



Fish Passage Center

Weekly Report #09 - 23

August 14, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 14% and 501% of average at individual sub-basins through the first portion of August. Precipitation above The Dalles has been 178% of average over August. Over the entire water year, precipitation has generally been near 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 2009 August 1-10		Water Year 2009 October 1, 2008 to August 1-10, 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.68	125	20.70	91
Snake River Above Ice Harbor	0.75	272	18.83	116
Columbia Above The Dalles	0.68	178	21.35	100
Kootenai	0.34	62	20.15	86
Clark Fork	1.17	279	16.95	107
Flathead	0.68	130	19.08	91
Pend Oreille/ Spokane	0.73	177	27.46	95
Central Washington	0.07	58	7.01	83
Snake River Plain	0.47	249	12.49	120
Salmon/Boise/ Payette	1.13	501	18.63	100
Clearwater	1.24	319	30.84	108
SW Washington Cascades/Cowlitz	0.10	21	59.08	88
Willamette Valley	0.05	14	48.27	85

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. The most notable differences between the June Final and July Final forecasts came at Libby Dam and Lower Granite Dam. At Libby, the July Final forecast decreased 11% relative to the June Final Forecast. At Lower Granite Dam, the July Final forecast increased 7% relative to the June Final Forecast, it appears most of the increase at Lower Granite was due to an increase in water supply above Brownlee Dam (increased 14%). The Water Supply Forecast at The Dalles between January and July is 89300 Kaf (83% 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)	86	92000	83	89300
Grand Coulee (Jan- July)	85	53700	79	49600
Libby Res. Inflow, MT (Apr-Aug)	80	5000 5062*	69	4330
Hungry Horse Res. Inflow, MT (Jan- July)	93	2060	91	2020
Lower Granite Res. Inflow (Apr- July)	102	21900	109	23500
Brownlee Res. Inflow (Apr-July)	76	4780	90	5710
Dworshak Res. Inflow (Apr-July)	98	2590 2597*	97	2570

*Denotes COE Forecast

The summer flow period began on 6-21-09 at Lower Granite Dam and the objective is 52.5 Kcfs. Flows at Lower Granite have average 54.0 Kcfs over the summer period and 33.4 Kcfs last week.

The summer flow period began on July 1 at McNary Dam and the objective is 200 Kcfs. Flows at McNary Dam have averaged 153.7 Kcfs over the summer period and 116.9 Kcfs last week.

Grand Coulee Reservoir is at 1283.4 feet (8-13-09) and drafted 0.3 feet over the last week. Outflows at Grand Coulee have ranged between 55.3 and 88.9 Kcfs over the last week. The Grand Coulee summer draft will be 1278 feet this year by August 31st, 2009.

The Libby Reservoir is currently at elevation 2442.5 feet (8-13-09) and has refilled 0.4 feet last week. Outflows at Libby are currently 7 Kcfs (minimum bull trout flow) and will remain at this level through August.

Hungry Horse is currently at an elevation of 3557.3 ft (8-13-09) and has drafted 0.6 feet last week. Outflows at Hungry Horse have been approximately 2.6 Kcfs last week.

Dworshak is currently at an elevation of 1555.1 feet (8-13-09) and has drafted 6.8 feet last week. Outflows at Dworshak were 10 Kcfs last week. Future releases from the project will be dependent on temperatures at the Lower Granite Dam tailrace.

The Brownlee Reservoir was at an elevation of 2060.9 feet on August 13th, 2009, refilling 1.9 feet last week. Outflows at Brownlee Dam have been 7.5 to 11.9 Kcfs over the last week.

Spill:

The 2009 planned summer spill program at the lower Snake River Projects began at 0001 hours on June 20, 2009. The following table shows the planned operations for 2009.

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

Lower Granite Dam has been spilling at, or above, the Court Order. Little Goose and Lower Monumental dams met the court order over the past week. Ice Harbor Dam has met the court ordered levels of 45 Kcfs daytime spill and gas cap nighttime spill, except when daytime spill is below 45 Kcfs due to low flows and powerhouse minimum flows.

The following table shows the planned operations for summer spill levels in the lower Columbia River for 2009.

Project	Day/Night Spill
McNary	50%/50%* (beginning June 20)
John Day	30%/30%
The Dalles	40%/40%
Bonneville	75 Kcfs/gas cap

McNary Dam spill has met the Court Order over the past week. At John Day Dam the project is spilling an instantaneous 30%. The Dalles Dam met the court ordered 40% level over the past week. At Bonneville Dam all flow above the powerhouse minimum of about 30 Kcfs is being spilled.

TDG registered slightly above 115% at the Camas/Washougal gage (08/09, 08/10 and 08/11). The total dissolved gas levels were due to the diel heating, and there is no water quality requirement to manage spill to this gage. The tailrace gage at McNary Dam was malfunctioning from 08/07 to 08/10.

Gas bubble trauma (GBT) monitoring occurred at Little Goose and Lower Monumental dams in the Snake River, at Rock Island Dam in the Mid Columbia and at McNary and Bonneville dams in the lower Columbia. Over the past week no fish were detected with signs of GBT.

Smolt Monitoring: Subyearling Chinook smolt collection and passage numbers dropped off steadily at McNary Dam and Bonneville Dam this past week, while at Snake River projects numbers of subyearlings declined again at Little Goose and Lower Monumental dams. Collection of Spring migrants continued to decline at all SMP sites in the Snake River and Lower Columbia this past week.

At Lower Granite Dam subyearling Chinook predominated with coho smolt numbers second in prevalence but at very low numbers. Average daily passage index for subyearling Chinook was at 330 per day this week compared to 340 per day last week. At Little Goose Dam the subyearling Chinook indices increased this week with the daily average index at 410 per day this week compared to 970 last week.

At Rock Island dam the daily passage indices for subyearling Chinook predominated in the sample, with

indices averaging over 30 per day this week compared to 80 per day last week.

In the lower Columbia River subyearling Chinook smolt numbers declined again this week at McNary Dam. Subyearling Chinook passage indices dropped from nearly 11,000 per day last week to about 4,000 per day this week. At Bonneville Dam subyearling Chinook indices were down a little from last week; the index average just over 1,700 per day this week compared to over 13,500 per day last week.

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 week. Furthermore, no releases of juvenile salmonids are scheduled to begin 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 scheduled releases of juvenile salmonids to this zone this week. There are no releases of juvenile salmonids to 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. No releases of juvenile salmonids were scheduled for this zone over the past week. Furthermore, there are no releases scheduled for this zone over the next two weeks.

Adult Passage:

Fall Chinook began to pass Bonneville Dam on August 1st. Daily counts of adult fall Chinook ranged from 232 to 1575. The 2009 adult fall Chinook count of 6104 was about 96.0% of the 2008 count and about 87.2% of the 10 year average. The fall Chinook jack count of 1887 was about 1.89 times greater than the 2008 count and about 1.70 times greater than the 10 year average. The adult fall Chinook count total at The Dalles Dam of 2480 is about 40.6% of the Bonneville passage to date.

Summer Chinook counts ended on 8/13 at Little Goose Dam. The 2009 Little Goose Dam adult summer Chinook count of 20212 was about 93.2% of the 2008 count and 1.80 times greater than the 10 year average. The 2009 summer Chinook jack count at Little Goose Dam of 11181 was 2.33 times greater than the 2008 count and about 4.44 times greater than the 10 year

average. The adult summer Chinook count at Lower Granite Dam of 14373 was 63.7% of the 2008 count and 1.29 times greater than the 10 year average. The Lower Granite summer Chinook jack count of 16285 was 3.22 times greater than the 2008 count and 5.93 times greater than the 10 year average. The 2009 Priest Rapids Dam adult summer Chinook count of 49156 was about 1.27 times greater than the 2008 count and was about 93.4% of the 10 year average. The 2009 Priest Rapids summer Chinook jack count of 2086 was about 73.5% of the 2008 count and 91.4% of the 10 year average.

Daily steelhead counts at Bonneville Dam for the past week ranged between 2737 and 34053. The daily adult steelhead count of 34053 on 8/13/09 was the highest recorded adult daily steelhead count at Bonneville Dam (date range searched was 1977 through 2009). Prior to this season, the highest adult daily steelhead count at Bonneville Dam occurred on August 3rd, 2001 when a total of 14432 adult steelhead were counted. The Bonneville Dam 2009 steelhead count of 258087 is about 1.39 times greater than the 2008 count and 1.46 times greater than the 10 year average. In the Snake River, this year's Lower Granite steelhead count of 18405 is about 99.8% of the 2008 count of 18445 and 1.40 times greater than the 10 year average of 13129. The 2009 wild steelhead count as of August 13th was 5966. At Rock Island Dam, as of August 12th, 3868 adult steelhead had been counted and at Rocky Reach Dam, 3108 adult steelhead had been counted so far this season. At Willamette Falls Dam, the 2009 count for steelhead was 16828, as of August 12th. This year's steelhead count is only about 90.1% of the 2008 count of 18562 at Willamette Falls Dam for the same date range.

The 2009 adult sockeye count at Bonneville Dam of 177785 is about 83.2% of the 2008 count of 213583 and about 2.26 times greater than the 10 year average of 78583. In the upper Columbia River at Priest Rapids Dam, the 2009 adult sockeye count of 153291 was about 77.9% of the 2008 count and 2.05 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 at Lower Granite Dam the 2009 adult sockeye count of 1208 was about 1.38 times greater than the 2008 count of 877 and 9.59 times greater than the 10 year average count of 126.

The coho salmon run at Bonneville Dam is just beginning with 363 adults and 116 jacks counted to date. Five chum and one pink salmon have been observed at Bonneville Dam so far this season. In 2008, 5 chum and 59 pink salmon had been observed by this date. As of August 13th at Bonneville Dam, the adult Shad count was 1373623 which was about 64.1% of the 2008 count of 2143835 and only about 44.1% of the 10 year average count of 3117871.

The posting of the daily fish counts have been delayed several days this week on the Corp of Engineers website due to computer problems. The COE is working on fixing the problems. FPC staff called project count stations and requested fish count data. The counts for BON, TDA, JDA, LGS and LGR have been updated with the data we have received over the phone from the COE fish counters. The data for 8/11 through 8/13 at these sites are preliminary data.

Daily Average Flow and Spill (in kcfs) at Mid-Columbia Projects

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/31/2009	106.5	0.1	107.2	0.0	110.7	8.2	109.5	9.0	109.4	22.6	117.7	22.7	118.1	22.4
08/01/2009	75.7	0.2	70.4	0.0	77.5	6.8	83.9	6.3	86.6	14.8	94.4	19.7	96.0	22.2
08/02/2009	60.0	0.2	59.5	0.0	60.1	6.2	59.5	5.5	60.0	13.1	71.9	19.1	69.3	21.4
08/03/2009	79.6	0.2	84.5	0.0	83.5	7.2	84.6	8.1	85.1	20.0	86.3	19.2	74.5	21.6
08/04/2009	87.4	0.2	89.2	0.0	91.9	7.1	90.0	7.6	89.8	18.6	94.9	19.2	93.9	22.2
08/05/2009	93.9	0.2	94.0	0.0	99.2	7.8	96.2	7.3	95.8	19.0	94.2	19.6	86.9	22.6
08/06/2009	94.9	0.2	97.6	0.0	98.7	7.4	96.7	7.2	98.4	18.9	103.6	19.4	99.7	23.4
08/07/2009	74.4	0.1	71.7	0.0	79.4	6.0	81.6	7.4	82.5	19.0	98.6	19.6	99.6	23.2
08/08/2009	55.8	0.1	58.4	0.0	57.6	4.5	57.8	5.5	57.2	13.8	53.8	18.8	58.7	21.4
08/09/2009	55.3	0.2	59.6	0.0	59.4	5.2	55.0	5.0	52.9	12.4	55.6	19.1	51.1	22.7
08/10/2009	88.9	0.1	82.9	0.0	83.3	6.3	82.8	7.0	83.9	16.3	87.9	19.4	76.3	22.4
08/11/2009	81.6	0.1	86.1	0.0	90.7	7.4	89.2	6.6	89.1	15.4	90.1	20.0	87.1	23.4
08/12/2009	70.1	0.2	66.9	0.0	68.8	6.5	68.2	6.6	68.7	16.3	84.9	19.6	88.9	23.0
08/13/2009	55.4	0.2	60.7	0.0	63.7	6.2	62.7	6.3	64.4	12.6	66.9	19.4	60.0	22.0

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
07/31/2009	13.6	3.8	9.9	15.1	40.6	18.8	39.5	11.8	37.9	16.9	39.6	29.1
08/01/2009	13.6	3.8	9.7	13.5	39.5	18.7	38.2	11.3	36.9	17.5	37.5	27.1
08/02/2009	13.6	3.7	9.6	10.6	36.3	18.7	35.9	10.6	34.8	17.1	37.2	26.4
08/03/2009	13.5	3.6	10.2	13.4	35.2	18.7	33.7	9.9	32.7	17.5	34.6	24.4
08/04/2009	13.3	3.4	9.5	11.5	37.4	18.8	36.8	10.9	35.7	17.1	38.5	28.3
08/05/2009	12.1	2.2	9.1	11.4	33.3	18.6	33.3	9.9	30.4	17.4	30.4	20.1
08/06/2009	10.1	0.1	8.9	8.6	32.6	18.8	30.9	9.2	29.3	17.1	30.2	20.2
08/07/2009	9.9	0.0	10.1	8.7	31.5	18.8	30.7	9.2	29.7	17.4	31.4	21.2
08/08/2009	10.0	0.0	11.6	8.4	31.6	18.9	30.3	9.1	29.5	17.3	32.1	21.6
08/09/2009	10.0	0.0	13.0	9.5	34.3	18.6	33.8	9.9	33.3	17.5	34.4	24.1
08/10/2009	10.0	0.0	13.1	11.5	34.6	23.9	33.7	9.9	32.8	17.1	34.3	24.3
08/11/2009	10.0	0.0	11.7	11.2	34.3	23.8	33.7	9.9	32.1	17.4	33.0	22.8
08/12/2009	10.0	0.0	12.3	12.4	33.2	24.0	33.7	9.9	32.0	17.2	33.1	23.0
08/13/2009	10.1	0.0	---	---	34.6	24.4	33.7	9.9	31.9	17.5	33.7	23.5

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		
07/31/2009	156.1	77.0	130.5	39.2	128.8	51.5	130.4	74.5	0.0	43.8
08/01/2009	154.3	76.0	147.4	44.1	137.5	54.9	159.6	74.4	0.0	73.1
08/02/2009	137.8	67.8	128.3	38.6	123.5	49.3	136.7	74.4	0.0	50.3
08/03/2009	112.5	55.1	108.1	32.4	106.4	42.5	118.4	75.5	0.0	30.9
08/04/2009	117.4	56.6	108.9	32.5	106.5	42.6	124.9	78.5	0.0	34.3
08/05/2009	151.7	73.3	141.3	42.4	136.4	54.4	139.6	80.7	0.0	46.8
08/06/2009	130.4	63.8	114.6	34.4	111.5	44.6	124.6	81.6	0.0	30.8
08/07/2009	124.8	61.1	120.4	36.1	115.0	45.9	116.8	73.9	0.0	30.7
08/08/2009	125.6	61.6	104.2	31.3	96.6	38.6	106.6	64.0	0.0	30.5
08/09/2009	110.0	54.6	103.1	30.9	100.2	40.0	113.0	70.3	0.0	30.7
08/10/2009	108.1	52.0	99.2	30.0	102.6	40.9	113.1	70.2	0.0	30.9
08/11/2009	110.2	53.8	101.8	30.5	96.0	38.2	113.2	70.1	0.0	31.1
08/12/2009	122.2	59.3	113.0	34.0	111.1	44.5	118.3	75.2	0.0	31.0
08/13/2009	117.7	57.5	112.9	33.9	110.5	44.2	125.8	83.2	0.1	30.4

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
Little Goose Dam											
	08/04/09	Chinook + Steelhead	59	1	1	1.69%	0.00%	1	0	0	0
	08/11/09	Chinook + Steelhead	10	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	08/05/09	Chinook + Steelhead	9	0	0	0.00%	0.00%	0	0	0	0
	08/12/09	Chinook + Steelhead	2	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	08/06/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/10/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/13/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	08/05/09	Chinook + Steelhead	68	0	0	0.00%	0.00%	0	0	0	0
	08/11/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>		<u>#</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>				
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/31	105.2	105.4	105.7	24	108.5	109.0	109.6	24	108.8	109.1	109.5	24	108.7	110.1	112.9	24	109.6	110.2	110.7	24
8/1	105.4	106.1	106.3	24	108.6	109.3	109.7	24	108.4	108.9	109.3	24	109.2	111.1	115.2	24	109.5	110.0	110.3	24
8/2	105.8	106.1	106.6	24	108.3	108.7	109.5	21	108.9	109.1	109.3	24	108.9	109.7	110.8	21	109.5	110.2	110.6	24
8/3	105.6	105.9	106.1	24	107.7	108.1	108.5	22	108.8	109.0	109.2	24	109.2	110.3	112.6	22	110.2	110.9	111.3	24
8/4	105.9	106.5	106.8	24	107.4	107.8	108.2	23	108.4	108.6	108.9	24	108.9	110.1	113.9	23	109.7	110.2	110.4	24
8/5	105.7	106.0	106.2	24	107.5	107.9	108.2	22	108.4	108.7	109.0	24	108.7	109.8	113.3	22	110.5	111.2	111.4	24
8/6	106.1	106.7	107.5	24	107.2	107.7	108.1	23	108.4	108.6	108.8	24	108.4	109.5	111.9	23	110.1	110.5	111.0	24
8/7	104.9	105.8	106.1	24	106.6	106.9	107.2	23	107.8	108.0	108.3	24	107.8	109.0	112.6	23	108.5	108.8	109.3	24
8/8	103.8	104.5	104.9	24	105.9	106.4	107.0	22	107.1	107.2	107.6	24	108.0	109.3	112.2	22	107.5	107.9	108.3	24
8/9	104.2	104.4	104.5	24	106.7	107.7	108.4	23	106.9	107.0	107.2	24	107.9	108.7	110.7	23	107.4	108.1	108.7	24
8/10	104.3	104.8	105.1	24	107.5	108.2	109.0	23	106.8	107.0	107.2	24	108.6	109.6	111.6	23	107.2	107.6	107.8	24
8/11	104.5	105.1	105.6	24	106.6	106.9	107.3	23	106.6	106.8	107.2	24	106.7	107.6	110.1	23	107.6	108.0	108.3	24
8/12	104.6	104.9	105.2	24	105.5	105.9	106.3	24	106.6	106.8	107.0	24	106.2	107.5	110.1	24	107.9	107.9	108.1	6
8/13	104.0	104.5	104.7	24	105.2	105.6	106.5	22	106.7	106.8	106.9	24	104.5	105.4	106.1	22	---	---	---	0

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>#</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>				
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/31	109.1	109.5	110.1	24	111.3	112.1	112.5	24	113.0	113.9	114.7	24	113.0	113.3	113.4	24	112.1	113.7	114.8	24
8/1	109.0	110.0	111.4	24	111.2	112.0	112.6	24	113.1	113.7	114.0	24	113.2	113.9	114.8	24	111.3	112.0	112.7	24
8/2	109.4	110.5	111.1	24	111.1	112.1	112.7	24	113.2	114.1	115.4	24	112.8	113.6	114.9	24	110.2	110.8	111.6	24
8/3	109.4	110.3	111.0	24	111.1	111.9	112.5	24	113.2	113.9	114.3	24	112.8	113.1	113.9	24	110.7	111.5	112.1	24
8/4	109.4	110.0	110.4	24	110.6	111.2	111.5	24	112.4	112.9	113.4	24	111.5	111.8	112.5	24	110.3	111.0	111.5	24
8/5	110.4	111.0	111.7	24	110.3	111.2	111.5	24	112.4	113.2	113.5	24	111.1	111.6	111.9	24	110.1	111.3	111.8	24
8/6	110.1	110.7	111.3	24	110.5	111.5	111.9	24	112.3	113.1	113.7	24	110.5	110.7	111.0	24	110.0	111.3	112.3	24
8/7	108.7	109.0	109.9	24	110.6	111.4	112.7	24	112.0	112.8	113.5	24	109.9	110.1	110.3	24	109.2	110.2	111.1	24
8/8	108.2	109.0	110.0	24	109.1	109.9	110.8	24	110.4	111.5	112.4	24	109.0	109.4	109.9	24	108.0	108.7	109.4	24
8/9	107.6	108.4	109.6	24	108.8	109.6	110.4	24	110.6	111.5	112.8	24	109.6	110.1	110.6	24	108.2	108.9	109.2	24
8/10	107.0	107.5	108.3	24	108.2	108.6	109.0	24	109.8	110.6	111.2	24	109.9	110.1	110.3	23	109.5	110.6	111.6	23
8/11	108.0	108.4	109.0	24	107.2	107.5	107.7	24	109.2	109.7	110.1	24	109.3	109.5	109.9	24	109.4	109.8	110.3	24
8/12	108.4	108.4	108.9	6	107.0	107.7	108.4	23	109.0	109.5	109.8	23	108.5	108.8	109.2	24	108.6	109.0	109.5	24
8/13	---	---	---	0	107.5	108.2	109.0	24	109.3	110.2	111.0	24	108.1	108.4	108.9	24	108.0	108.4	108.9	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>#</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>				
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/31	113.5	114.1	114.6	24	116.9	117.4	118.4	24	116.5	117.9	119.5	24	115.8	116.1	116.4	24	115.1	115.3	115.6	24
8/1	113.3	113.9	114.1	24	116.3	116.7	117.8	24	115.9	117.1	118.9	24	116.2	116.5	117.6	24	115.4	115.6	116.3	24
8/2	112.7	113.1	113.5	24	116.7	117.8	119.7	24	113.8	114.3	114.9	24	115.7	116.1	116.6	24	113.9	114.3	114.6	24
8/3	112.6	113.0	113.3	24	116.4	117.1	118.4	24	113.1	113.6	114.2	24	115.1	115.7	116.2	24	112.7	113.1	113.7	24
8/4	111.5	111.9	112.6	24	115.8	116.7	119.1	24	110.8	111.7	112.2	24	113.9	114.5	115.3	24	111.3	111.8	112.2	24
8/5	111.4	111.8	112.4	24	115.5	115.9	117.2	24	111.4	112.6	114.9	24	114.7	115.4	116.5	24	110.7	110.8	111.3	14
8/6	110.6	111.0	111.9	24	114.7	115.7	117.8	24	110.6	111.2	111.8	24	113.6	114.7	117.1	24	109.2	109.5	111.0	16
8/7	109.1	109.5	110.3	24	114.1	114.8	115.9	24	108.4	109.1	109.5	24	112.5	113.6	115.1	24	108.1	109.0	109.5	24
8/8	109.0	109.5	110.0	24	114.6	116.0	117.1	24	107.5	108.0	108.3	24	114.8	115.7	116.5	24	108.5	109.1	109.4	24
8/9	109.0	109.5	109.7	24	114.4	116.2	118.4	24	106.1	106.9	107.2	24	114.5	115.8	116.5	24	108.7	110.0	111.4	24
8/10	110.2	110.5	111.2	23	114.3	115.3	118.4	23	106.9	107.4	108.1	24	113.0	114.2	116.6	24	110.9	112.1	113.3	24
8/11	109.9	110.3	110.9	24	114.1	115.4	119.3	24	107.6	108.5	109.1	24	113.6	115.2	116.4	24	111.1	111.6	112.2	24
8/12	109.6	109.7	109.9	24	114.9	116.3	120.5	24	107.9	108.5	108.7	24	113.7	115.2	116.5	24	110.9	111.4	112.1	24
8/13	108.8	109.2	109.6	24	114.0	115.6	119.4	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</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>			<u>Avg</u>	<u>Avg</u>		
7/31	115.7	116.0	116.1	24	110.7	111.5	111.8	24	109.2	109.4	109.7	24	108.4	109.5	110.4	24	102.2	103.5	104.6	24
8/1	115.4	115.9	116.2	24	111.2	112.0	112.4	24	109.2	109.5	109.9	23	108.5	109.7	110.7	24	102.4	103.8	104.9	24
8/2	113.4	114.2	114.8	24	111.0	111.9	112.4	24	109.3	109.5	109.8	24	108.5	109.7	110.7	24	102.2	103.4	104.6	24
8/3	113.1	114.1	114.8	24	109.8	110.6	111.2	24	109.1	109.3	109.8	24	108.4	109.5	110.5	24	102.0	103.6	105.1	24
8/4	112.8	113.4	113.8	24	108.3	109.3	109.6	24	108.3	108.8	109.1	24	107.9	109.1	110.3	24	102.0	103.4	104.9	24
8/5	111.8	112.5	112.9	24	108.4	109.7	110.3	24	104.7	105.0	105.3	23	105.6	106.7	107.3	24	102.0	103.4	104.7	24
8/6	111.5	112.3	113.1	24	107.5	108.3	109.1	24	101.0	101.5	104.5	24	103.4	104.4	104.9	24	101.1	101.9	102.9	24
8/7	109.9	110.5	111.0	24	104.4	105.3	106.0	24	100.1	100.4	100.5	24	101.9	102.4	103.0	24	100.3	101.0	101.8	24
8/8	110.2	110.7	111.6	24	104.7	105.7	106.3	24	99.8	100.0	100.4	24	102.1	103.1	104.2	24	101.3	102.8	104.1	24
8/9	110.2	110.9	111.5	24	106.0	107.1	107.8	24	99.9	100.2	100.5	24	102.4	103.6	104.7	24	101.9	103.2	104.4	24
8/10	111.5	112.6	113.6	24	106.1	107.0	107.6	24	100.0	100.3	100.7	24	102.4	103.8	104.9	24	101.7	102.9	103.9	24
8/11	112.2	113.1	113.5	24	106.7	107.7	108.3	24	100.1	100.5	100.8	24	102.4	103.8	104.9	24	101.7	102.8	104.0	24
8/12	112.3	112.8	113.3	24	107.3	107.9	108.5	24	100.0	100.2	100.4	24	102.1	103.2	103.9	24	101.1	101.9	102.5	24
8/13	---	---	---	0	107.2	107.9	108.6	24	100.0	100.2	100.5	24	101.8	102.5	103.9	24	101.0	101.7	102.7	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</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>			<u>Avg</u>	<u>Avg</u>		
7/31	106.3	108.5	109.6	24	103.6	103.7	104.0	24	110.4	110.5	110.8	24	110.5	110.8	111.3	24	113.3	113.6	114.0	24
8/1	106.8	109.3	111.1	24	103.4	103.5	103.6	24	110.6	111.0	111.7	24	110.1	110.4	110.6	24	113.0	113.4	113.9	24
8/2	106.5	108.8	110.6	24	102.9	103.1	103.3	24	110.8	111.2	111.5	24	109.8	110.0	110.2	24	112.7	113.1	113.6	24
8/3	106.6	109.1	110.7	24	103.8	105.2	105.6	24	111.5	112.4	113.4	24	109.0	109.3	109.5	24	112.4	112.7	113.1	24
8/4	106.1	108.5	110.4	24	104.6	104.9	105.6	24	111.6	112.0	112.4	24	108.8	109.1	109.2	24	112.3	112.8	113.3	24
8/5	105.5	107.4	108.5	24	104.5	104.8	105.0	24	111.7	111.9	112.2	24	109.5	109.7	109.9	24	112.4	112.9	113.4	24
8/6	103.8	105.1	106.4	24	104.8	104.9	105.1	24	112.1	112.3	113.2	24	108.7	108.8	109.2	24	111.9	112.6	113.1	24
8/7	102.0	102.8	103.9	20	103.6	103.8	103.9	24	111.6	111.7	112.0	24	107.4	107.8	108.3	24	111.3	111.9	112.2	24
8/8	102.6	104.7	106.2	24	102.7	103.0	103.2	24	111.6	111.8	112.0	24	106.0	106.3	106.7	24	111.2	111.6	112.1	24
8/9	103.3	105.4	107.1	23	102.5	102.6	102.9	24	111.1	111.4	112.0	24	105.4	105.5	105.7	24	111.1	111.4	111.6	24
8/10	103.5	105.6	107.3	23	101.2	101.5	102.1	24	112.9	114.6	115.5	24	105.4	105.6	105.8	24	110.9	111.2	111.4	24
8/11	103.4	105.5	107.1	23	100.4	100.6	100.8	24	112.7	114.3	115.8	24	105.4	105.6	105.8	24	111.0	111.5	111.8	24
8/12	102.6	104.0	105.4	23	100.6	100.7	100.9	24	113.0	114.5	115.4	24	105.4	105.8	107.0	24	110.5	110.9	111.3	24
8/13	102.4	103.6	104.8	22	101.8	102.2	102.5	24	112.8	114.8	115.3	24	107.2	107.5	107.7	24	111.2	111.5	111.8	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</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>			<u>Avg</u>	<u>Avg</u>		
7/31	110.7	110.9	111.3	24	115.3	115.8	116.2	24	113.3	113.8	114.5	24	114.1	114.6	114.9	24	---	---	---	0
8/1	110.4	110.7	111.1	24	115.7	116.0	116.3	24	112.2	112.4	112.5	24	113.5	113.9	114.7	24	---	---	---	0
8/2	109.6	109.9	110.3	24	115.7	116.4	116.9	24	111.9	112.2	112.7	24	113.2	113.5	113.9	24	---	---	---	0
8/3	109.9	110.4	111.2	24	116.1	116.3	116.5	24	112.2	112.4	112.8	24	112.5	113.0	113.4	24	---	---	---	0
8/4	110.0	110.2	110.6	24	115.9	116.3	116.5	24	112.2	112.5	112.9	24	112.5	113.0	113.6	24	---	---	---	0
8/5	109.7	109.9	110.2	24	116.3	116.7	116.9	24	112.0	112.2	112.4	24	113.2	113.7	114.3	24	---	---	---	0
8/6	108.8	109.2	109.6	24	115.7	116.3	116.4	24	111.8	112.2	112.5	24	112.8	113.2	113.9	24	---	---	---	0
8/7	107.2	107.7	108.1	24	114.9	115.0	115.2	24	109.1	110.0	111.5	24	112.7	113.0	113.6	24	---	---	---	0
8/8	105.7	106.2	106.6	24	115.3	115.5	115.6	24	107.3	107.8	108.4	24	112.6	113.2	113.7	24	---	---	---	0
8/9	105.8	105.9	106.2	24	115.3	115.4	115.6	24	106.8	107.0	107.3	24	113.2	113.8	114.1	24	---	---	---	0
8/10	105.0	105.3	105.7	24	115.0	115.3	115.7	24	106.6	106.7	106.9	24	112.7	113.3	113.6	24	---	---	---	0
8/11	105.5	105.8	106.4	24	115.7	116.0	116.2	24	106.8	107.0	107.5	24	112.4	112.8	112.9	24	---	---	---	0
8/12	106.0	106.3	106.4	24	115.6	115.8	116.0	24	107.8	108.3	108.7	24	112.5	113.0	113.4	24	---	---	---	0
8/13	106.4	106.6	107.0	24	115.6	115.7	115.9	24	108.6	108.8	109.1	24	113.2	113.6	114.0	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	McNary-Wash			McNary Tlwr			John Day			John Day Tlwr			The Dalles							
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr				
7/31	110.8	111.2	112.1	24	115.5	116.4	117.4	24	111.2	111.7	112.3	24	114.7	115.2	115.3	24	110.7	110.9	111.2	24
8/1	111.4	112.0	113.4	24	115.4	116.0	117.1	24	111.9	112.3	113.4	24	114.7	115.2	115.7	24	110.3	110.8	111.2	24
8/2	111.9	112.3	112.8	24	116.7	117.5	117.9	24	111.2	111.6	111.9	24	114.6	114.8	115.1	24	109.6	110.0	110.3	24
8/3	110.9	111.2	111.4	24	116.4	116.7	116.8	24	109.2	109.7	110.3	24	115.0	115.0	115.8	10	108.2	108.6	108.8	24
8/4	110.5	110.7	111.1	24	116.6	117.0	117.3	24	107.3	107.6	108.1	24	114.3	114.6	114.9	24	106.6	106.9	107.2	24
8/5	109.5	110.0	110.9	24	114.7	115.3	116.6	24	106.1	106.5	106.8	24	114.9	115.4	116.1	24	105.8	106.3	106.4	24
8/6	107.1	107.6	108.0	24	114.5	115.4	115.9	24	104.8	105.2	105.5	24	113.9	114.3	114.5	24	104.8	105.5	106.0	24
8/7	105.2	105.7	106.3	24	---	---	---	24	102.7	103.1	103.5	24	113.7	114.1	114.4	24	102.6	102.8	102.9	24
8/8	103.4	103.6	103.8	24	---	---	---	24	100.9	101.1	101.3	24	112.9	113.8	114.5	24	101.7	102.0	102.2	24
8/9	102.2	102.5	102.9	24	---	---	---	24	100.2	100.4	100.5	24	112.6	113.3	113.8	24	102.5	103.2	103.6	24
8/10	101.8	102.3	102.7	24	---	---	---	24	99.8	99.9	100.1	24	112.7	113.3	113.9	24	104.2	104.8	105.0	24
8/11	103.4	104.3	105.2	24	115.4	115.7	116.1	24	99.6	99.8	100.0	24	113.1	113.6	113.9	24	105.0	105.3	105.6	24
8/12	104.1	104.5	104.8	24	115.3	116.1	116.6	24	99.6	99.8	99.9	24	113.3	114.1	114.3	24	105.2	105.4	105.7	24
8/13	104.9	105.1	105.3	24	115.5	116.4	116.6	24	99.7	99.9	100.0	24	113.5	114.0	114.1	24	104.7	105.0	105.3	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			Bonneville			Warrendale			Camas\Washougal			Cascade Island							
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr				
7/31	115.4	115.8	116.2	24	112.1	112.6	113.0	24	---	---	---	0	113.7	115.1	115.8	24	113.4	113.5	114.0	24
8/1	115.4	115.9	116.4	24	110.2	110.8	111.9	24	---	---	---	0	115.4	116.6	117.7	24	114.4	114.8	115.7	24
8/2	114.7	115.0	115.4	24	109.0	109.3	109.5	24	---	---	---	0	113.6	115.0	115.6	24	113.8	114.1	114.4	24
8/3	114.2	114.5	114.8	24	107.7	108.2	108.3	24	---	---	---	0	113.7	114.8	115.3	24	113.5	113.6	114.0	24
8/4	113.1	113.4	113.6	24	108.6	108.6	112.0	6	---	---	---	0	114.2	115.2	115.9	24	114.1	114.5	116.6	24
8/5	112.4	112.9	113.2	24	117.3	124.3	151.6	19	---	---	---	0	113.3	114.8	115.9	24	114.7	115.7	116.6	24
8/6	112.0	112.5	112.9	24	103.8	104.4	105.0	24	---	---	---	0	110.5	111.6	114.1	24	114.6	115.6	116.6	24
8/7	110.6	110.8	111.1	24	101.9	102.4	103.0	24	---	---	---	0	110.7	111.5	112.2	24	113.4	114.5	116.4	24
8/8	110.8	111.0	111.2	24	100.9	101.0	101.3	24	---	---	---	0	112.2	113.5	114.2	24	112.2	112.3	112.8	24
8/9	111.4	111.7	111.9	24	101.1	101.3	101.7	24	---	---	---	0	114.8	115.8	116.7	24	112.6	112.8	112.9	24
8/10	112.0	112.5	112.9	24	102.2	102.7	103.6	24	---	---	---	0	114.7	115.9	116.7	24	112.7	112.9	113.1	24
8/11	112.2	112.5	112.8	24	104.0	104.4	104.9	24	---	---	---	0	114.8	115.4	115.7	24	112.7	112.9	113.0	24
8/12	112.2	112.4	112.6	24	105.0	105.3	105.5	24	---	---	---	0	113.2	113.9	114.2	24	113.4	114.2	118.8	24
8/13	111.5	111.8	112.0	24	104.8	105.2	105.5	24	---	---	---	0	112.2	113.5	114.4	24	113.7	114.7	117.6	24

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/14/2009 13:24

Two-Week Summary of Passage Indices

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

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

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

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

Date	COMBINED YEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/31/2009 *	---	---	---	---	0	0	6	0	0	14	0
08/01/2009 *	---	---	---	---	0	0	11	2	0	---	---
08/02/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/03/2009 *	---	---	---	---	0	0	0	0	0	---	---
08/04/2009 *	---	---	---	---	0	0	6	0	0	0	0
08/05/2009 *	---	---	---	---	0	0	0	0	0	---	---
08/06/2009 *	---	---	---	---	0	0	0	0	10	---	0
08/07/2009 *	---	---	---	---	0	0	0	0	0	14	---
08/08/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/09/2009 *	---	---	---	---	0	0	0	0	0	---	---
08/10/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/11/2009 *	---	---	---	---	0	0	0	0	0	7	---
08/12/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/13/2009 *	---	---	---	---	0	0	0	0	0	---	---
08/14/2009 *	---	---	---	---	0	---	---	0	0	0	0
Total:	0	0	0	0	0	0	23	2	10	35	0
# Days:	0	0	0	0	15	14	14	15	15	5	8
Average:	0	0	0	0	0	0	2	0	1	7	0
YTD	37,667	44,693	20,207	29,713	3,081,413	2,432,949	449,028	9,225	2,251,664	1,032,260	1,717,088

Date	COMBINED SUBYEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/31/2009 *	---	---	---	---	547	1,724	567	102	20,873	2,165	25,712
08/01/2009 *	---	---	---	---	404	794	1,274	173	22,909	---	---
08/02/2009 *	---	---	---	---	336	750	536	64	12,382	---	12,679
08/03/2009 *	---	---	---	---	232	821	132	75	10,302	---	---
08/04/2009 *	---	---	---	---	253	661	169	49	3,866	1,009	6,829
08/05/2009 *	---	---	---	---	331	1,023	352	65	4,786	---	---
08/06/2009 *	---	---	---	---	279	983	174	40	14,374	---	9,023
08/07/2009 *	---	---	---	---	385	1,198	142	55	9,851	1,300	---
08/08/2009 *	---	---	---	---	472	551	30	38	8,308	---	2,182
08/09/2009 *	---	---	---	---	416	192	42	33	3,336	---	---
08/10/2009 *	---	---	---	---	308	164	48	24	1,096	---	1,076
08/11/2009 *	---	---	---	---	288	200	32	32	2,603	1,066	---
08/12/2009 *	---	---	---	---	209	215	99	30	3,248	---	1,856
08/13/2009 *	---	---	---	---	236	367	166	30	7,194	---	---
08/14/2009 *	---	---	---	---	279	---	---	16	7,582	0	2,065
Total:	0	0	0	0	4,975	9,643	3,763	826	132,710	5,540	61,422
# Days:	0	0	0	0	15	14	14	15	15	5	8
Average:	0	0	0	0	332	689	269	55	8,847	1,108	7,678
YTD	0	18	15	545	993,553	1,178,401	432,480	7,966	3,595,336	1,502,125	4,290,932

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)	
07/31/2009	*	---	---	---	---	42	60	6	1	41	14	0
08/01/2009	*	---	---	---	---	37	39	86	0	0	---	---
08/02/2009	*	---	---	---	---	32	17	30	1	61	---	0
08/03/2009	*	---	---	---	---	12	17	12	1	0	---	---
08/04/2009	*	---	---	---	---	14	11	6	0	0	0	0
08/05/2009	*	---	---	---	---	16	7	6	0	20	---	---
08/06/2009	*	---	---	---	---	5	14	0	0	10	---	0
08/07/2009	*	---	---	---	---	10	42	0	0	0	0	---
08/08/2009	*	---	---	---	---	20	1	8	1	0	---	0
08/09/2009	*	---	---	---	---	20	4	0	0	0	---	---
08/10/2009	*	---	---	---	---	32	3	4	1	0	---	0
08/11/2009	*	---	---	---	---	13	7	0	0	0	0	---
08/12/2009	*	---	---	---	---	7	9	4	0	0	---	0
08/13/2009	*	---	---	---	---	88	7	40	1	10	---	---
08/14/2009	*	---	---	---	---	75	---	---	0	10	0	0
Total:		0	0	0	0	423	238	202	6	152	14	0
# Days:		0	0	0	0	15	14	14	15	15	5	8
Average:		0	0	0	0	28	17	14	0	10	3	0
YTD		0	0	0	332	91,918	80,930	18,928	37,588	127,100	240,409	503,265

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)	
07/31/2009	*	---	---	---	---	4	3	0	1	0	0	73
08/01/2009	*	---	---	---	---	0	6	0	2	0	---	---
08/02/2009	*	---	---	---	---	4	1	0	0	0	---	0
08/03/2009	*	---	---	---	---	4	6	0	0	0	---	---
08/04/2009	*	---	---	---	---	0	0	0	0	0	0	0
08/05/2009	*	---	---	---	---	0	0	0	0	0	---	---
08/06/2009	*	---	---	---	---	5	0	0	0	10	---	0
08/07/2009	*	---	---	---	---	0	1	0	0	0	0	---
08/08/2009	*	---	---	---	---	0	0	0	0	0	---	0
08/09/2009	*	---	---	---	---	0	0	0	0	0	---	---
08/10/2009	*	---	---	---	---	0	0	0	0	0	---	0
08/11/2009	*	---	---	---	---	0	0	0	0	0	0	---
08/12/2009	*	---	---	---	---	0	1	0	0	0	---	0
08/13/2009	*	---	---	---	---	0	1	0	3	0	---	---
08/14/2009	*	---	---	---	---	0	---	---	0	0	0	0
Total:		0	0	0	0	17	19	0	6	10	0	73
# Days:		0	0	0	0	15	14	14	15	15	5	8
Average:		0	0	0	0	1	1	0	0	1	0	9
YTD		1,833	24,360	9,611	8,297	4,510,908	3,563,508	727,829	17,612	803,725	940,632	677,051

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/31/2009 *	---	---	---	---	0	1	0	4	122	0	0
08/01/2009 *	---	---	---	---	0	0	0	5	41	---	---
08/02/2009 *	---	---	---	---	0	0	6	3	40	---	0
08/03/2009 *	---	---	---	---	0	0	6	5	20	---	---
08/04/2009 *	---	---	---	---	0	0	0	0	20	0	0
08/05/2009 *	---	---	---	---	0	6	0	4	10	---	---
08/06/2009 *	---	---	---	---	0	1	0	4	40	---	0
08/07/2009 *	---	---	---	---	0	0	0	16	61	0	---
08/08/2009 *	---	---	---	---	0	0	0	6	0	---	0
08/09/2009 *	---	---	---	---	0	0	0	1	0	---	---
08/10/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/11/2009 *	---	---	---	---	0	0	0	1	10	0	---
08/12/2009 *	---	---	---	---	0	1	0	3	31	---	27
08/13/2009 *	---	---	---	---	0	0	0	3	30	---	---
08/14/2009 *	---	---	---	---	0	---	---	0	0	0	0
Total:	0	0	0	0	0	9	12	55	425	0	27
# Days:	0	0	0	0	15	14	14	15	15	5	8
Average:	0	0	0	0	0	1	1	4	28	0	3
YTD	170	0	0	177	46,501	46,359	21,692	4,916	190,797	111,933	74,945

* 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:

8/14/09 1:24 PM

07/31/09 TO 08/14/09

		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	2,122			166	8	2,296	
	Sum of NumberBarged	2,681			185	12	2,878	
	Sum of NumberBypassed	0			0	0	0	
	Sum of Numbertrucked	0			0	0	0	
	Sum of SampleMorts	15			2	0	17	
	Sum of FacilityMorts	14			2	0	16	
	Sum of ResearchMorts	0			0	0	0	
	Sum of TotalProjectMorts	29			4	0	33	
LGS	Sum of NumberCollected	6,731			167	14	7	6,919
	Sum of NumberBarged	7,559			189	17	6	7,771
	Sum of NumberBypassed	0			0	0	0	0
	Sum of Numbertrucked	0			0	0	0	0
	Sum of SampleMorts	81			14	0	1	96
	Sum of FacilityMorts	50			0	0	0	50
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	131			14	0	1	146
LMN	Sum of NumberCollected	1,857		12	100		6	1,975
	Sum of NumberBarged	1,980		15	87		6	2,088
	Sum of NumberBypassed	11		0	0		0	11
	Sum of Numbertrucked	0		0	0		0	0
	Sum of SampleMorts	9		0	1		0	10
	Sum of FacilityMorts	25		0	0		0	25
	Sum of ResearchMorts	0		0	0		0	0
	Sum of TotalProjectMorts	34		0	1		0	35
MCN	Sum of NumberCollected	65,335		5	75	5	210	65,630
	Sum of NumberBarged	64,667		3	75	4	210	64,959
	Sum of NumberBypassed	0		0	0	0	0	0
	Sum of Numbertrucked	0		0	0	0	0	0
	Sum of SampleMorts	89		0	0	0	0	89
	Sum of FacilityMorts	579		2	0	1	0	582
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	668		2	0	1	0	671
Total Sum of NumberCollected		76,045		17	508	27	223	76,820
Total Sum of NumberBarged		76,887		18	536	33	222	77,696
Total Sum of NumberBypassed		11		0	0	0	0	11
Total Sum of Numbertrucked		0		0	0	0	0	0
Total Sum of SampleMorts		194		0	17	0	1	212
Total Sum of FacilityMorts		668		2	2	1	0	673
Total Sum of ResearchMorts		0		0	0	0	0	0
Total Sum of TotalProjectMorts		862		2	19	1	1	885

YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/14/09 1:24 PM

TO: 08/14/09

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	700,463	2,352,637	65,695	33,451	3,430,194	6,582,440
	Sum of NumberBarged	680,280	1,500,926	63,607	26,169	1,841,961	4,112,943
	Sum of NumberBypassed	15,858	847,954	1,951	7,068	1,587,772	2,460,603
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	249	118	6	22	33	428
	Sum of FacilityMorts	4,057	2,734	131	192	409	7,523
	Sum of ResearchMorts	19	1,035	0	0	19	1,073
	Sum of TotalProjectMorts	4,325	3,887	137	214	461	9,024
LGS	Sum of NumberCollected	849,216	1,720,161	59,226	33,649	2,517,668	5,179,920
	Sum of NumberBarged	833,201	966,563	56,366	27,767	1,057,253	2,941,150
	Sum of NumberBypassed	9,300	751,922	2,825	5,826	1,460,070	2,229,943
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	403	49	27	9	20	508
	Sum of FacilityMorts	6,048	1,622	3	47	323	8,043
	Sum of ResearchMorts	12	4	0	0	0	16
	Sum of TotalProjectMorts	6,463	1,675	30	56	343	8,567
LMN	Sum of NumberCollected	325,001	321,108	13,970	16,048	518,660	1,194,787
	Sum of NumberBarged	318,339	312,079	13,932	15,870	506,287	1,166,507
	Sum of NumberBypassed	5,816	8,790	9	114	12,089	26,818
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	88	15	2	3	9	117
	Sum of FacilityMorts	583	237	8	7	258	1,093
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	671	252	10	10	267	1,210
MCN	Sum of NumberCollected	1,802,725	1,303,737	69,871	106,340	467,735	3,750,408
	Sum of NumberBarged	413,802	196	448	425	74	414,945
	Sum of NumberBypassed	1,353,699	1,301,926	69,357	105,852	467,487	3,298,321
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	751	149	1	2	14	917
	Sum of FacilityMorts	33,954	1,441	65	59	157	35,676
	Sum of ResearchMorts	518	25	0	1	3	547
	Sum of TotalProjectMorts	35,223	1,615	66	62	174	37,140
Total Sum of NumberCollected		3,677,405	5,697,643	208,762	189,488	6,934,257	16,707,555
Total Sum of NumberBarged		2,245,622	2,779,764	134,353	70,231	3,405,575	8,635,545
Total Sum of NumberBypassed		1,384,673	2,910,592	74,142	118,860	3,527,418	8,015,685
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		1,491	331	36	36	76	1,970
Total Sum of FacilityMorts		44,642	6,034	207	305	1,147	52,335
Total Sum of ResearchMorts		549	1,064	0	1	22	1,636
Total Sum of TotalProjectMorts		46,682	7,429	243	342	1,245	55,941

Cumulative Adult Passage at Mainstem Dams Through: 08/13

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/06	114525	66631	125543	17554	160243	11507	81936	37416	78271	11621	76947	10024	6104	1887	6357	1000	7001	1107
TDA	08/06	93908	53646	95438	15801	113852	9048	79916	27878	65073	12206	66821	7950	2480	797	3336	735	3538	737
JDA	08/06	76806	49733	81772	14925	95147	7579	65989	33147	63649	13680	61980	8146	1650	757	1979	748	1849	568
MCN	08/05	70413	43328	68080	12133	86998	7409	57137	21182	54735	11239	59015	7256	504	181	601	70	666	135
IHR	08/05	55435	28223	53142	7757	59050	4663	23820	9394	23667	4962	13223	2566	0	0	0	0	0	0
LMN	08/05	66931	20009	54512	6885	57079	4270	23332	11701	27343	2890	13716	1912	0	0	0	0	0	0
LGS	08/06	52642	24331	50396	7805	54016	4453	20212	11181	21693	4801	12215	2515	0	0	0	0	0	0
LGR	08/06	49667	31064	50146	10946	54673	5280	14373	16285	22548	5060	11124	2748	0	0	0	0	0	0
PRD	08/04	13469	2910	12178	620	18164	621	49156	2086	38760	2837	52638	2283	0	0	0	0	0	0
RIS	08/05	12634	6003	12490	1119	14914	1069	43742	7448	37123	2895	48705	5197	0	0	0	0	0	0
RRH	08/05	6090	1086	4065	371	5734	430	34028	4978	28138	1898	35829	3535	0	0	0	0	0	0
WEL	08/05	6312	1858	2708	426	4250	321	23115	3147	18455	858	24477	1432	0	0	0	0	0	0
WFA	07/26	24933	2505	13924	353	-	-	728	64	0	0	-	-	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2009		2008		10-Yr Avg.		2009	2008	10-Yr Avg.	2009	2008	10-Yr Avg.	Wild 2009
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	363	116	29	6	92	14	177785	213583	78583	258087	186058	176759	95960
TDA	13	0	0	0	0	0	155508	177982	66377	70476	97402	69810	28871
JDA	17	17	2	0	3	0	157333	193361	72397	63934	73140	49649	24336
MCN	2	2	0	0	0	0	121651	146915	58751	30399	45251	34150	11634
IHR	0	0	0	0	0	0	867	538	90	20630	26960	16421	5782
LMN	0	0	0	0	0	0	1161	721	103	22842	29762	15792	8171
LGS	0	0	0	0	0	0	1065	593	96	14934	17279	9658	5351
LGR	0	0	0	0	0	0	1208	877	126	18405	18445	13129	5966
PRD	0	0	4	-1	6	0	153291	196818	74773	4860	6641	4417	0
RIS	0	0	0	0	1	0	162759	193663	70787	3868	5559	3416	1866
RRH	0	0	0	0	1	0	132958	161206	52250	3108	4233	2345	1467
WEL	15	0	0	0	0	0	134616	165010	52532	1332	1787	1154	640
WFA	0	0	14	4	-	-	0	0	-	16828	18562	-	-

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: 08/14/09

BON counts from January 1, 2009 to March 14, 2009 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2009	19	-1	321	109
2008	42	0	568	273