0</b>
<b>YTD</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>188</b>	<b>8,768</b>	<b>12,821</b>	<b>2,204</b>	<b>36,508</b>	<b>1,469,140</b>	<b>656,055</b>	<b>803,520</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:

8/27/10 7:31 AM

**08/13/10 TO 08/27/10**

Site	Data	Species					Grand Total
		CH0	CH1	CO	ST	SO	
<b>LGR</b>	Sum of NumberCollected	3,819	1	11	6	4	3,841
	Sum of NumberBarged	1,195	0	6	2	0	1,203
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	2,568	1	5	4	4	2,582
	Sum of SampleMorts	50	0	0	0	0	50
	Sum of FacilityMorts	6	0	0	0	0	6
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	56	0	0	0	0	56
<b>LGS</b>	Sum of NumberCollected	10,691	11	8	38		10,748
	Sum of NumberBarged	6,338	4	0	27		6,369
	Sum of NumberBypassed	0	0	0	0		0
	Sum of Numbertrucked	4,217	6	7	8		4,238
	Sum of SampleMorts	49	1	1	0		51
	Sum of FacilityMorts	87	0	0	3		90
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	136	1	1	3		141
<b>LMN</b>	Sum of NumberCollected	1,208	9		9		1,226
	Sum of NumberBarged	346	8		8		362
	Sum of NumberBypassed	47	0		0		47
	Sum of Numbertrucked	805	1		1		807
	Sum of SampleMorts	7	0		0		7
	Sum of FacilityMorts	3	0		0		3
	Sum of ResearchMorts	0	0		0		0
	Sum of TotalProjectMorts	10	0		0		10
<b>MCN</b>	Sum of NumberCollected	75,695		20	10	50	75,775
	Sum of NumberBarged	19,680		10	7	10	19,707
	Sum of NumberBypassed	0		0	0	0	0
	Sum of Numbertrucked	55,403		10	0	40	55,453
	Sum of SampleMorts	78		0	1	0	79
	Sum of FacilityMorts	534		0	2	0	536
	Sum of ResearchMorts	0		0	0	0	0
	Sum of TotalProjectMorts	612		0	3	0	615
Total Sum of NumberCollected		91,413	21	39	63	54	91,590
Total Sum of NumberBarged		27,559	12	16	44	10	27,641
Total Sum of NumberBypassed		47	0	0	0	0	47
Total Sum of Numbertrucked		62,993	8	22	13	44	63,080
Total Sum of SampleMorts		184	1	1	1	0	187
Total Sum of FacilityMorts		630	0	0	5	0	635
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		814	1	1	6	0	822

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/27/10 7:31 AM

TO: 08/27/10

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	610,179	1,622,345	28,353	5,791	1,358,152	3,624,820
	Sum of NumberBarged	605,631	1,428,784	28,337	5,772	1,309,483	3,378,007
	Sum of NumberBypassed	700	191,860	0	10	48,344	240,914
	Sum of NumberTrucked	2,568	1	5	4	4	2,582
	Sum of SampleMorts	240	54	1	0	19	314
	Sum of FacilityMorts	1,040	1,231	10	5	285	2,571
	Sum of ResearchMorts	0	415	0	0	17	432
	Sum of TotalProjectMorts	1,280	1,700	11	5	321	3,317
<b>LGS</b>	Sum of NumberCollected	859,799	873,200	36,905	8,874	1,085,609	2,864,387
	Sum of NumberBarged	849,625	791,515	36,896	8,872	1,025,889	2,712,797
	Sum of NumberBypassed	68	81,373	0	0	59,473	140,914
	Sum of NumberTrucked	4,217	6	7	0	8	4,238
	Sum of SampleMorts	231	30	2	1	10	274
	Sum of FacilityMorts	5,658	276	0	1	229	6,164
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	5,889	306	2	2	239	6,438
<b>LMN</b>	Sum of NumberCollected	509,264	305,751	8,789	1,525	239,911	1,065,240
	Sum of NumberBarged	507,240	304,265	8,789	1,421	234,687	1,056,402
	Sum of NumberBypassed	565	1,473	0	0	5,000	7,038
	Sum of NumberTrucked	805	1	0	0	1	807
	Sum of SampleMorts	55	9	0	1	10	75
	Sum of FacilityMorts	618	201	0	3	314	1,136
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	673	210	0	4	324	1,211
<b>MCN</b>	Sum of NumberCollected	1,880,893	1,224,094	47,445	848,900	260,030	4,261,362
	Sum of NumberBarged	299,909	173	70	190	86	300,428
	Sum of NumberBypassed	1,490,588	1,222,563	47,275	847,904	259,728	3,868,058
	Sum of NumberTrucked	83,176	0	40	60	0	83,276
	Sum of SampleMorts	480	121	5	96	17	719
	Sum of FacilityMorts	6,690	1,237	55	650	199	8,831
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	7,170	1,358	60	746	216	9,550
Total Sum of NumberCollected		3,860,135	4,025,390	121,492	865,090	2,943,702	11,815,809
Total Sum of NumberBarged		2,262,405	2,524,737	74,092	16,255	2,570,145	7,447,634
Total Sum of NumberBypassed		1,491,921	1,497,269	47,275	847,914	372,545	4,256,924
Total Sum of NumberTrucked		90,766	8	52	64	13	90,903
Total Sum of SampleMorts		1,006	214	8	98	56	1,382
Total Sum of FacilityMorts		14,006	2,945	65	659	1,027	18,702
Total Sum of ResearchMorts		0	415	0	0	17	432
Total Sum of TotalProjectMorts		15,012	3,574	73	757	1,100	20,516

Cumulative Adult Passage at Mainstem Dams Through:													08/26	
DAM	EndDate	Spring Chinook						Summer Chinook						
		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.		
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	
BON	08/25	244384	12612	114525	66631	167834	17301	97604	15603	81936	37416	82525	13362	
TDA	08/25	189839	11546	93908	53646	121486	13792	81292	12528	79916	27878	72634	10423	
JDA	08/25	179446	11794	76806	49733	101283	12037	70955	12475	65989	33147	66361	11207	
MCN	08/25	153246	9178	70413	43328	93119	11340	66526	8063	57137	21182	62804	9141	
IHR	08/25	101188	6047	55435	28223	64058	7222	29583	3503	23856	9400	15236	3378	
LMN	08/25	97334	5898	66931	20009	63381	6004	35097	4362	23353	11733	15714	2947	
LGS	08/25	92985	5461	52642	24331	58937	6617	32410	3968	20340	11207	12950	3477	
LGR	08/25	94203	6409	49667	31064	59309	8137	28778	5294	14482	16367	12293	4233	
PRD	08/24	30539	932	13469	2910	19097	834	49265	1217	49417	2117	55919	2554	
RIS	08/24	29684	1513	12634	6003	15841	1581	47220	4018	44295	7727	52600	6133	
RRH	08/24	8660	523	6090	1086	6208	510	34173	1724	34961	5231	40122	4303	
WEL	08/24	7555	661	6307	1867	4866	487	25943	1668	25456	3664	28860	2184	
WFA	08/07	64167	1626	25673	2582	-	-	-	-	-	-	-	-	

DAM	EndDate	Fall Chinook					
		2010		2009		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack
BON	08/25	32227	4275	54052	17418	33389	4894
TDA	08/25	13549	2163	26740	7604	15327	2613
JDA	08/25	5866	1198	19122	6034	8804	2200
MCN	08/25	3919	644	10424	2491	5340	1070
IHR	08/25	1203	176	3043	732	831	145
LMN	08/25	619	95	1551	936	560	186
LGS	08/25	474	80	690	173	331	54
LGR	08/25	376	104	445	268	201	64
PRD	08/24	1324	450	2156	350	2498	638
RIS	08/24	803	337	1191	480	1216	357
RRH	08/24	763	130	795	277	824	197
WEL	08/24	0	0	0	0	0	0
WFA	08/07	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2010		2009		10-Yr Avg.		2010	2009	10-Yr Avg.	2010	2009	10-Yr Avg.	Wild 2010
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	1255	107	14880	1638	3298	355	386514	177819	94583	304088	443986	257696	125367
TDA	68	13	1906	618	337	84	325123	155573	80569	152697	170108	99201	70282
JDA	8	5	966	519	144	52	324110	157392	86659	103807	155875	72347	47720
MCN	5	0	111	55	11	3	278794	121663	69739	86160	70281	49232	37021
IHR	0	0	0	0	0	0	1302	867	175	55602	37164	25640	18323
LMN	0	0	0	0	0	0	1653	1163	220	49004	30770	22714	18884
LGS	0	0	0	0	0	0	1653	1064	197	30971	18964	14385	12273
LGR	0	0	0	0	0	0	2154	1215	242	33811	21815	17162	13453
PRD	0	0	161	10	19	0	357056	153465	88584	15805	8700	6879	0
RIS	0	0	1	11	1	0	338274	162804	85444	12057	6789	5722	6159
RRH	0	0	0	1	1	0	295591	133038	64293	8801	5209	4123	3964
WEL	0	0	0	0	0	0	291233	134850	65093	4740	2937	2317	2147
WFA	4	1	0	0	-	-	0	0	-	28654	16796	-	-

PRD does not post 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: 08/26/10

BON counts from January 1, 2010 to March 14, 2010 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2009	39	0	2,318	657
2008	19	-1	321	109