



Fish Passage Center

Weekly Report #13 - 22

August 16, 2013

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied over August, ranging between 22% and 141% of average at individual sub-basins. Precipitation above The Dalles has been 87% of average over August. Over the 2013 water year, precipitation has ranged between 66% and 104% of average.

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

Location	Water Year 2013 August 1–14, 2013		Water Year 2013 October 1, 2012 to August 14, 2013	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	1.08	102	33.8	96
Snake River above Ice Harbor	0.19	46	15.1	71
Columbia above The Dalles	0.54	87	21.5	83
Kootenai	1.42	121	37.8	104
Clark Fork	0.66	90	19.3	74
Flathead	1.20	141	32.7	96
Pend Oreille Basin	0.95	120	26.7	86
Snake Basin above Hells Canyon	0.07	22	11.9	68
Salmon River Basin	0.27	44	18.1	66
Clearwater	0.67	97	32.4	83
Willamette River above Portland	0.20	39	55.3	89

Grand Coulee Reservoir is at 1282.4 feet (8-14-13) and has drafted 1.5 feet over the last week. Outflows at Grand Coulee have ranged between 100.5

and 126.4 Kcfs over the last week. The end of August draft elevation at Grand Coulee is 1278 feet, with an additional 0.3 ft draft as part of the Lake Roosevelt Incremental Storage Release Program.

The Libby Reservoir is currently at elevation 2452.3 feet (8-14-13) and has drafted 1.1 feet last week. Outflows at Libby Dam have been 14.0 Kcfs last week. According to July 10, 2013, Technical Management Team notes the COE plans facilitate the Kootenai Tribes Habitat work by targeting an August 31st Libby elevation of between 2449 and 2451.6 feet, followed by a release of 8 Kcfs in September to reach 2449 feet, and then ramping down to 6 Kcfs.

Hungry Horse is currently at an elevation of 3555.8 feet (8-14-13) and has drafted 0.7 feet over the last week. Outflows at Hungry Horse have been 2.5 Kcfs last week. The end of September draft limit is 3550 feet at Hungry Horse.

Dworshak is currently at an elevation of 1551.6 feet (8-14-13) and has drafted 6.9 feet last week. Outflows from Dworshak were reduced from 10.0 Kcfs to 8.0 Kcfs on August 13, 2013. The August 31st draft target at Dworshak is 1535 feet.

The flow objective at Lower Granite over the summer period (June 21st to August 31st) is 50 Kcfs; over the summer period flows at Lower Granite have averaged 32.8 Kcfs and 22.7 Kcfs over the last week.

The flow objective at McNary over the summer period (July 1st to August 31st) is 200 Kcfs; over the summer period flows at McNary have averaged 198.4 Kcfs and over the last week have averaged 159.1 Kcfs.

Spill: Summer Spill began on June 20th at the lower Snake River projects and will extend through August 31st.

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

Flow in the Snake River has ranged from 21 to 23 Kcfs over the past week. This means that at times spill levels are likely going to be below the Court-ordered amounts due to low flows and required powerhouse minimum flows at the Snake River projects.

At Lower Granite Dam spill was greater than the Court-ordered spill levels for most of the week due to repairs being made to the powerhouse roof. Currently, all flow in excess of the 5 Kcfs needed to provide station service is being spilled. At Little Goose Dam the low flows initiated a change in spill from the 30% of instantaneous flow to a constant spill level in the 7–11 Kcfs range. This change was initiated on the afternoon of July 18th. The project spilled an instantaneous amount of approximately 7.5 Kcfs over the past week. At Lower Monumental and Ice Harbor dams the Court-ordered summer spill levels were not met due to low flows and powerhouse minimum requirements precluding spill at the amounts described in the table.

Summer spill for fish passage at the Lower Columbia projects began on July 1st, except at McNary Dam where summer spill began on June 20th and Bonneville Dam where summer spill began on June 16th. Spill will continue through August 31st.

Project	Summer Spill Level Day/Night
McNary	50%/50%
John Day	July 20–August 31: 30%/30%
The Dalles	40%/40%
Bonneville	July 21–August 31: 75 Kcfs/Gas Cap

All the middle Columbia River dams met the Court-ordered summer spill levels described in the table.

There were TDG exceedences observed in the system over the past week at Lower Granite Dam related to the roof repairs. Based on historic data collected since 1995 from the gas bubble trauma (GBT) monitoring program, we would not expect to see fish exhibit signs of GBT at the present TDG levels. Consistent with historic data, no fish were detected with minor signs of GBT.

Smolt Monitoring: Smolt monitoring is ongoing at six of the seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, and LGR). Lower Monumental Dam went to primary bypass as of August 15, due to concerns about fish holding at high temperatures. There are currently no SMP traps under operation.

Subyearling Chinook continued to be the dominant species of salmonid at all SMP dams over the past week. Passage of subyearlings decreased this week at all SMP sites. Although subyearling Chinook dominated the collections, most of the SMP sites continue to collect a few spring migrants.

High temperature sampling protocols were in effect this week at BON. Under these high temperature sampling protocols, daily index sampling occurred every other day. All fish were bypassed on non-sample days. Passage of subyearling Chinook decreased this week, when compared to last week. This week’s daily average passage index for subyearling Chinook was about 3,500 per day. Last week’s daily average passage index for subyearling Chinook was just over 8,300 per day. Coho, sockeye, and steelhead were all collected this week, although in very low numbers. No yearling Chinook juveniles were collected at BON this week. Pacific lamprey ammocoetes and macrophthalmia were both collected this week. The high temperature sampling protocols will remain in effect until temperatures decrease to safer levels.

High temperature sampling protocols were in effect this week at JDA. Under these high temperature

sampling protocols, the SMP crew at JDA samples only twice a week, for condition only. It is important to note that sampling under the higher temperature protocols at JDA results in biased collection estimates, as sampling is not for the full 24-hours. Therefore, it is not appropriate to compare passage index estimates during this period to those from previous weeks. Subyearling Chinook dominated the bypass samples at JDA this week. The only other species of salmonid that was collected in this week's samples was sockeye. Finally, no lamprey juveniles were collected in this week's samples. The high temperature sampling protocols will continue until temperatures decrease to safer levels.

Sampling at MCN for the 2013 season is every-other-day. Subyearling Chinook continued to dominate the bypass sample at MCN this week. This week's daily average passage index for subyearling Chinook at MCN was just over 10,000 per day. This represents a decrease over last week's daily average passage index, which was about 24,000 per day. The only spring migrants that were collected at MCN this week were sockeye. This week's daily average passage index for sockeye was 67 per day, which is a decrease from last week's daily average passage index of about 290 per day. Pacific lamprey macrophthalmia continue to be the only species and life-stage of lamprey collected at MCN this season. This week's daily average collection for Pacific lamprey macrophthalmia was about 40, which is about half last week's daily average collection of 100 per day.

Passage of subyearling Chinook at LGR continued to decrease this week, when compared to last week. This week's daily average passage index for subyearling Chinook was about 600 per day. Last week's daily average passage index was about 1,400 per day. A very small number of spring migrants were collected this week. Finally, two lamprey ammocoetes were collected at LGR this week. Due to the possible resampling of PIT-tagged research fish that were released into the gatewells, the estimated year-to-date collection and passage index totals for yearling Chinook, steelhead, subyearling Chinook, and Pacific lamprey macrophthalmia are likely inflated. The FPC is aware of this possible bias and is investigating ways

to correct these inflated estimates after the season has ended. However, the magnitude of this bias is relatively low and is unlikely to skew estimates of timing for this species.

Subyearling Chinook passage at LGS increased slightly this week, when compared to last week. This week's daily average passage index for subyearling Chinook at LGS was about 800 per day. Last week's daily average passage index was about 2,200 per day. Yearling Chinook and steelhead were the only spring migrants that were collected in this week's samples. However, collections of yearling Chinook and steelhead were extremely low this week. Finally, Pacific lamprey macrophthalmia were collected at LGS this week. The macrophthalmia were collected nearly every day this week. The daily average collection for Pacific macrophthalmia this week was seven per day.

Lower Monumental Dam went to primary bypass on August 14, so that no samples were available for samples after that date. While sampling was ongoing, subyearling Chinook passage at LMN decreased during this week, when compared to last week. This week's daily average passage index for subyearling Chinook at LMN was about 100 per day. Last week's daily average passage index was about 1,100 per day. There were no spring migrant salmonids collected this week. Finally, only Pacific lamprey macrophthalmia were collected at LMN this week. These Pacific lamprey macrophthalmia were collected on four of the five days of sampling.

SMP collections at RIS were suspended from the morning of July 29th to the afternoon of August 1st in order to make repairs to the adult ladder. Passage of subyearling Chinook decreased this week, when compared to the previous week. The daily average passage index for subyearling Chinook at RIS this week was about 108 per day. For the previous week, the daily average passage index for subyearling Chinook was about 125 per day. Passage of sockeye, and steelhead continued to be extremely low this week. Finally, Pacific lamprey macrophthalmia were collected on five days this week, although in low numbers.

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

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

Adult Fish Passage

Fall Chinook began to pass Bonneville Dam on August 1st. The adult fall Chinook count of 16,714 is about 1.9 times greater than the 2012 count of 8,641 and about 2.3 times greater than the 10-year average count of 7,165. The 2013 Bonneville Dam fall Chinook jack count of 2,735 is about 1.3 times greater than the 2012 count of 2,146 and about 2 times greater than the 10-year average count of 1,353. The 2013 adult summer Chinook count of 8,294 at Lower Granite Dam in the Snake River is about 63.5% of the 2012 count and 52% of the 10-year average count. The 2013 Lower Granite summer Chinook jack count of 7,536 is about 4.4 times greater than the 2012 count and 1.3 times greater than the 10-year average count.

The 2013 Bonneville Dam adult steelhead count of 139,581 has 2,939 more fish than the 2012 count of 136,642 and is about 74.7% of the 10-year average

count of 186,912. The 2013 Bonneville Dam adult wild steelhead count of 68,675 is about 1.2 times greater than the 2012 count of 55,903, while having 1,748 fewer fish than the 10-year average count of 70,423. In the Snake River, this year's Lower Granite steelhead count of 10,274 is about 94.8% of the 2012 count of 10,831 and 63.3% of the 10-year average count of 16,237. The 2013 Lower Granite Dam adult wild steelhead count of 4,825 has 23 fewer fish than the 2012 count of 4,848 and is about 84.7% of the 10-year average count of 5,699. At Willamette Falls, the 2013 count for steelhead was 17,146 as of August 1st. This year's steelhead count is about 55.2% of the 2012 count of 31,033 and about 67.8% of the 10-year average count of 25,269.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 8 and 29 last week. The 2013 adult sockeye count at Bonneville Dam of 185,452 is about 36% of the 2012 count of 515,651, while being 1.04 times greater than the 10-year average count of 177,581. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2013 McNary Dam adult sockeye count of 134,129 is about 45% of the 2012 count of 364,113, while being 1.07 times greater than the 10-year average count of 125,768. The Lower Granite Dam 2013 adult sockeye count of 732 is about 1.6 times greater than the 2012 count of 452 and about 1.2 times greater than the 10-year average count of 613.

Ninety-five adult coho and twelve jack coho have crossed Bonneville Dam so far this year. As of August 14th at Bonneville Dam, the adult shad count was 3,750,807. This year's shad count is about 1.5 times greater than the 2012 count of 2,431,817 and 1.3 times greater than the 10-year average count of 2,863,060.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/02/2013	128.8	0.2	128.9	0.0	129.3	10.0	131.4	11.1	135.8	24.6	136.0	27.5	127.0	26.1
08/03/2013	127.2	0.2	129.3	0.0	131.6	10.0	130.1	9.2	134.6	21.2	144.4	22.7	139.7	28.2
08/04/2013	127.8	0.2	125.2	0.0	130.2	10.3	130.1	9.9	134.7	21.3	145.4	20.8	143.7	28.5
08/05/2013	121.7	0.2	119.8	0.0	129.9	9.0	131.7	10.8	135.1	24.2	139.8	30.3	141.2	26.2
08/06/2013	120.8	0.2	124.8	0.0	126.2	9.5	125.2	11.0	126.1	24.1	131.5	29.2	127.1	27.2
08/07/2013	124.6	0.2	123.3	0.0	125.5	9.4	124.3	11.6	125.0	25.6	133.4	27.5	129.9	27.4
08/08/2013	126.4	0.2	124.9	0.0	132.5	9.5	131.8	11.2	132.7	25.9	139.5	34.6	138.4	27.5
08/09/2013	111.3	0.2	118.6	0.0	117.2	8.9	118.9	11.1	123.0	24.3	136.0	26.3	131.7	26.5
08/10/2013	103.2	0.2	101.3	0.0	103.7	7.7	101.6	9.3	102.3	20.9	110.8	19.8	108.9	27.6
08/11/2013	100.5	0.2	103.1	0.0	103.9	8.5	103.0	8.9	107.0	20.3	107.1	20.0	102.9	28.2
08/12/2013	105.1	0.2	104.6	0.0	114.5	8.2	118.3	11.7	122.3	25.6	132.5	27.1	132.9	26.6
08/13/2013	120.8	0.1	122.7	0.0	120.4	9.2	119.2	11.2	118.9	25.5	124.7	19.4	124.6	26.4
08/14/2013	118.8	0.1	121.5	0.0	118.8	9.5	119.6	11.4	121.9	25.6	130.0	25.0	124.0	27.5
08/15/2013	124.3	0.1	127.0	0.0	132.0	9.8	135.7	11.2	134.7	25.5	138.5	46.3	138.0	27.0

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/02/2013	9.9	0.0	---	---	24.2	6.9	27.9	8.5	27.4	14.3	27.1	16.6
08/03/2013	9.9	0.0	---	---	26.0	8.7	28.1	7.4	31.7	16.0	31.1	21.0
08/04/2013	9.9	0.0	---	---	24.5	7.1	25.8	7.5	25.8	13.3	25.7	15.2
08/05/2013	9.9	0.0	---	---	24.2	10.2	27.8	7.5	26.7	14.2	27.1	16.6
08/06/2013	9.9	0.0	---	---	24.0	12.9	26.4	7.4	27.5	15.1	29.8	19.3
08/07/2013	10.0	0.0	---	---	24.4	12.9	25.1	7.4	24.5	12.0	24.4	14.0
08/08/2013	10.0	0.0	---	---	24.2	12.8	25.2	7.4	25.9	13.4	25.7	15.2
08/09/2013	10.0	0.0	---	---	24.1	12.6	25.3	7.5	25.4	13.0	27.2	17.1
08/10/2013	10.0	0.0	---	---	23.8	15.9	25.0	7.5	25.3	12.8	24.3	14.0
08/11/2013	10.1	0.0	---	---	21.6	12.4	22.5	7.5	22.4	9.9	23.3	13.3
08/12/2013	10.1	0.0	---	---	22.0	14.7	24.2	7.5	24.1	11.7	24.0	14.1
08/13/2013	8.0	0.0	---	---	21.7	16.0	24.9	7.5	26.7	14.2	28.1	17.6
08/14/2013	8.1	0.0	---	---	21.4	16.1	22.6	7.4	22.6	10.0	21.7	11.1
08/15/2013	8.1	0.0	---	---	21.3	16.0	23.1	7.5	22.5	10.1	22.2	11.7

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/02/2013	162.1	81.2	159.6	47.8	147.4	58.8	167.6	89.6	0.0	65.6
08/03/2013	175.5	88.1	167.8	50.3	152.9	61.3	172.4	89.4	3.8	66.8
08/04/2013	172.0	86.4	170.9	51.1	157.5	62.6	161.7	89.3	0.6	59.4
08/05/2013	173.5	87.1	152.2	45.5	142.7	56.9	160.7	89.3	0.0	59.1
08/06/2013	180.5	90.6	180.7	54.0	165.1	65.9	170.9	89.2	0.0	69.3
08/07/2013	166.1	83.4	153.0	46.1	143.7	57.2	171.9	88.7	6.8	64.0
08/08/2013	158.2	79.3	157.2	46.8	142.7	56.8	153.6	88.5	0.0	52.7
08/09/2013	175.9	88.1	160.0	47.8	142.7	56.9	147.8	88.9	0.0	46.5
08/10/2013	154.0	77.0	147.2	44.1	136.0	54.4	152.8	89.2	0.0	51.2
08/11/2013	129.6	64.8	113.3	34.0	101.2	40.8	134.7	88.5	0.0	33.7
08/12/2013	159.8	80.1	152.5	45.8	139.9	55.8	141.1	88.8	0.0	40.0
08/13/2013	174.5	87.4	167.0	50.0	156.4	62.4	165.8	88.9	#VALUE!	---
08/14/2013	161.7	81.1	165.3	49.7	153.8	61.5	172.4	89.1	2.1	68.8
08/15/2013	156.2	78.3	141.3	42.3	130.7	52.4	149.6	89.9	0.0	47.3

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											
	08/05/13	Chinook + Steelhead	51	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
McNary Dam											
	08/04/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/08/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/12/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/14/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	08/04/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/06/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/10/13	Chinook + Steelhead	41	0	0	0.00%	0.00%	0	0	0	0
	08/14/13	Chinook + Steelhead	71	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	08/06/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/08/13	Chinook + Steelhead	58	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
8/2	105.8	106.2	106.3	24	---	---	---	0	113.0	113.3	113.7	24	110.3	110.5	110.6	24	110.6	110.8	111.1	24
8/3	104.3	104.7	105.0	24	---	---	---	0	112.3	112.5	112.8	24	109.5	109.6	109.9	24	110.3	110.8	111.2	24
8/4	105.1	105.5	106.0	24	---	---	---	0	112.8	112.9	113.1	24	109.8	110.2	110.5	24	110.5	110.8	111.1	24
8/5	105.4	106.0	106.5	24	---	---	---	0	112.8	113.1	113.3	24	109.5	110.0	110.3	24	110.4	110.9	111.2	24
8/6	---	---	---	0	---	---	---	0	112.3	112.4	112.8	24	109.4	109.8	110.0	24	110.6	111.1	111.3	24
8/7	106.5	106.9	107.5	21	---	---	---	0	112.0	112.3	112.6	24	109.3	109.6	109.9	24	110.5	110.9	111.1	24
8/8	106.0	106.4	106.7	24	---	---	---	0	111.2	111.5	111.9	24	108.9	109.5	109.7	24	110.2	110.5	110.8	24
8/9	105.9	106.4	106.9	24	---	---	---	0	110.3	110.6	111.0	24	109.0	109.3	109.6	24	110.1	110.6	110.9	24
8/10	105.8	106.2	106.8	24	---	---	---	0	109.3	109.8	110.4	24	108.7	109.0	109.3	24	109.7	110.1	110.4	24
8/11	106.0	106.3	106.8	24	---	---	---	0	109.0	109.2	109.5	24	108.6	109.2	109.4	24	109.0	109.3	109.6	24
8/12	106.0	106.3	106.7	24	---	---	---	0	108.3	108.5	109.0	24	108.4	108.9	109.2	24	109.1	109.4	109.7	24
8/13	106.3	106.8	107.0	24	---	---	---	0	108.3	108.7	114.0	24	108.1	108.7	110.1	24	109.0	109.3	109.6	24
8/14	106.5	106.8	107.3	24	---	---	---	0	107.7	107.9	108.3	24	107.7	108.2	108.6	24	108.9	109.2	109.5	24
8/15	106.7	107.1	107.6	23	---	---	---	0	107.3	107.5	108.0	23	107.3	107.6	107.8	23	108.5	108.7	108.9	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
8/2	110.0	110.3	110.7	24	110.0	110.5	110.9	22	112.0	112.4	113.0	22	111.0	111.3	111.6	24	113.2	114.0	114.9	24
8/3	109.9	110.2	110.6	24	109.7	110.0	110.6	20	111.6	112.0	112.6	20	110.3	110.6	110.8	24	112.3	113.0	113.6	24
8/4	110.0	110.5	111.9	24	110.4	110.9	111.9	21	112.2	112.8	113.8	21	110.7	111.1	111.2	24	112.7	113.3	114.1	24
8/5	110.3	110.8	112.0	24	110.5	111.2	111.5	22	112.0	113.1	113.9	22	111.3	111.8	112.1	24	113.5	114.6	115.7	24
8/6	110.6	111.3	112.0	24	110.6	111.2	111.8	22	112.3	112.9	113.7	22	111.6	111.8	111.9	24	113.4	114.4	115.0	24
8/7	110.5	111.0	111.8	24	110.5	111.1	112.0	21	112.1	112.9	114.1	21	111.3	111.6	111.7	24	113.3	114.8	116.1	24
8/8	110.0	110.3	110.8	24	110.6	111.1	111.6	21	112.5	113.1	113.7	21	111.1	111.4	111.7	24	113.6	114.5	115.3	24
8/9	110.3	110.7	111.6	24	110.3	110.7	111.1	21	112.0	112.6	113.3	21	111.5	111.9	112.1	24	113.7	115.0	115.9	24
8/10	109.9	110.3	111.6	24	110.1	110.7	111.4	24	111.5	112.3	113.0	24	111.0	111.3	111.8	24	112.8	113.6	114.3	24
8/11	109.0	109.2	109.7	24	109.2	109.2	110.4	11	111.0	111.0	111.6	10	110.5	110.8	111.4	24	112.3	113.0	113.5	24
8/12	109.2	109.6	110.3	24	108.4	108.4	109.7	11	111.0	111.0	111.9	11	109.8	110.2	110.4	24	112.8	114.0	115.2	24
8/13	108.9	109.3	109.7	24	109.0	109.0	110.0	8	110.9	110.9	111.1	4	109.9	110.1	110.3	24	113.0	114.0	115.1	24
8/14	108.8	109.3	110.0	24	109.2	109.1	110.3	8	---	---	---	0	109.9	110.2	110.5	24	113.2	114.2	115.2	24
8/15	108.4	108.7	109.7	23	108.5	108.7	109.0	15	110.5	110.5	111.0	12	110.1	110.2	110.4	21	113.2	114.1	115.3	21

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
8/2	110.3	110.6	110.9	24	115.3	116.1	116.6	24	---	---	---	0	---	---	---	0	---	---	---	0
8/3	109.9	110.2	110.7	24	114.0	115.0	115.6	24	---	---	---	0	---	---	---	0	---	---	---	0
8/4	110.2	110.8	111.3	24	114.4	115.4	115.8	24	---	---	---	0	---	---	---	0	---	---	---	0
8/5	110.7	111.5	112.1	24	115.3	116.7	117.8	24	---	---	---	0	---	---	---	0	---	---	---	0
8/6	111.1	111.8	112.6	24	115.6	116.7	118.0	24	---	---	---	0	---	---	---	0	---	---	---	0
8/7	109.7	111.5	112.1	24	116.0	116.8	117.6	24	112.4	113.2	114.5	24	113.1	113.1	113.4	11	111.8	112.5	113.0	24
8/8	110.6	111.2	111.5	24	115.8	116.8	118.0	24	111.8	112.9	114.2	24	---	---	---	0	111.6	112.3	113.4	24
8/9	110.8	111.4	112.0	24	115.9	117.0	118.9	24	113.2	114.7	115.8	24	---	---	---	0	112.6	113.8	114.9	24
8/10	110.8	111.2	111.9	24	115.4	116.2	118.8	24	111.9	113.0	114.0	24	---	---	---	0	111.2	112.3	113.6	24
8/11	109.8	110.2	110.6	24	114.5	115.0	116.4	24	110.5	112.2	113.0	24	---	---	---	0	111.1	112.0	112.8	24
8/12	109.5	110.2	110.6	24	114.7	115.8	116.5	24	111.4	112.4	113.2	24	---	---	---	0	111.6	112.3	112.7	24
8/13	109.4	110.4	110.8	24	115.0	116.1	117.6	24	---	---	---	0	---	---	---	0	---	---	---	0
8/14	109.5	110.3	110.5	24	114.9	115.8	117.7	24	---	---	---	0	---	---	---	0	---	---	---	0
8/15	109.6	109.9	110.1	21	114.5	115.0	115.5	21	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwrtr-Peck</u>			<u>Anatone</u>						
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>				
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High				
8/2	---	---	---	0	---	---	0	99.8	100.0	100.2	24	101.4	102.1	102.9	24	101.4	102.6	103.8	24
8/3	---	---	---	0	---	---	0	99.6	99.8	100.0	24	101.7	102.7	103.3	24	101.6	102.9	104.3	24
8/4	---	---	---	0	---	---	0	100.0	100.4	100.7	24	102.0	103.2	104.1	24	101.6	102.8	104.0	24
8/5	---	---	---	0	---	---	0	100.3	100.6	101.0	24	102.0	102.9	104.2	22	102.0	103.3	104.7	24
8/6	---	---	---	0	---	---	0	100.2	100.5	100.8	24	102.2	103.4	104.4	24	102.0	103.5	104.8	24
8/7	114.4	114.8	115.3	24	---	---	0	100.4	100.7	101.0	24	102.3	103.5	104.4	24	102.1	103.5	104.8	24
8/8	114.0	114.5	114.7	24	---	---	0	100.4	100.7	101.0	24	102.3	103.4	104.3	24	101.0	101.8	102.7	24
8/9	115.0	115.8	116.7	24	---	---	0	100.6	101.0	101.4	24	102.3	103.2	104.4	22	101.4	102.4	103.8	24
8/10	113.6	114.3	114.9	24	---	---	0	100.7	101.0	101.3	24	102.3	103.4	104.2	24	101.6	102.8	103.9	24
8/11	113.4	114.2	114.6	24	---	---	0	100.4	100.7	101.1	24	102.0	102.9	104.0	24	101.2	102.2	103.6	24
8/12	113.9	114.3	114.6	24	---	---	0	100.4	100.7	101.1	24	102.1	103.2	104.3	24	101.5	102.8	104.3	24
8/13	---	---	---	0	---	---	0	100.9	101.3	101.7	24	102.6	103.8	104.9	24	101.8	103.1	104.4	23
8/14	---	---	---	0	---	---	0	101.2	101.7	102.0	24	102.9	104.2	105.3	24	102.1	103.4	104.8	24
8/15	---	---	---	0	---	---	0	101.2	101.5	101.8	23	102.9	104.0	105.2	22	101.9	103.3	104.7	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwrtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
8/2	102.3	103.6	104.7	24	101.4	101.5	101.7	24	111.7	112.0	112.2	24	109.4	110.0	110.8	24	108.6	108.9	109.4	24
8/3	102.5	104.3	105.8	24	101.3	101.5	101.7	24	113.5	115.0	115.7	24	108.2	108.5	109.3	24	108.6	109.1	109.7	24
8/4	103.2	105.5	107.1	24	101.5	101.6	101.8	24	112.2	112.7	114.7	24	107.6	108.0	108.5	24	108.8	109.4	109.7	24
8/5	103.3	105.5	107.2	24	101.1	101.3	101.4	24	113.8	115.9	119.8	24	109.2	109.5	109.7	24	109.1	109.6	110.2	24
8/6	103.4	105.6	107.3	24	100.5	100.7	100.9	24	115.7	119.2	120.3	24	108.7	108.8	109.2	24	108.6	109.1	109.4	24
8/7	103.4	105.5	107.2	24	100.4	100.6	100.7	24	115.2	118.2	118.9	24	108.4	108.6	108.7	24	108.7	109.3	109.7	24
8/8	103.2	105.3	106.8	24	100.9	101.2	101.5	24	115.3	118.3	119.1	24	108.6	108.8	109.0	24	108.9	109.3	109.8	24
8/9	103.1	105.0	106.9	24	101.2	101.4	101.6	24	115.6	118.4	119.2	24	109.3	109.8	110.0	24	109.1	109.5	110.0	24
8/10	103.2	105.3	106.8	24	101.1	101.3	101.5	24	117.6	119.3	119.9	24	109.1	109.6	110.0	24	109.0	109.5	110.0	24
8/11	102.7	104.4	106.3	24	101.0	101.2	101.3	24	116.9	120.9	122.1	24	110.4	110.8	111.3	24	109.0	109.3	109.7	24
8/12	102.8	104.7	106.6	24	100.9	101.1	101.4	24	118.8	121.2	122.1	24	110.3	110.7	111.6	24	109.3	109.8	110.2	24
8/13	103.1	105.3	107.0	24	100.9	101.0	101.1	24	120.2	120.5	121.2	24	109.8	110.0	110.3	24	109.1	109.4	109.8	24
8/14	103.6	105.7	107.4	24	101.1	101.4	101.7	24	119.8	120.1	120.7	24	111.3	111.8	112.1	24	109.2	109.7	110.1	24
8/15	102.3	102.3	104.8	8	100.8	101.0	101.1	23	119.9	120.3	121.1	23	112.0	112.1	112.3	23	109.3	109.7	110.2	23

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
8/2	109.2	109.6	109.9	24	112.6	113.6	113.9	24	109.3	109.5	109.8	24	110.1	110.6	110.9	24	---	---	---	0
8/3	107.3	107.8	108.2	24	113.8	115.8	116.5	24	108.3	108.7	109.2	24	112.2	113.5	114.5	24	---	---	---	0
8/4	108.3	108.4	108.6	24	113.9	114.3	115.9	24	108.4	108.5	108.6	24	110.2	110.9	111.6	24	---	---	---	0
8/5	108.2	108.3	108.4	24	114.3	115.2	116.3	24	108.2	108.4	108.5	24	110.7	111.7	112.6	24	---	---	---	0
8/6	108.0	108.1	108.3	24	115.0	116.1	116.4	24	108.5	108.9	109.2	24	111.6	112.5	113.2	24	---	---	---	0
8/7	107.7	107.9	108.0	24	113.0	113.3	113.7	24	109.2	109.4	109.7	24	109.7	110.5	111.0	24	---	---	---	0
8/8	107.1	107.3	107.6	24	113.9	114.7	115.8	24	110.0	110.4	110.6	24	110.4	111.4	112.1	24	---	---	---	0
8/9	107.3	107.5	107.7	24	113.0	113.4	113.7	24	110.6	110.9	111.1	24	112.2	113.1	113.8	24	---	---	---	0
8/10	106.5	106.8	107.2	24	112.7	113.1	113.4	24	110.9	111.1	111.4	24	110.0	110.8	111.6	24	---	---	---	0
8/11	105.3	105.6	105.9	24	111.9	112.3	112.6	24	111.1	111.2	111.4	24	110.3	111.2	112.2	24	---	---	---	0
8/12	105.7	106.1	106.5	24	112.6	113.3	114.3	24	110.3	110.4	110.6	24	110.2	111.0	111.6	24	---	---	---	0
8/13	105.9	106.3	107.2	24	113.4	114.2	114.6	24	110.5	110.6	110.7	24	112.1	113.7	114.4	24	---	---	---	0
8/14	106.4	106.6	106.8	24	112.6	112.9	113.3	24	110.2	110.4	110.6	24	110.9	111.9	112.4	24	---	---	---	0
8/15	106.1	106.4	106.8	23	112.8	113.1	113.5	23	109.7	109.9	110.1	23	110.3	111.0	111.6	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	AVG	High
8/2	106.3	106.6	106.7	24	115.4	116.2	116.5	24	104.1	104.4	104.8	24	112.6	113.2	113.5	24	104.9	105.2	105.3	24
8/3	106.1	106.4	107.0	24	116.1	116.3	116.5	24	104.0	104.6	105.4	24	112.8	113.6	113.9	24	105.9	106.5	107.5	24
8/4	106.9	108.1	108.8	24	116.1	116.3	116.6	24	105.3	105.6	106.4	24	113.2	114.0	114.4	24	108.5	108.7	108.9	24
8/5	107.7	108.2	108.8	24	116.2	116.5	116.8	24	105.8	106.0	106.3	24	112.8	113.5	113.7	24	108.6	108.9	109.2	24
8/6	109.8	110.2	110.3	24	116.5	117.0	117.3	24	105.7	106.2	106.5	24	112.8	113.3	113.7	24	108.2	108.5	108.8	24
8/7	110.3	110.7	111.0	24	116.1	116.7	117.4	24	105.9	106.3	106.8	24	112.8	113.5	114.5	24	107.8	108.3	108.5	24
8/8	110.4	110.6	111.0	24	115.5	115.8	116.1	24	106.5	107.4	107.9	24	112.7	113.2	113.6	24	106.8	106.8	106.9	24
8/9	110.3	110.6	111.3	24	116.1	116.5	116.8	24	107.7	108.4	108.8	24	112.9	113.3	113.8	24	108.3	108.7	109.1	24
8/10	108.8	109.1	109.4	24	115.0	115.3	115.9	24	108.0	108.2	108.4	24	113.0	113.4	113.9	24	108.6	109.1	109.3	24
8/11	108.0	108.2	108.4	24	113.7	114.4	115.0	24	107.2	107.5	108.0	24	112.5	112.8	113.1	24	107.7	108.0	108.2	24
8/12	107.6	107.8	108.2	24	115.0	116.3	116.7	24	107.0	107.4	107.7	24	113.4	114.6	115.6	24	107.4	108.0	108.5	24
8/13	107.5	107.8	108.0	24	115.4	116.4	116.6	24	106.9	107.3	107.6	24	113.8	114.2	114.8	24	108.3	108.5	108.8	24
8/14	108.1	108.4	108.8	24	115.3	116.3	116.6	24	107.0	107.4	107.8	24	113.7	114.1	114.6	24	109.1	109.4	109.5	24
8/15	108.4	108.9	109.9	23	115.6	116.3	116.8	23	106.0	106.2	106.5	23	113.2	113.7	114.5	23	108.2	108.5	108.6	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	Avg	High
8/2	112.1	112.6	112.9	24	105.0	105.1	105.2	24	114.6	115.7	117.1	24	109.6	111.3	112.6	24	116.6	118.1	120.1	24
8/3	112.9	114.0	114.5	24	105.7	106.4	106.9	24	115.1	116.7	118.1	24	111.5	113.5	115.4	24	116.9	118.5	120.2	24
8/4	114.4	115.4	116.0	24	108.5	109.8	110.3	24	116.3	117.2	118.3	24	112.2	114.7	117.0	24	116.8	118.5	120.4	24
8/5	114.4	115.0	115.6	24	110.9	111.5	111.9	24	116.8	117.5	118.5	24	113.6	115.6	117.0	24	116.9	118.7	120.6	24
8/6	114.5	114.9	115.3	24	109.9	110.2	110.4	24	116.0	117.0	118.0	24	113.7	115.1	116.4	24	116.9	118.3	120.4	24
8/7	113.8	114.4	115.1	24	108.8	109.1	109.4	24	115.5	116.8	117.5	24	112.3	113.8	115.0	24	116.6	117.8	119.1	24
8/8	113.0	113.8	114.1	24	106.7	107.0	107.4	24	114.8	115.5	116.5	24	111.1	112.8	114.4	24	116.2	117.5	118.9	24
8/9	114.2	115.4	116.8	24	106.4	106.7	107.2	20	115.9	116.9	117.9	20	111.8	113.1	114.4	20	116.2	117.4	118.9	20
8/10	114.2	114.7	115.2	24	106.9	107.5	109.7	24	116.0	116.8	118.0	24	112.4	113.9	115.0	24	116.1	117.5	118.8	24
8/11	112.6	112.9	113.3	24	107.1	107.4	107.8	24	116.2	116.9	118.0	24	112.3	113.6	114.6	24	115.8	117.3	119.4	24
8/12	113.3	114.5	115.2	24	107.1	107.3	107.5	24	116.0	117.0	118.1	24	113.1	114.4	115.2	24	115.8	117.4	119.2	24
8/13	114.2	115.2	115.9	24	107.2	107.7	108.2	24	115.6	116.5	117.4	24	113.2	114.8	115.9	24	116.2	117.4	118.6	24
8/14	114.7	115.2	115.6	24	108.8	109.6	110.0	24	115.9	116.9	117.6	24	112.4	114.3	115.2	24	116.8	118.0	120.0	24
8/15	113.6	114.2	114.6	23	109.6	109.8	110.0	23	116.7	117.3	118.2	23	112.7	114.2	115.3	23	116.5	118.0	120.4	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/16/2013 7:25

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/currentsmptsubmitdata.asp>

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR ^{††} (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/02/2013	*	---	---	---	0	0	13	0	---	0	---
08/03/2013	*	---	---	---	11	0	8	0	0	---	0
08/04/2013	*	---	---	---	0	0	22	1	---	---	---
08/05/2013	*	---	---	---	0	0	0	0	0	---	10
08/06/2013	*	---	---	---	0	0	0	0	---	0	---
08/07/2013	*	---	---	---	0	0	0	0	0	---	0
08/08/2013	*	---	---	---	0	6	0	0	---	---	---
08/09/2013	*	---	---	---	0	0	0	0	0	0	0
08/10/2013	*	---	---	---	0	0	0	0	---	---	---
08/11/2013	*	---	---	---	0	0	0	0	0	---	0
08/12/2013	*	---	---	---	0	0	0	0	---	---	---
08/13/2013	*	---	---	---	0	0	0	0	0	0	0
08/14/2013	*	---	---	---	0	0	0	0	---	---	---
08/15/2013	*	---	---	---	0	0	---	0	0	---	0
08/16/2013		---	---	---	---	---	---	---	---	---	---
<hr/>											
Total:	0	0	0	0	11	6	43	1	0	0	10
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	1	0	3	0	0	0	1
YTD	50,632	55,650	26,301	2,797	2,607,081	1,498,294	614,254	28,315	2,123,325	2,056,882	1,881,678

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR ^{††} (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/02/2013	*	---	---	---	1,559	2,266	455	115	---	1,919	---
08/03/2013	*	---	---	---	2,221	2,476	4,576	133	22,725	---	10,053
08/04/2013	*	---	---	---	2,255	3,621	1,779	124	---	---	---
08/05/2013	*	---	---	---	1,366	2,855	492	87	19,016	---	7,842
08/06/2013	*	---	---	---	1,509	2,053	108	170	---	1,659	---
08/07/2013	*	---	---	---	544	1,150	163	142	31,075	---	7,131
08/08/2013	*	---	---	---	326	947	107	107	---	---	---
08/09/2013	*	---	---	---	241	986	114	105	5,744	1,079	5,017
08/10/2013	*	---	---	---	375	1,129	63	95	---	---	---
08/11/2013	*	---	---	---	1,089	969	44	125	14,622	---	2,678
08/12/2013	*	---	---	---	1,441	579	7	172	---	---	---
08/13/2013	*	---	---	---	873	402	116	122	0	1,014	3,279
08/14/2013	*	---	---	---	286	644	127	93	---	---	---
08/15/2013	*	---	---	---	194	627	---	44	11,859	---	3,125
08/16/2013		---	---	---	---	---	---	---	---	---	---
<hr/>											
Total:	0	0	0	0	14,279	20,704	8,151	1,634	105,041	5,671	39,125
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	1,020	1,479	627	117	15,006	1,418	5,589
YTD	2	61	195	2,668	698,834	615,254	267,733	18,314	3,656,870	2,425,330	4,848,638

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/02/2013 *	---	---	---	---	0	0	4	0	---	0	---
08/03/2013 *	---	---	---	---	0	0	0	1	0	---	0
08/04/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/05/2013 *	---	---	---	---	6	0	0	0	0	---	0
08/06/2013 *	---	---	---	---	0	0	0	0	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	0	---	10
08/08/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/09/2013 *	---	---	---	---	0	0	0	2	0	0	0
08/10/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/11/2013 *	---	---	---	---	0	0	0	0	0	---	12
08/12/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/13/2013 *	---	---	---	---	0	0	0	0	0	0	0
08/14/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/15/2013 *	---	---	---	---	0	0	---	0	0	---	0
08/16/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	6	0	4	3	0	0	22
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	0	0	0	0	0	0	3
YTD	0	0	0	107	61,816	54,077	10,584	49,973	85,380	188,509	770,840

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR ^{††} (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/02/2013 *	---	---	---	---	6	0	0	2	---	0	---
08/03/2013 *	---	---	---	---	0	0	4	0	0	---	0
08/04/2013 *	---	---	---	---	6	0	0	1	---	---	---
08/05/2013 *	---	---	---	---	6	0	0	1	0	---	0
08/06/2013 *	---	---	---	---	0	20	0	0	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	0	---	0
08/08/2013 *	---	---	---	---	0	6	0	0	---	---	---
08/09/2013 *	---	---	---	---	0	6	0	0	0	0	0
08/10/2013 *	---	---	---	---	0	3	0	0	---	---	---
08/11/2013 *	---	---	---	---	0	3	0	0	0	---	0
08/12/2013 *	---	---	---	---	0	0	0	2	---	---	---
08/13/2013 *	---	---	---	---	0	6	0	0	0	0	32
08/14/2013 *	---	---	---	---	0	3	0	2	---	---	---
08/15/2013 *	---	---	---	---	0	0	---	0	0	---	0
08/16/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	18	47	4	8	0	0	32
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	1	3	0	1	0	0	5
YTD	3,789	40,841	3,547	9,925	2,037,011	1,713,513	610,901	14,972	471,593	732,388	470,306

Two-Week Summary of Passage Indices

COMBINED SOCKEYE											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/02/2013 *	---	---	---	---	0	0	0	2	---	57	---
08/03/2013 *	---	---	---	---	6	0	0	4	330	---	187
08/04/2013 *	---	---	---	---	0	0	0	1	---	---	---
08/05/2013 *	---	---	---	---	0	0	0	0	165	---	10
08/06/2013 *	---	---	---	---	0	0	0	3	---	64	---
08/07/2013 *	---	---	---	---	0	0	0	5	371	---	0
08/08/2013 *	---	---	---	---	0	0	0	2	---	---	---
08/09/2013 *	---	---	---	---	0	0	0	10	41	14	71
08/10/2013 *	---	---	---	---	0	3	0	2	---	---	---
08/11/2013 *	---	---	---	---	0	0	0	6	104	---	0
08/12/2013 *	---	---	---	---	0	0	0	9	---	---	---
08/13/2013 *	---	---	---	---	0	0	0	0	0	10	0
08/14/2013 *	---	---	---	---	8	0	0	0	---	---	---
08/15/2013 *	---	---	---	---	0	0	---	2	41	---	10
08/16/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	14	3	0	46	1,052	145	278
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	1	0	0	3	150	36	40
YTD	1	0	0	326	54,679	33,001	11,379	25,085	633,608	414,271	396,085

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
08/02/2013 *	---	---	---	---	0	40	0	0	---	0	---
08/03/2013 *	---	---	---	---	0	4	0	6	120	---	25
08/04/2013 *	---	---	---	---	0	84	40	2	---	---	---
08/05/2013 *	---	---	---	---	0	10	0	1	80	---	4
08/06/2013 *	---	---	---	---	0	15	0	3	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	80	---	4
08/08/2013 *	---	---	---	---	0	4	0	0	---	---	---
08/09/2013 *	---	---	---	---	0	8	2	0	20	0	0
08/10/2013 *	---	---	---	---	0	4	0	1	---	---	---
08/11/2013 *	---	---	---	---	0	0	2	2	10	---	4
08/12/2013 *	---	---	---	---	0	8	2	3	---	---	---
08/13/2013 *	---	---	---	---	2	6	24	12	40	0	14
08/14/2013 *	---	---	---	---	0	0	2	7	---	---	---
08/15/2013 *	---	---	---	---	0	20	---	0	80	---	4
08/16/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	2	203	72	37	430	0	55
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	0	15	6	3	61	0	8
YTD	0	8	0	0	4,962	55,167	63,708	178	74,940	173,687	6,179

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, pacific lamprey macrophthalmia, and unidentified lamprey species.

†† Passage index for yearling Chinook, steelhead, and subyearling Chinook at LGR may be inflated in 2013 due to possible resampling of PIT-tagged research fish

† 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.

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.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

8/16/13 7:21 AM

08/02/13 TO 08/16/13

		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	7,818	8	4	12	6	7,848
	Sum of NumberBarged	8,681	8	4	16	5	8,714
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	31	0	0	0	1	32
	Sum of FacilityMorts	17	0	0	0	0	17
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	48	0	0	0	1	49
LGS	Sum of NumberCollected	14,450	4		33	2	14,489
	Sum of NumberBarged	14,978	4		33	0	15,015
	Sum of NumberBypassed	0	0		0	0	0
	Sum of Numbertrucked	0	0		0	0	0
	Sum of SampleMorts	22	0		0	1	23
	Sum of FacilityMorts	51	0		0	1	52
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	73	0		0	2	75
LMN	Sum of NumberCollected	3,886	20	2	2		3,910
	Sum of NumberBarged	3,886	19	2	2		3,909
	Sum of NumberBypassed	2	0	0	0		2
	Sum of Numbertrucked	0	0	0	0		0
	Sum of SampleMorts	17	1	0	0		18
	Sum of FacilityMorts	55	0	0	0		55
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	72	1	0	0		73
MCN	Sum of NumberCollected	54,822				550	55,372
	Sum of NumberBarged	0				0	0
	Sum of NumberBypassed	54,761				550	55,311
	Sum of Numbertrucked	0				0	0
	Sum of SampleMorts	36				0	36
	Sum of FacilityMorts	25				0	25
	Sum of ResearchMorts	0				0	0
	Sum of TotalProjectMorts	61				0	61
Total Sum of NumberCollected		80,976	32	6	47	558	81,619
Total Sum of NumberBarged		27,545	31	6	51	5	27,638
Total Sum of NumberBypassed		54,763	0	0	0	550	55,313
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		106	1	0	0	2	109
Total Sum of FacilityMorts		148	0	0	0	1	149
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		254	1	0	0	3	258

YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/16/13 7:21 AM

TO: 08/16/13

Site	Data	Species						Grand Total
		CH0	CH1	CO	SO	ST	LU	
LGR	Sum of NumberCollected	452,319	1,865,127	48,074	42,644	1,444,850		3,853,014
	Sum of NumberBarged	437,696	1,554,580	47,805	42,574	1,087,929		3,170,584
	Sum of NumberBypassed	13,693	308,258	210	52	356,574		678,787
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	506	173	2	3	40		724
	Sum of FacilityMorts	342	2,066	57	15	259		2,739
	Sum of ResearchMorts	38	52	0	0	47		137
	Sum of TotalProjectMorts	886	2,291	59	18	346		3,600
LGS	Sum of NumberCollected	426,561	1,026,511	36,885	22,613	1,174,678		2,687,248
	Sum of NumberBarged	425,416	979,239	36,685	22,607	1,108,345		2,572,292
	Sum of NumberBypassed	251	46,698	200	1	66,201		113,351
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	119	14	0	1	9		143
	Sum of FacilityMorts	360	560	0	4	123		1,047
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	479	574	0	5	132		1,190
LMN	Sum of NumberCollected	166,298	470,897	8,000	8,064	459,574	1	1,112,834
	Sum of NumberBarged	151,939	469,284	7,999	8,058	458,179	0	1,095,459
	Sum of NumberBypassed	13,372	1,079	0	2	1,142	129	15,724
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	107	16	0	0	18	0	141
	Sum of FacilityMorts	360	518	1	4	235	0	1,118
	Sum of ResearchMorts	0	0	0	0	0	0	0
	Sum of TotalProjectMorts	467	534	1	4	253	0	1,259
MCN	Sum of NumberCollected	1,761,664	1,098,880	43,803	314,527	255,352		3,474,226
	Sum of NumberBarged	0	0	0	0	0		0
	Sum of NumberBypassed	1,761,133	1,098,057	43,799	314,278	255,297		3,472,564
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	368	62	1	34	8		473
	Sum of FacilityMorts	163	761	3	215	47		1,189
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	531	823	4	249	55		1,662
Total Sum of NumberCollected		2,806,842	4,461,415	136,762	387,848	3,334,454	1	11,127,322
Total Sum of NumberBarged		1,015,051	3,003,103	92,489	73,239	2,654,453	0	6,838,335
Total Sum of NumberBypassed		1,788,449	1,454,092	44,209	314,333	679,214	129	4,280,426
Total Sum of NumberTrucked		0	0	0	0	0	0	0
Total Sum of SampleMorts		1,100	265	3	38	75	0	1,481
Total Sum of FacilityMorts		1,225	3,905	61	238	664	0	6,093
Total Sum of ResearchMorts		38	52	0	0	47	0	137
Total Sum of TotalProjectMorts		2,363	4,222	64	276	786	0	7,711

Cumulative Adult Passage at Mainstem Dams Through: 08/16

DAM	ENDDA	Spring Chinook						Summer Chinook						Fall Chinook					
		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/14	83345	33820	158089	7592	141713	20323	93097	26186	81663	12235	87543	17586	16714	2735	8641	2146	7165	1353
TDA	08/15	69202	32311	117087	7175	107368	16911	85639	20750	69222	10392	74538	13909	9789	1818	5914	1634	4354	976
JDA	08/15	56991	28957	107655	6755	92410	15875	74764	19636	60814	10415	67514	14608	5846	1068	3237	970	2274	746
MCN	08/15	52176	22279	102763	4787	83990	13854	75741	14808	64428	5104	63310	10848	3919	821	2497	446	1582	338
IHR	08/15	38017	18611	71957	2905	58986	8558	11912	6321	14182	1481	17476	4251	645	135	280	52	142	23
LMN	08/15	36470	19053	68608	2891	58025	7379	11765	7703	15150	1611	18803	4213	203	30	135	35	65	15
LGS	08/15	35072	19443	68247	3449	53406	8429	10120	7632	14748	1613	17532	4903	0	0	0	0	0	0
LGR	08/15	35031	19940	66366	3525	53382	9851	8294	7536	13065	1693	15957	5542	0	0	0	0	0	0
PRD	08/13	13725	1298	19495	1015	15225	1406	71083	3174	50667	1994	53926	2612	0	0	0	0	0	0
WAN	08/13	13715	1661	19804	973	15699	2278	69983	2189	50588	1515	47124	1979	0	0	0	0	0	0
RIS	08/09	13345	3100	19881	800	14248	2237	65977	3029	49260	2248	49239	4916	0	0	0	0	0	0
RRH	08/09	6841	2101	6641	459	5306	853	56465	3120	42197	1989	36607	3782	0	0	0	0	0	0
WEL	07/28	7133	2980	5311	700	4618	880	38786	3149	22896	1612	19885	1329	0	0	0	0	0	0
WFA	08/01	27554	1614	35731	1299	46011	1099	0	0	0	0	0	0	0	0	0	0	0	0

DAM	ENDDA	Coho						Sockeye			Steelhead						Lamprey		
		2013		2012		10-Yr Avg.		2013	2012	10-Yr Avg.	10-Yr		Wild	Wild	10-Yr	2013	2012	10-Yr	
		Adult	Jack	Adult	Jack	Adult	Jack				2013	2012	Avg.	2013	2012	Avg.	2013	2012	Avg.
BON	08/14	95	12	235	68	169	38	185452	515651	177581	139581	136642	186912	68675	55903	70423	21305	23856	30276
TDA	08/15	5	0	77	24	11	2	161849	410050	146257	59275	90139	79043	33313	39593	34021	7298	4446	6945
JDA	08/15	5	1	11	4	4	3	155341	394086	149030	34490	56637	61253	17885	26121	24953	4582	3156	5718
MCN	08/15	0	0	3	0	0	0	134129	364113	125768	29914	46877	45085	15082	19240	17155	1100	472	2150
IHR	08/15	0	0	0	0	0	0	894	453	425	18352	8943	24812	5774	3024	7127	192	287	280
LMN	08/15	0	0	0	0	0	0	1012	485	530	13156	9330	26414	5426	3861	8369	61	70	78
LGS	08/15	0	0	0	0	0	0	988	451	508	6817	6652	18590	3440	3571	6230	19	34	74
LGR	08/15	0	0	0	0	0	0	732	452	613	10274	10831	16237	4825	4848	5699	12	22	23
PRD	08/13	0	0	3	0	0	0	163028	408143	154723	3145	4798	5359	0	0	0	2589	633	1150
WAN	08/13	0	0	1	1	0	0	155673	450052	196374	2642	4607	5859	0	0	0	984	284	489
RIS	08/09	0	0	0	0	0	0	158839	409968	152189	1668	3101	3325	1100	1674	1919	162	32	273
RRH	08/09	0	0	0	0	0	0	131241	362677	129523	1074	2680	2474	683	1509	1351	90	13	89
WEL	07/28	0	0	0	0	0	0	122783	310867	118359	292	593	502	195	326	279	11	0	0
WFA	08/01	2	0	0	0	0	0	0	0	0	17146	31033	25269	0	0	0	0	0	0

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.