Fish Passage Center

Weekly Report #11 - 21

August 5, 2011

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 34% and 183% of average at individual sub-basins over July. Precipitation above The Dalles has been 96% of average over July. Over the 2011 water year, precipitation has ranged between 109% and 127% of average.

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

Location	Water Year 2011 July 1-25, 2011		Water Year 2011 October 1, 2010 to July 25, 2011	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.87	131	25.91	118
Snake River Above Ice Harbor	0.35	47	19.90	126
Columbia Above The Dalles	0.96	96	25.12	121
Kootenai	2.16	141	25.76	114
Clark Fork	0.78	81	18.63	123
Flathead	1.29	101	25.62	127
Pend Oreille/ Spokane	0.78	70	33.49	118
Central Washington	0.24	82	9.30	113
Snake River Plain	0.21	43	12.38	123
Salmon/Boise/ Payette	0.22	34	20.41	112
Clearwater	0.65	55	35.39	127
SW Washington Cascades/Cowlitz	1.14	102	72.36	109
Willamette Valley	1.23	183	61.98	110

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. The July Final forecast at The Dalles between January and July is 142000 Kaf (132% 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)	131	141000	132	142000
Grand Coulee (Jan-July)	124	78300	126	79500
Libby Res. Inflow, MT (Apr-Aug)	127	7930 8099*	129	8090
Hungry Horse Res. Inflow, MT (Jan-July)	153	3410	154	3430
Lower Granite Res. Inflow (Apr- July)	156	33700	159	34200
Brownlee Res. Inflow (Apr-July)	177	11200	173	10900
Dworshak Res. Inflow (Apr-July)	143	3770 3813*	149	3940

* Denotes COE Forecast

The flow objective at Lower Granite over the summer period (June 21st to August 31st) is 55 Kcfs; over the summer period flows at Lower Granite have averaged 107.3 Kcfs and 51.6 Kcfs over the last week.

The summer flow objective period began at McNary Dam on July 1st with a flow objective of 200 Kcfs. Over the summer flow period, flows at McNary have averaged 310.6 Kcfs and 230.4 Kcfs last week.

Grand Coulee Reservoir is at 1289.8 feet (8-4-11) and has held steady over the last week. The August 31st draft elevation at Grand Coulee is 1280 feet. Outflows at Grand Coulee have ranged between 136.4 and 155.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2453.3 feet (8-4-11) and has refilled 0.8 feet last week. Outflows at Libby Dam have been 14.0-16.0 Kcfs last week. The COE plans to target elevation 2449 feet by the end of September.

Hungry Horse is currently at an elevation of 3559.2 feet (8-4-11) and has refilled 0.4 feet last week. Outflows at Hungry Horse have been 4.0 Kcfs last week. The BOR plans to target elevation 3550 feet by the end of September.

Dworshak is currently at an elevation of 1581.4 feet (8-4-11) and has drafted 7.0 feet last week. Outflows from Dworshak have been 13.8-14.1 Kcfs last week. The COE plans to draft Dworshak to elevation 1535 feet by early September.

The Brownlee Reservoir was at an elevation of 2058.3 feet on August 4th, 2011 drafting 5.0 feet last week. Over the last week, outflows at Brownlee have ranged between 16.0 -23.0 Kcfs.

Spill:

Spill levels transitioned from spring to summer levels for fish passage on June 21st at the lower Snake River projects. Flows have decreased over the past week. By week's end hydroelectric projects in the FCRPS were mostly spilling to the Biological Opinion summer spill requirements.

Spill has occurred at Dworshak Dam this past week, as the project drafts to the end of August target elevation of 1535 feet that will be met sometime in early September. Excess spill has occurred at Lower Granite Dam since August 1st due to a powerhouse outage for transmission line repairs. Over the past week, daily average flows at Lower Granite Dam have ranged from 46.3 to 55.4 Kcfs, and daily average spill has been 18.7 to 47.4 Kcfs. At Little Goose Dam, spill met the 30% of instantaneous flow Court Order through the week, except on August 1st and 2nd, when spill exceeded the 30% for transmission line repairs. At Lower Monumental Dam spill met the Court ordered 17 Kcfs over the past week.

Beginning April 28th, the Court Order spill operations at Ice Harbor called for an alternating schedule of 45 Kcfs spill during the day and gas cap spill at night versus 30% if instantaneous flow, on 2-day alternating blocks until mid-July. Beginning July 13, spill levels were changed to the 45 Kcfs/gas cap levels, which will continue through the rest of the summer period. Over the past week spill levels have met the Court Order, except when flows were too low to maintain the spill levels and powerhouse minimum flows. Daily average spill ranged from 38.7 to 48.1 Kcfs.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	**April 28-July 12:** 45 Kcfs/gas cap vs. 30%/30% **July 13 – August 31**: 45 Kcfs / gas cap

Summer spill levels were initiated at McNary Dam on June 20th and at Bonneville Dam on June 16th. Summer spill season began at John Day and The Dalles dams on July 1st. Some spill occurred at Grand Coulee Dam and Chief Joseph Dam. Chief Joseph is being managed by BPA based on running reserves and unit availability.

Spill at McNary Dam has met, or exceeded, the Court Ordered 50% of daily average flow. The higher spill levels were due to unit outages and transmission line repairs. Spill levels at John Day are now meeting post-test conditions of 30% of total river flow. At The Dalles Dam, spill met the Court Order over the past week. Finally, at Bonneville Dam, after last Friday's end to 5 days of restricted powerhouse capacity, spill met the Court ordered summer operations.

Project	Day/Night Spill
McNary	50%/50%
John Day	**Pre-test:** 30%/30% **Testing:** 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	**June 16 to July 20**: alternate between 95 Kcfs/95 Kcfs and 85 Kcfs/121 Kcfs. **July 20th - August 31:** 75 Kcfs day/GasCap night.

Most projects are now in compliance with the 115/120% criteria, with higher TDG levels measured at projects with excess spill due to transmission line repairs. Only one fish was observed with minor signs of GBT this past week, and that was at Rock Island Dam in the sample taken on August 2nd.

Smolt Monitoring:

Smolt monitoring was ongoing at all SMP sites this past week. Subyearling Chinook continued to predominate in the collections at all dams over the past week. The numbers of spring migrant salmonids and lamprey have continued to decline or remain very low over the past few weeks. The largest numbers of subyearling Chinook continue to pass the Lower Columbia dams in the reach from McNary Dam to Bonneville Dam, as both wild Hanford subyearlings and large hatchery releases from the mid-Columbia River pass through the system.

At Lower Granite Dam subyearling Chinook smolts continued to predominate in the passage indices, however subyearling Chinook indices decreased from last week. Beginning August 1st, only about 5 Kcfs of flow passed through the powerhouse, which is about 10% of the overall river flow. With this change in operations, it is difficult know if the decrease in the subyearling Chinook index is due to a decrease in passage or the change in operations. Subyearling Chinook indices averaged approximately 2,400 per day this week compared to nearly 3,700 per day last week. Coho continue to be the second most predominant species, with the average daily passage index increasing this week over last week. The average daily passage index for coho at Lower Granite this week was 220 per day, compared to about 140 per day last week. Sockeye indices at Lower Granite also decreased this week. Little Goose and Lower Monumental dams showed similar passage as Lower Granite, with subyearling Chinook predominating and lower passage indices for coho and sockeye. Steelhead and yearling Chinook passage at Little Goose and Lower Momumental dams have been are zero or near zero over the past week.

Sampling at Rock Island Dam is ongoing. Subyearling Chinook predominated in the samples over the past week. Subyearling Chinook collections decreased this week with the index averaging about 250 per day compared to nearly 620 per day last week. All spring migrant indices averaged fewer than 15 fish per day over the past week.

Sampling at McNary Dam moved to every day sampling with the beginning of collections for transportation on July 20th. The first barge load of smolts was shipped on July 21st this year. Subyearling Chinook were the predominate species passing the project this week, with the average passage index at 128,000 per day this week compared to 174,000 last week. Indices for all spring migrants, except sockeye, continued to remain low, with less than 40 per day over the past week. The sockeye passage index averaged about 300 per day over the past week. There were no detections of PIT-tagged sockeye juveniles at McNary this week.

The average daily passage indices for spring migrant species at John Day Dam are zero or near zero this week. The passage index for subyearling Chinook also decreased this week, with 31,500 per day this week compared to nearly 65,600 per day last week. Lamprey collections decreased this week, with about 150 per day this week compared to about 300 per day last week.

The subyearling Chinook passage index at Bonneville Dam decreased this week. The average daily passage index at Bonneville Dam for subyearling Chinook was 31,500 oer day, compared to the nearly 59,500 per day last week. Indices for spring migrant species at Bonneville Dam remain low; at zero or near zero.

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 scheduled releases to this zone this week. In addition, there are no new releases of juvenile salmonids scheduled for 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 to this zone this week. In addition, there are no new releases of juvenile salmonids scheduled for the next two weeks.

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

Adult Passage:

Fall Chinook began to pass Bonneville Dam on August 1st . Daily counts of fall Chinook at Bonneville Dam ranged from 143 to 212. The 2011 adult fall Chinook count of 1,988 is about 1.36 times greater than the 2010 count and 1.17 times greater than the 10 average. The 2011 Bonneville Dam fall Chinook jack count of 739 is about 3.24 times greater than the 2010 count and 2.62 times greater than the 10 year average. The 2011 Bonneville Dam adult summer Chinook count ended on 7/31. The adult summer Chinook count of 108,279 was about 1.11 times greater than the 2010 count and 1.21 times greater than the 10 year average. The 2011 Bonneville Dam summer Chinook jack count of 51,451 is about 3.3 times greater than the 2010 count and about 3.8 times greater than the 10 year average count. At McNary Dam 72,713 adult summer Chinook have been counted. The 2011 McNary adult summer Chinook is about 1.10 times greater than the 2010 count and about 1.09 times greater than the 10 average. The 2011 summer Chinook jack count of 27,672 is about 3.47 times greater than the 2010 count and 3.06 times greater than the 10 year average. The adult summer Chinook count at Lower Granite Dam in the Snake River of 35,718 is about 1.26 times greater than the 2010 count and 2.46 times greater than the 10 year average. The Lower Granite summer Chinook jack count of 16,191 is about 3.12 times greater than the 2010 count and 3.75 times greater than the 10 year average.

The Bonneville Dam 2011 steelhead count of 136,542 is about 64.6% of the 2010 count of 211,155 and about 92.1% of the 10 year average count of 148,190. In the Snake River, this year's Lower Granite steelhead count of 16,490 is about 78.5% of the 2010 count, while being about 1.15 times greater than the 10 year average count of 14,377. The 2011 LGR wild steelhead count as of August 4th was 7,482. The 2011 Rock Island Dam adult steelhead count of 1,230 is about 23.5% of the 2010 count and 45.6% of the 10 year average. At Willamette Falls Dam, the 2011 count for steelhead was 26,852, as of July 27th. This year's steelhead count is about 85.6% of the 2010 count and about 97% of the 10 year average.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 13 and 103 last week. The 2011 adult sockeye count at Bonneville Dam of 185,714 is about 48.1% of the 2010 count, while being about 1.5 times greater than the 10 year average. The 2011 adult sockeye count at McNary Dam of 113,654 is about 40.8% of the 2010 count, while being 1.24 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 2011 adult sockeye count of 1,119 is about 86.2% of the 2010 count of 1,298, while being about 4 times greater than the 10 year average count of 280. The Lower Granite Dam 2011 adult sockeye count of 1,465 is about 70.8% of the 2010 count of 2,064 and 3.49 times greater than the 10 year average of 420.

The coho salmon run at Bonneville Dam is just beginning with 7 adults and 8 jacks counted to date. As of August 4th at Bonneville Dam, the adult Shad count was 946,467 which was about 90.8% of the 2010 count of 1,041,806 and about 30.8% of the 10 year average count of 3,069,930.

Hatchery Releases Last Two Weeks

No releases to report.

Hatchery Releases Next Two Weeks

No releases to report.

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

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	105.4	105.6	105.9	23	120.0	120.4	120.6	21	121.2	121.4	121.7	24	119.2	119.7	120.2	21	117.4	118.0	118.7	24
7/23	105.0	105.2	105.4	23	119.1	119.5	120.3	21	120.4	120.7	121.2	24	118.6	119.0	119.3	21	116.9	117.2	117.5	24
7/24	105.0	105.5	105.7	23	119.2	119.8	120.2	22	119.9	120.1	120.3	24	118.5	119.0	119.6	22	117.4	117.9	118.2	24
7/25	105.8	106.3	106.8	24	118.7	118.9	119.2	21	119.9	120.2	120.5	24	118.7	119.0	119.8	21	117.1	117.4	117.7	24
7/26	105.8	105.9	106.0	24	117.9	118.4	119.4	21	119.8	120.3	120.5	24	117.1	117.7	119.6	21	116.8	117.0	117.3	24
7/27	105.6	105.8	106.0	24	116.9	117.3	118.1	23	119.8	119.9	120.4	24	116.2	116.7	117.8	23	116.5	116.8	117.0	24
7/28	105.3	105.6	105.8	24	117.4	118.3	119.0	24	119.2	119.4	119.5	24	115.6	116.1	116.6	24	116.7	117.0	117.4	24
7/29	105.7	106.0	106.3	24	117.3	117.9	118.3	24	118.7	118.9	119.4	24	115.8	116.3	117.4	24	117.0	117.3	117.5	24
7/30	105.9	106.5	106.8	24	117.6	118.4	118.9	23	118.4	118.7	119.0	24	115.3	115.8	116.7	23	117.0	117.3	117.7	24
7/31	106.2	106.6	106.9	24	116.8	117.9	118.4	23	118.2	118.4	118.6	24	115.2	115.8	116.4	23	116.3	116.6	116.9	24
8/1	105.9	106.1	106.5	22	116.1	116.7	117.8	19	117.1	117.3	117.5	24	114.2	114.6	115.1	19	115.2	115.5	115.7	24
8/2	106.0	106.4	106.8	24	115.3	115.8	117.0	23	116.7	116.9	117.2	24	114.3	114.6	115.3	23	115.1	115.4	115.7	24
8/3	106.2	106.7	107.1	24	114.8	115.4	115.9	23	116.5	116.8	117.1	24	113.9	114.4	115.2	23	115.2	115.5	115.7	24
8/4	106.5	106.9	107.2	24	114.2	114.9	115.8	23	116.4	116.7	116.9	24	113.5	114.1	114.8	23	114.8	115.0	115.2	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	115.3	116.2	116.5	24	114.0	114.3	114.7	24	121.6	121.8	122.0	24	114.5	114.7	114.9	24	114.8	115.2	116.2	24
7/23	113.6	115.7	116.5	24	115.1	115.5	116.0	24	121.5	121.9	122.4	24	115.3	116.2	116.9	24	115.6	116.2	117.0	24
7/24	114.5	116.5	118.4	24	115.7	116.6	116.9	23	121.8	122.4	122.7	24	116.5	117.1	118.1	24	116.8	117.4	118.0	24
7/25	115.0	115.7	116.4	24	115.6	116.4	117.0	23	120.1	121.7	121.9	23	117.7	118.3	119.2	24	117.3	118.5	119.4	24
7/26	115.3	115.6	115.9	24	114.8	115.2	115.4	24	115.7	116.1	116.9	24	116.2	116.7	117.1	24	115.5	116.3	117.9	24
7/27	115.1	115.5	115.8	24	114.9	115.1	115.4	24	115.3	115.9	116.3	24	113.7	114.5	114.9	24	115.4	115.9	116.5	24
7/28	115.4	116.0	116.9	24	114.9	115.2	115.4	24	114.4	114.6	114.9	24	114.6	115.2	115.5	24	114.9	115.7	116.1	24
7/29	116.0	116.6	117.7	24	115.7	116.0	116.4	23	117.1	119.1	119.8	23	114.6	115.1	115.4	24	118.2	119.8	121.1	24
7/30	116.0	116.4	117.6	24	116.3	116.8	117.1	24	117.8	118.2	118.6	24	117.2	118.6	119.5	24	116.8	118.3	119.9	24
7/31	115.6	116.2	117.4	24	115.4	116.1	116.6	24	115.9	116.3	116.6	24	115.4	115.8	116.1	24	115.2	115.9	117.0	24
8/1	114.2	115.2	115.7	24	114.1	114.4	114.9	24	113.5	114.4	115.6	24	114.0	114.5	114.9	24	114.9	115.8	117.4	24
8/2	111.5	112.0	113.3	24	114.4	115.0	115.3	24	112.5	113.1	113.9	24	114.5	115.2	115.6	24	114.2	115.1	115.4	24
8/3	114.2	114.6	115.0	24	114.2	114.8	115.2	24	113.5	115.0	115.5	24	114.0	114.7	115.1	24	114.2	115.0	115.6	24
8/4	114.2	114.6	115.4	24	115.0	115.5	116.0	24	114.7	115.9	117.0	24	114.3	115.1	115.8	24	113.9	114.8	115.6	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	113.9	114.6	116.0	24	117.6	118.6	120.3	24	114.9	115.4	116.3	24	115.5	116.1	116.7	24	114.3	115.1	116.2	24
7/23	114.8	115.5	116.0	24	117.9	118.7	119.4	24	116.8	117.5	118.4	24	116.0	116.3	116.7	24	114.7	116.3	117.2	24
7/24	116.1	116.7	117.2	24	119.2	119.9	120.3	24	116.9	118.3	118.9	24	116.4	116.7	117.1	24	115.6	116.6	117.0	24
7/25	117.0	117.3	117.7	24	120.0	120.4	120.8	24	116.5	116.8	117.8	24	116.4	116.6	116.7	24	114.5	115.0	116.1	24
7/26	115.6	116.4	117.9	24	119.4	120.4	121.3	24	114.7	115.1	115.6	24	115.1	115.4	115.6	24	113.3	113.6	114.2	24
7/27	113.6	114.4	114.8	24	117.8	118.3	119.3	24	114.1	114.8	115.5	24	115.0	115.6	116.1	24	112.2	113.0	113.4	24
7/28	113.7	115.2	116.2	24	117.7	119.0	120.0	24	114.7	115.7	116.4	24	114.9	115.2	115.4	24	113.6	114.4	114.8	24
7/29	115.9	118.0	119.1	24	119.0	120.9	121.6	24	114.3	115.0	115.6	24	115.3	115.9	116.6	24	113.7	114.4	115.0	24
7/30	115.7	118.2	119.8	24	118.9	121.0	122.1	24	115.1	116.0	116.5	24	115.4	116.0	116.8	24	114.3	114.8	115.1	24
7/31	114.7	115.3	117.1	24	118.8	119.4	120.2	24	114.5	115.3	116.0	24	115.3	115.5	115.9	24	113.6	114.0	114.7	24
8/1	114.2	114.5	115.0	24	118.3	118.9	119.1	24	115.5	117.5	118.3	24	115.1	115.7	116.0	24	113.3	113.9	114.7	24
8/2	113.7	114.8	115.7	24	117.9	118.9	119.5	24	115.7	116.4	117.1	24	115.5	115.7	115.7	24	114.6	115.2	116.2	24
8/3	113.4	114.2	114.7	24	117.9	118.8	119.2	24	116.0	117.0	118.3	24	115.4	115.6	116.0	24	113.9	115.1	115.8	24
8/4	113.4	114.2	114.8	24	118.1	119.0	119.4	24	116.0	117.4	119.3	24	116.9	118.0	118.9	24	114.4	115.7	117.7	24

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

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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	117.9	118.6	119.2	24	113.9	114.7	115.3	24	107.6	107.9	108.2	24	105.1	105.8	106.3	24	102.9	103.7	104.4	24
7/23	117.2	117.7	118.7	24	113.5	114.0	114.3	24	107.4	107.7	107.9	24	104.9	105.8	106.4	24	102.9	103.9	104.7	24
7/24	119.2	119.7	120.5	24	113.8	114.9	115.7	24	107.8	108.0	108.4	24	105.4	106.4	107.1	24	103.3	104.3	105.2	24
7/25	118.2	118.9	119.5	24	114.6	114.9	115.4	24	108.2	108.8	112.8	24	105.9	106.8	108.2	24	102.9	103.6	104.8	24
7/26	116.2	116.9	117.2	24	113.1	113.9	114.6	24	107.9	108.1	108.2	24	105.8	106.6	107.3	24	102.7	103.8	104.9	24
7/27	116.9	117.3	117.9	24	112.1	112.8	113.2	24	107.4	107.8	108.1	24	105.7	106.4	107.2	24	102.3	103.3	104.3	24
7/28	115.6	116.2	116.5	24	112.6	113.7	114.5	24	107.5	107.6	107.7	24	105.6	106.5	107.2	24	102.4	103.6	104.8	24
7/29	116.1	116.6	117.0	24	112.5	113.4	114.0	24	107.8	108.2	108.5	24	106.1	107.0	107.7	24	102.9	104.1	105.2	24
7/30	116.4	117.0	117.3	24	113.0	113.9	114.6	24	108.2	108.5	108.8	24	106.2	107.1	107.8	24	102.8	104.0	105.1	24
7/31	115.1	115.4	115.9	24	112.6	113.4	114.1	24	108.1	108.4	108.7	24	106.4	107.3	108.1	24	102.7	104.0	105.3	24
8/1	115.3	116.0	117.7	24	111.5	112.4	112.8	24	108.0	108.3	108.5	24	106.4	107.3	108.1	24	102.6	103.9	105.2	24
8/2	118.0	118.4	118.6	24	112.0	113.0	113.7	24	108.2	108.6	108.8	24	106.9	107.8	108.5	24	102.9	104.2	105.5	24
8/3	115.8	116.6	117.4	24	113.1	113.8	114.4	24	108.7	109.0	109.6	24	107.0	108.2	109.1	24	102.6	103.9	105.4	24
8/4	115.6	116.1	117.1	24	112.3	113.6	114.5	24	109.4	109.7	110.6	24	107.3	108.5	109.5	24	102.1	103.2	104.1	24

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	104.1	105.7	106.8	24	102.6	102.9	103.3	24	113.2	113.5	114.0	24	107.9	108.3	108.6	24	113.4	113.6	113.8	24
7/23	104.1	106.0	107.4	24	103.2	103.4	103.7	24	113.6	113.9	114.5	24	108.7	109.2	109.4	24	113.9	114.1	114.4	24
7/24	104.6	106.8	108.3	24	102.9	103.2	103.4	24	112.8	113.3	114.2	24	109.8	110.2	110.7	24	114.1	114.3	114.7	24
7/25	104.6	106.4	107.7	24	103.0	103.4	103.8	24	113.8	114.4	114.9	24	110.5	110.8	111.3	24	114.8	115.1	115.3	24
7/26	104.5	106.2	107.1	24	102.9	103.1	103.3	24	114.8	115.2	116.0	24	110.8	111.3	111.5	24	112.9	113.9	115.1	24
7/27	104.3	106.1	107.4	24	102.9	103.3	103.9	24	115.1	115.6	116.0	24	110.4	110.6	111.3	24	111.8	112.2	112.4	24
7/28	104.4	106.5	108.0	24	102.7	103.0	103.8	24	115.3	115.8	116.4	24	110.0	110.2	110.3	24	111.4	111.5	111.7	24
7/29	104.6	106.7	108.2	24	102.2	102.6	103.0	24	115.0	115.2	115.9	24	109.9	110.1	110.2	24	111.6	111.7	112.0	24
7/30	104.7	106.8	108.2	24	102.6	102.9	103.0	24	115.8	116.3	116.8	24	111.4	111.9	112.3	24	112.3	112.6	112.8	24
7/31	104.9	107.0	108.4	24	102.6	102.9	103.4	24	115.3	115.6	116.5	24	112.0	112.4	112.7	24	112.5	112.8	113.4	24
8/1	104.6	106.8	108.3	24	102.6	102.9	103.2	24	118.4	119.5	120.6	24	112.5	112.7	112.8	24	115.6	118.6	119.6	24
8/2	104.8	107.0	108.7	24	103.3	103.5	103.7	24	119.8	120.3	120.5	24	112.6	112.9	113.2	24	116.3	119.9	120.8	24
8/3	104.6	106.8	108.3	24	103.2	103.5	103.6	24	119.7	120.3	120.7	24	112.7	112.9	113.0	24	112.4	112.7	113.1	24
8/4	104.4	106.3	107.4	24	103.3	103.7	104.0	24	119.4	119.8	120.3	24	113.2	113.7	114.6	24	112.4	112.6	112.9	24

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

	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	111.4	111.6	111.7	24	116.2	116.5	117.2	13	111.7	111.8	112.0	24	116.0	116.2	116.5	24	---	---	---	0
7/23	111.3	111.4	111.5	24	117.3	117.6	118.6	24	111.3	111.5	111.7	24	115.9	116.1	116.4	24	---	---	---	0
7/24	111.9	112.3	112.7	24	117.7	117.9	118.2	24	112.3	112.7	113.0	24	116.1	116.5	116.9	24	---	---	---	0
7/25	113.2	113.5	113.6	24	117.4	117.7	118.2	24	113.4	113.6	114.0	24	116.3	116.7	117.3	24	---	---	---	0
7/26	113.5	113.6	113.8	24	117.1	117.4	117.9	24	112.5	112.9	113.1	24	116.4	116.8	117.3	24	---	---	---	0
7/27	112.4	112.7	113.3	24	116.7	117.0	117.4	24	112.0	112.2	112.4	24	115.6	116.1	116.5	24	---	---	---	0
7/28	111.8	112.3	112.5	24	117.1	117.7	118.4	24	112.0	112.3	112.4	24	115.4	116.0	116.6	24	---	---	---	0
7/29	111.8	111.9	112.0	24	117.0	117.4	118.0	24	112.6	112.8	113.3	24	115.3	116.0	117.2	24	---	---	---	0
7/30	111.5	112.1	112.5	24	116.8	117.4	117.9	24	113.5	114.0	114.5	24	114.6	115.4	116.1	24	---	---	---	0
7/31	111.8	112.0	112.2	24	117.1	117.4	118.2	24	113.6	113.8	114.2	24	115.0	116.1	117.1	24	---	---	---	0
8/1	111.3	111.4	111.7	24	116.3	116.7	117.0	24	113.4	113.5	113.7	24	113.3	113.8	116.3	24	---	---	---	0
8/2	111.2	111.5	111.6	24	116.8	117.2	117.9	24	113.4	113.6	114.1	24	115.5	116.1	116.9	24	---	---	---	0
8/3	111.8	112.6	113.1	24	116.5	117.1	117.4	24	113.2	113.5	113.7	24	114.8	115.1	115.4	24	---	---	---	0
8/4	114.1	115.1	116.9	24	117.9	118.3	119.5	24	113.7	113.9	114.3	24	115.7	116.5	117.5	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

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
7/22	111.2	111.7	112.4	24	118.4	118.9	119.2	24	108.3	108.6	109.0	24	114.8	115.6	116.6	24	109.0	109.4	109.9	24
7/23	112.4	113.7	115.3	24	119.8	121.2	121.4	24	108.9	109.8	110.9	24	115.1	116.6	117.6	24	109.8	110.7	111.5	24
7/24	114.6	115.6	115.9	24	119.9	120.9	121.6	24	110.7	111.0	111.2	24	114.9	116.2	117.0	24	111.5	112.0	112.5	24
7/25	114.2	114.6	115.3	24	118.7	119.0	119.2	24	109.9	110.2	110.8	24	114.6	115.3	117.0	24	109.2	110.4	112.0	24
7/26	113.3	113.8	114.2	24	117.5	117.8	118.5	24	110.3	110.9	111.3	24	113.9	114.8	115.2	24	108.7	109.5	109.8	24
7/27	112.6	113.1	113.7	24	117.6	118.0	118.3	24	109.5	109.8	110.2	24	112.9	113.8	114.6	24	108.5	108.9	109.4	24
7/28	112.4	113.0	113.5	24	118.3	118.7	119.3	24	109.1	109.5	109.7	24	114.0	114.9	115.7	24	109.6	110.5	111.0	24
7/29	113.2	113.9	114.7	24	119.1	120.5	120.9	24	109.2	109.4	109.6	24	113.8	114.6	115.9	24	110.2	110.5	111.0	24
7/30	114.1	114.5	115.1	24	138.8	151.5	152.8	24	109.5	110.0	110.4	24	114.1	114.7	115.3	24	109.7	110.1	110.5	24
7/31	113.7	114.0	114.4	24	151.1	152.2	152.9	24	109.6	110.0	110.3	24	114.0	114.8	115.2	24	109.1	109.5	109.8	24
8/1	112.8	113.7	114.4	24	132.2	147.3	154.7	24	109.8	110.4	110.9	24	114.1	115.0	115.9	24	109.9	110.6	111.3	24
8/2	112.5	112.9	113.6	24	117.7	118.1	118.5	24	110.5	110.8	111.1	24	113.5	114.1	114.8	24	110.5	110.9	111.3	24
8/3	111.8	112.1	112.4	24	117.8	118.2	118.4	24	109.8	110.1	110.4	24	112.6	114.0	115.3	24	109.5	110.0	110.6	24
8/4	112.1	112.6	113.3	24	117.9	118.4	118.5	24	109.0	109.3	109.5	24	112.6	113.2	114.1	24	109.8	110.1	110.8	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/22	115.7	116.3	116.6	24	111.9	112.1	112.4	24	113.8	114.6	116.0	24	112.2	113.5	115.0	24	---	---	---	0
7/23	116.6	117.9	118.5	24	112.5	113.5	114.0	24	114.4	115.3	116.3	24	112.9	114.8	116.3	24	---	---	---	0
7/24	117.5	118.3	118.8	24	114.2	114.8	115.6	24	115.5	116.1	117.4	24	113.9	115.5	117.1	24	---	---	---	0
7/25	116.2	116.9	118.4	24	112.4	113.8	115.7	24	117.0	117.7	118.5	24	113.1	114.3	115.3	24	---	---	---	0
7/26	115.5	116.1	116.5	24	110.3	110.5	110.9	24	117.2	117.9	119.3	24	114.8	115.6	116.5	24	---	---	---	0
7/27	115.4	115.6	115.8	24	109.1	109.4	109.7	24	116.0	116.2	116.4	24	113.3	114.2	114.8	24	---	---	---	0
7/28	116.3	116.9	117.6	24	110.1	110.9	111.1	24	116.2	116.6	117.2	24	113.5	114.8	115.6	24	---	---	---	0
7/29	116.7	117.3	118.0	24	111.3	111.4	111.6	24	115.6	116.6	117.7	24	114.1	115.0	116.2	24	---	---	---	0
7/30	116.0	116.4	116.7	24	111.4	111.7	112.1	24	114.5	115.6	117.2	24	113.0	113.8	115.1	24	---	---	---	0
7/31	115.6	115.7	116.0	24	110.5	110.8	110.9	24	114.9	116.2	118.1	24	111.7	113.1	114.7	24	---	---	---	0
8/1	116.0	116.5	117.0	24	110.2	110.7	111.1	24	114.4	115.3	116.8	24	111.5	113.1	114.5	24	---	---	---	0
8/2	116.5	117.0	117.5	24	111.2	111.6	112.0	24	114.2	115.1	116.4	24	111.9	113.5	114.7	24	---	---	---	0
8/3	116.1	116.5	117.0	24	110.9	111.2	111.5	24	115.1	116.3	117.6	24	112.5	114.5	116.2	24	---	---	---	0
8/4	116.0	116.5	117.0	24	110.8	111.1	111.4	24	114.6	116.0	117.4	24	112.7	114.1	115.7	24	---	---	---	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
Lower Granite Dam											
Little Goose Dam											
	07/25/11	Chinook + Steelhead	88	0	0	0.00%	0.00%	0	0	0	0
	08/01/11	Chinook + Steelhead	35	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	07/27/11	Chinook + Steelhead	36	0	0	0.00%	0.00%	0	0	0	0
	08/03/11	Chinook + Steelhead	82	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	07/25/11	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/28/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/01/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/04/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	07/23/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/26/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/30/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/02/11	Chinook + Steelhead	40	0	0	0.00%	0.00%	0	0	0	0
	08/03/11	Chinook + Steelhead	60	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	07/26/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	07/29/11	Chinook + Steelhead	100	2	2	2.00%	0.00%	1	1	0	0
	08/02/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/04/11	Chinook + Steelhead	81	0	0	0.00%	0.00%	0	0	0	0

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/22/2011	170.9	3.2	169.9	46.7	181.2	27.7	181.4	26.8	183.9	39.8	197.7	62.8	198.5	80.8
07/23/2011	172.3	3.4	166.6	42.7	181.4	27.2	186.5	37.9	190.9	38.3	194.1	57.4	190.0	57.3
07/24/2011	170.3	1.5	177.4	46.0	188.6	29.9	191.2	36.5	194.5	37.5	207.3	72.7	210.1	79.6
07/25/2011	159.7	0.2	157.6	23.8	170.9	18.2	175.0	41.2	179.6	36.7	190.1	55.6	192.6	71.1
07/26/2011	153.8	0.1	155.9	0.0	162.5	12.5	168.0	27.9	165.9	36.3	172.7	48.6	171.1	56.4
07/27/2011	159.4	0.1	160.0	0.0	172.2	16.1	174.9	26.4	179.8	34.7	173.3	50.6	190.8	77.7
07/28/2011	160.8	0.2	156.0	0.0	162.3	11.7	161.6	17.5	166.9	33.7	173.1	39.1	171.1	41.2
07/29/2011	155.0	0.2	156.1	0.0	169.0	28.0	173.4	48.9	175.5	32.7	189.1	57.5	189.0	49.4
07/30/2011	145.3	0.2	149.9	0.0	159.2	10.0	161.7	22.6	164.5	32.6	175.6	43.0	174.7	48.2
07/31/2011	141.0	0.2	142.4	0.0	148.3	10.4	148.4	18.4	152.1	32.5	155.4	25.5	150.8	37.0
08/01/2011	142.5	3.6	135.8	3.4	149.0	14.7	156.8	18.9	164.5	31.5	177.7	38.7	176.4	39.2
08/02/2011	153.7	17.0	154.2	17.5	158.8	10.0	156.6	14.4	158.1	32.3	163.2	34.4	161.8	62.7
08/03/2011	149.1	0.8	144.7	0.0	153.5	13.7	157.9	17.6	162.6	32.1	170.0	33.9	168.9	39.2
08/04/2011	136.4	1.8	133.9	0.0	143.9	9.8	144.5	14.3	149.2	32.2	157.8	27.3	161.1	26.8

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/22/2011	13.9	4.4	18.2	25.8	71.6	18.5	68.4	20.4	68.9	16.6	73.8	52.2
07/23/2011	13.9	4.4	18.5	26.5	70.5	18.5	69.2	20.8	69.8	17.0	75.1	55.2
07/24/2011	13.8	4.3	17.8	25.6	69.4	18.4	69.5	21.0	68.6	17.0	72.2	52.2
07/25/2011	13.7	4.3	16.1	23.5	62.5	18.7	60.0	17.8	59.0	17.0	63.1	48.7
07/26/2011	13.9	4.4	15.1	19.3	62.1	18.9	60.8	18.0	60.4	16.9	64.0	48.2
07/27/2011	13.9	4.3	15.2	20.7	54.8	18.7	54.6	16.3	54.2	17.0	59.1	46.8
07/28/2011	13.9	4.2	15.2	20.9	58.1	18.6	58.2	17.4	57.6	16.8	62.5	47.7
07/29/2011	14.1	4.4	14.9	20.0	55.4	18.7	55.1	16.4	54.6	17.0	58.2	45.8
07/30/2011	14.1	4.4	14.3	20.1	50.8	18.7	50.2	14.9	49.2	16.8	53.3	42.7
07/31/2011	14.1	4.4	14.5	17.2	54.5	18.7	51.7	15.5	52.6	17.0	55.0	43.8
08/01/2011	14.0	4.3	14.3	20.8	46.3	35.8	45.9	26.9	46.3	16.6	48.5	38.7
08/02/2011	14.1	4.5	15.0	21.5	51.5	46.2	53.9	32.8	53.8	17.0	59.5	48.1
08/03/2011	14.2	4.5	14.8	22.8	52.8	47.4	52.5	15.8	51.5	16.5	54.6	45.0
08/04/2011	13.8	4.1	---	---	49.8	44.3	53.3	15.9	52.2	17.1	57.1	46.7

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

	McNary		John Day		The Dalles				Bonneville	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
07/22/2011	277.3	151.3	272.2	81.6	259.7	103.9	281.7	87.9	83.2	98.3
07/23/2011	272.0	134.4	267.7	80.3	255.3	102.2	268.1	89.8	79.9	86.0
07/24/2011	272.4	136.4	257.8	77.0	244.3	97.4	266.8	89.6	77.3	87.5
07/25/2011	273.3	148.9	258.5	77.3	244.5	97.7	258.5	130.2	43.4	72.5
07/26/2011	245.5	126.3	243.3	73.0	236.2	94.3	255.9	139.4	37.3	66.7
07/27/2011	247.9	123.8	243.3	72.8	226.5	90.7	249.3	133.0	37.1	66.7
07/28/2011	256.5	128.5	250.5	74.9	238.1	94.5	249.3	132.7	36.7	67.5
07/29/2011	237.5	117.8	220.3	66.2	209.2	83.9	225.5	105.6	36.1	71.5
07/30/2011	235.5	118.1	213.5	64.0	203.9	81.5	227.1	89.9	26.7	98.1
07/31/2011	236.4	118.1	238.1	71.2	225.7	89.8	219.4	90.0	24.2	92.7
08/01/2011	232.6	128.7	227.8	68.3	222.0	88.6	242.1	91.4	31.9	106.3
08/02/2011	217.9	131.7	205.1	61.4	191.5	76.5	232.1	91.7	36.9	91.2
08/03/2011	225.4	141.5	207.2	62.1	198.3	79.1	199.7	89.8	31.8	65.7
08/04/2011	227.2	137.1	219.6	65.9	205.5	82.1	216.9	91.5	39.3	73.8

Two-Week Summary of Passage Indices

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)
07/22/2011		---	---	---	---	13	0	26	0	0	0	0
07/23/2011		---	---	---	---	0	14	53	0	0	0	0
07/24/2011		---	---	---	---	0	0	13	0	0	0	0
07/25/2011		---	---	---	---	0	0	95	0	0	0	0
07/26/2011		---	---	---	---	0	0	14	0	0	0	0
07/27/2011		---	---	---	---	0	0	0	0	0	0	26
07/28/2011		---	---	---	---	0	0	0	0	0	0	0
07/29/2011		---	---	---	---	0	0	0	0	0	0	0
07/30/2011		---	---	---	---	0	0	0	0	0	0	0
07/31/2011		---	---	---	---	0	0	0	0	0	0	0
08/01/2011		---	---	---	---	0	0	18	2	0	0	0
08/02/2011		---	---	---	---	0	0	0	1	0	0	0
08/03/2011		---	---	---	---	0	0	22	0	0	0	0
08/04/2011	*	---	---	---	---	0	0	9	0	0	0	0
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**13**	**14**	**250**	**3**	**0**	**0**	**26**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**1**	**1**	**18**	**0**	**0**	**0**	**2**
YTD		**31,090**	**30,210**	**12,492**	**18,836**	**3,831,079**	**2,528,593**	**1,236,758**	**26,460**	**1,979,315**	**2,936,420**	**1,322,276**

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)
07/22/2011		---	---	---	---	5,859	8,011	5,443	549	149,445	76,233	49,618
07/23/2011		---	---	---	---	4,691	7,153	4,185	640	159,889	101,091	90,517
07/24/2011		---	---	---	---	5,047	12,784	3,727	862	225,165	65,033	75,421
07/25/2011		---	---	---	---	4,160	9,572	4,848	890	187,342	62,010	71,296
07/26/2011		---	---	---	---	2,009	3,682	1,513	392	191,542	56,810	47,228
07/27/2011		---	---	---	---	1,769	4,342	1,998	462	114,703	51,771	45,896
07/28/2011		---	---	---	---	2,299	4,770	1,824	515	191,116	46,192	35,902
07/29/2011		---	---	---	---	2,617	3,192	1,474	269	189,266	53,821	27,691
07/30/2011		---	---	---	---	2,068	4,377	1,067	344	167,052	44,656	37,169
07/31/2011		---	---	---	---	2,469	3,590	975	259	154,177	41,093	37,064
08/01/2011		---	---	---	---	2,744	3,628	889	279	92,702	34,468	28,447
08/02/2011		---	---	---	---	5,037	4,150	1,346	246	119,809	32,948	32,847
08/03/2011		---	---	---	---	1,349	2,823	1,071	211	111,939	30,057	33,537
08/04/2011	*	---	---	---	---	759	2,065	1,200	168	61,648	27,774	23,899
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**42,877**	**74,139**	**31,560**	**6,086**	**2,115,795**	**723,957**	**636,532**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**3,063**	**5,296**	**2,254**	**435**	**151,128**	**51,711**	**45,467**
YTD		**9**	**38**	**12**	**163**	**1,146,519**	**1,343,981**	**355,407**	**28,748**	**5,011,741**	**3,025,058**	**5,055,616**

Two-Week Summary of Passage Indices

				COMBINED COHO								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/22/2011		---	---	---	---	40	129	26	2	0	0	0
07/23/2011		---	---	---	---	94	43	26	0	0	0	0
07/24/2011		---	---	---	---	274	115	0	0	0	0	0
07/25/2011		---	---	---	---	152	86	0	2	0	0	290
07/26/2011		---	---	---	---	173	57	14	0	225	0	0
07/27/2011		---	---	---	---	73	100	28	3	0	0	0
07/28/2011		---	---	---	---	154	57	29	2	0	0	0
07/29/2011		---	---	---	---	289	72	29	2	0	0	0
07/30/2011		---	---	---	---	215	43	30	2	0	0	0
07/31/2011		---	---	---	---	149	36	28	2	0	0	0
08/01/2011		---	---	---	---	268	59	9	2	0	0	0
08/02/2011		---	---	---	---	387	72	89	1	231	0	0
08/03/2011		---	---	---	---	150	38	72	0	0	96	247
08/04/2011	*	---	---	---	---	84	14	62	2	0	0	0
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**2,502**	**921**	**442**	**20**	**456**	**96**	**537**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**179**	**66**	**32**	**1**	**33**	**7**	**38**
YTD		**0**	**0**	**0**	**218**	**83,516**	**81,279**	**19,442**	**46,394**	**187,710**	**476,755**	**439,811**

				COMBINED STEELHEAD								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/22/2011		---	---	---	---	54	14	0	0	234	192	0
07/23/2011		---	---	---	---	54	72	0	6	0	0	0
07/24/2011		---	---	---	---	27	0	0	8	0	0	0
07/25/2011		---	---	---	---	28	0	14	0	0	0	0
07/26/2011		---	---	---	---	14	3	0	2	0	0	0
07/27/2011		---	---	---	---	29	0	16	7	0	0	0
07/28/2011		---	---	---	---	0	14	0	0	0	0	0
07/29/2011		---	---	---	---	15	0	0	0	0	0	0
07/30/2011		---	---	---	---	0	29	0	0	0	0	0
07/31/2011		---	---	---	---	8	21	0	2	0	0	0
08/01/2011		---	---	---	---	0	0	9	0	0	0	0
08/02/2011		---	---	---	---	0	0	0	0	0	0	0
08/03/2011		---	---	---	---	0	13	0	2	0	0	0
08/04/2011	*	---	---	---	---	0	0	0	0	0	0	0
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**229**	**166**	**39**	**27**	**234**	**192**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**16**	**12**	**3**	**2**	**17**	**14**	**0**
YTD		**1,080**	**13,882**	**4,071**	**2,934**	**4,118,546**	**2,033,051**	**838,149**	**28,463**	**607,987**	**2,620,143**	**246,497**

Two-Week Summary of Passage Indices

				COMBINED SOCKEYE								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/22/2011		---	---	---	---	67	72	66	12	701	0	0
07/23/2011		---	---	---	---	81	14	26	13	0	0	287
07/24/2011		---	---	---	---	82	86	13	2	202	0	305
07/25/2011		---	---	---	---	55	57	14	9	205	204	290
07/26/2011		---	---	---	---	87	29	28	8	901	0	372
07/27/2011		---	---	---	---	29	0	43	18	416	0	0
07/28/2011		---	---	---	---	0	43	15	14	0	0	0
07/29/2011		---	---	---	---	22	0	14	12	203	143	0
07/30/2011		---	---	---	---	8	29	0	14	407	0	0
07/31/2011		---	---	---	---	0	36	9	4	817	0	152
08/01/2011		---	---	---	---	16	15	0	5	206	0	0
08/02/2011		---	---	---	---	0	12	0	7	231	96	0
08/03/2011		---	---	---	---	0	25	0	6	279	190	0
08/04/2011	*	---	---	---	---	0	7	0	8	0	190	0
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**447**	**425**	**228**	**132**	**4,568**	**823**	**1,406**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**32**	**30**	**16**	**9**	**326**	**59**	**100**
YTD		**0**	**0**	**1**	**0**	**119,301**	**44,347**	**31,313**	**18,662**	**323,066**	**363,196**	**113,711**

				COMBINED LAMPREY JUVENILES								
		WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
07/22/2011		---	---	---	---	40	70	0	0	200	143	0
07/23/2011		---	---	---	---	10	10	0	0	300	286	0
07/24/2011		---	---	---	---	30	10	0	0	300	429	0
07/25/2011		---	---	---	---	40	10	0	0	200	143	0
07/26/2011		---	---	---	---	30	0	0	1	100	429	0
07/27/2011		---	---	---	---	0	50	0	0	100	429	0
07/28/2011		---	---	---	---	0	30	0	0	100	300	0
07/29/2011		---	---	---	---	5	20	0	0	0	100	0
07/30/2011		---	---	---	---	5	5	0	0	200	200	0
07/31/2011		---	---	---	---	30	10	0	0	200	200	4
08/01/2011		---	---	---	---	10	5	0	0	100	0	0
08/02/2011		---	---	---	---	0	10	0	0	100	200	0
08/03/2011		---	---	---	---	0	25	0	0	200	133	0
08/04/2011	*	---	---	---	---	0	1,743	0	0	100	200	0
08/05/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**200**	**1,998**	**0**	**1**	**2,200**	**3,192**	**4**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**14**	**143**	**0**	**0**	**157**	**228**	**0**
YTD		**0**	**0**	**0**	**0**	**10,532**	**17,259**	**746**	**319**	**161,942**	**491,297**	**25,906**

Two-Week Summary of Passage Indices

* 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, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:
Two classes of fish counts are shown in these tables:
Collection counts (Coll), which account for sample rates but are not adjusted for flow;
Passage indices (INDEX), 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.
Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, and pacific lamprey macropthalmia.
† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

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: 8/5/11 10:46 AM

07/22/11 TO 08/05/11

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	25,772	10	1,338	165	320	27,605
	Sum of NumberBarged	30,373	9	1,378	181	368	32,309
	Sum of NumberBypassed	7	0	0	0	0	7
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	53	0	1	0	0	54
	Sum of FacilityMorts	179	1	1	3	2	186
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	232	1	2	3	2	240
LGS	Sum of NumberCollected	49,658	10	610	112	285	50,675
	Sum of NumberBarged	51,953	10	619	141	295	53,018
	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	331	0	1	0	5	337
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	420	0	1	0	5	426
LMN	Sum of NumberCollected	22,726	183	304	27	166	23,406
	Sum of NumberBarged	25,826	184	272	55	206	26,543
	Sum of NumberBypassed	114	3	0	1	0	118
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	15	0	1	0	0	16
	Sum of FacilityMorts	199	0	0	1	0	200
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	214	0	1	1	0	216
MCN	Sum of NumberCollected	986,400		200	100	2,100	988,800
	Sum of NumberBarged	927,400		200	100	1,991	929,691
	Sum of NumberBypassed	0		0	0	0	0
	Sum of Numbertrucked	39,618		0	0	100	39,718
	Sum of SampleMorts	224		0	0	1	225
	Sum of FacilityMorts	19,158		0	0	10	19,168
	Sum of ResearchMorts	0		0	0	0	0
	Sum of TotalProjectMorts	19,382		0	0	11	19,393
Total Sum of NumberCollected		1,084,556	203	2,452	404	2,871	1,090,486
Total Sum of NumberBarged		1,035,552	203	2,469	477	2,860	1,041,561
Total Sum of NumberBypassed		121	3	0	1	0	125
Total Sum of Numbertrucked		39,618	0	0	0	100	39,718
Total Sum of SampleMorts		381	0	2	0	1	384
Total Sum of FacilityMorts		19,867	1	2	4	17	19,891
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		20,248	1	4	4	18	20,275

YTD Transportation Summary

Source: Fish Passage Center Updated: 8/5/11 10:46 AM

TO: 08/05/11

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	723,872	2,716,904	54,512	78,039	2,713,293	6,286,620
	Sum of NumberBarged	639,635	1,705,110	39,974	35,408	1,437,008	3,857,135
	Sum of NumberBypassed	81,887	1,009,672	14,509	42,055	1,275,909	2,424,032
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	219	101	2	72	41	435
	Sum of FacilityMorts	2,046	1,780	19	504	272	4,621
	Sum of ResearchMorts	15	241	0	0	58	314
	Sum of TotalProjectMorts	2,280	2,122	21	576	371	5,370
LGS	Sum of NumberCollected	722,198	1,449,324	41,150	24,219	1,132,376	3,369,267
	Sum of NumberBarged	717,261	1,344,369	40,737	18,846	893,330	3,014,543
	Sum of NumberBypassed	92	103,168	401	5,227	238,633	347,521
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	229	52	0	9	10	300
	Sum of FacilityMorts	3,207	1,735	2	132	403	5,479
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	3,436	1,787	2	141	413	5,779
LMN	Sum of NumberCollected	240,697	854,099	12,929	21,045	565,761	1,694,531
	Sum of NumberBarged	230,074	636,687	11,724	18,829	459,647	1,356,961
	Sum of NumberBypassed	8,523	215,901	1,254	1,964	103,437	331,079
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	38	3	1	0	5	47
	Sum of FacilityMorts	1,254	1,499	11	252	872	3,888
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,292	1,502	12	252	877	3,935
MCN	Sum of NumberCollected	2,033,662	952,647	71,655	135,359	295,979	3,489,302
	Sum of NumberBarged	979,776	0	200	2,387	100	982,463
	Sum of NumberBypassed	975,593	949,771	71,257	132,464	295,663	2,424,748
	Sum of NumberTrucked	39,618	0	0	100	0	39,718
	Sum of SampleMorts	677	187	8	41	13	926
	Sum of FacilityMorts	37,998	2,689	170	369	203	41,429
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	38,675	2,876	178	410	216	42,355
Total Sum of NumberCollected		3,720,429	5,972,974	180,246	258,662	4,707,409	14,839,720
Total Sum of NumberBarged		2,566,746	3,686,166	92,635	75,470	2,790,085	9,211,102
Total Sum of NumberBypassed		1,066,095	2,278,512	87,421	181,710	1,913,642	5,527,380
Total Sum of NumberTrucked		39,618	0	0	100	0	39,718
Total Sum of SampleMorts		1,163	343	11	122	69	1,708
Total Sum of FacilityMorts		44,505	7,703	202	1,257	1,750	55,417
Total Sum of ResearchMorts		15	241	0	0	58	314
Total Sum of TotalProjectMorts		45,683	8,287	213	1,379	1,877	57,439

Cumulative Adult Passage at Mainstem Dams Through: 08/04

		Spring Chinook						Summer Chinook						Fall Chinook					
		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.	
DAM	EndDate	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	**08/04**	**167097**	**50945**	**244384**	**12612**	**174444**	**16431**	**108279**	**51451**	**97604**	**15603**	**89217**	**13568**	**1988**	**739**	**1465**	**228**	**1703**	**281**
TDA	**08/04**	**124164**	**40146**	**189839**	**11546**	**130174**	**13470**	**81127**	**39844**	**81292**	**12528**	**78252**	**10628**	**515**	**166**	**316**	**54**	**355**	**61**
JDA	**08/04**	**103401**	**39823**	**179446**	**11794**	**110572**	**12004**	**73557**	**34305**	**70851**	**12457**	**70912**	**11568**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**08/04**	**101245**	**31750**	**153500**	**9185**	**102003**	**11175**	**72713**	**27672**	**65810**	**7968**	**66422**	**9041**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**08/04**	**69306**	**18161**	**101188**	**6047**	**70295**	**6879**	**26077**	**12256**	**29185**	**3456**	**17610**	**3389**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**08/04**	**69832**	**18094**	**97334**	**5898**	**69566**	**5561**	**30547**	**13582**	**34725**	**4313**	**18553**	**3004**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**08/04**	**67321**	**23492**	**92985**	**5461**	**64800**	**6145**	**41056**	**17953**	**31563**	**3841**	**15492**	**3454**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**08/04**	**59342**	**22063**	**94203**	**6409**	**65342**	**7745**	**35718**	**16191**	**28221**	**5182**	**14527**	**4315**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**08/01**	**15246**	**6030**	**30539**	**932**	**20141**	**818**	**43705**	**2978**	**46096**	**919**	**54560**	**1877**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**08/03**	**13089**	**8394**	**29684**	**1513**	**17327**	**1572**	**37185**	**11969**	**43804**	**3194**	**50860**	**4436**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**08/03**	**6989**	**3491**	**8660**	**523**	**6536**	**525**	**29981**	**6657**	**30087**	**1098**	**36786**	**3240**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**07/28**	**4153**	**3969**	**7596**	**661**	**5414**	**510**	**17278**	**3755**	**20759**	**716**	**22304**	**1000**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**07/27**	**43140**	**1362**	**64940**	**1628**	**51380**	**1052**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**0**	**-**	**-**

	Coho						Sockeye			Steelhead			
	2011		2010		10-Yr Avg.				10-Yr			10-Yr	Wild
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2011	2010	Avg.	2011	2010	Avg.	2011
BON	**7**	**8**	**5**	**0**	**4**	**1**	**185714**	**386445**	**123846**	**136542**	**211155**	**148190**	**63056**
TDA	**4**	**6**	**2**	**0**	**0**	**0**	**138207**	**325051**	**105699**	**86733**	**127415**	**67756**	**42426**
JDA	**0**	**1**	**7**	**3**	**3**	**0**	**142962**	**324041**	**110176**	**45644**	**90562**	**48994**	**23197**
MCN	**0**	**0**	**0**	**0**	**0**	**0**	**113654**	**278701**	**91551**	**30752**	**68142**	**34806**	**13801**
IHR	**0**	**0**	**0**	**0**	**0**	**0**	**1119**	**1298**	**280**	**17890**	**41627**	**18276**	**6202**
LMN	**0**	**0**	**0**	**0**	**0**	**0**	**1365**	**1643**	**349**	**14171**	**32231**	**16518**	**5783**
LGS	**0**	**0**	**0**	**0**	**0**	**0**	**1402**	**1589**	**330**	**11958**	**14553**	**9514**	**5645**
LGR	**0**	**0**	**0**	**0**	**0**	**0**	**1465**	**2064**	**420**	**16490**	**20981**	**14377**	**7482**
PRD	**0**	**0**	**0**	**2**	**1**	**0**	**143616**	**356522**	**114873**	**1257**	**7464**	**3480**	**0**
RIS	**0**	**0**	**0**	**0**	**0**	**0**	**144256**	**337714**	**111210**	**1230**	**5235**	**2694**	**736**
RRH	**0**	**0**	**0**	**0**	**1**	**0**	**129945**	**294321**	**87554**	**1243**	**3339**	**1909**	**841**
WEL	**0**	**0**	**0**	**0**	**0**	**0**	**97647**	**285670**	**85517**	**291**	**972**	**581**	**185**
WFA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26852**	**31355**	**27675**	**-**

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: 08/05/11

BON counts from January 1, 2011 to March 14, 2011 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2011	49	1	1,419	600
2010	39	0	2,318	657