



Fish Passage Center

Weekly Report #13 - 26

September 13, 2013

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Starting September 13, the weekly reports will be published every other week; the next report will be September 27.

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied over September, ranging between 65% and 217% of average at individual sub-basins. Precipitation above The Dalles has been 141% of average over September. Over the 2013 water year, precipitation has ranged between 67% and 102% of average.

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

Location	Water Year 2013 September 1–11, 2013		Water Year 2013 October 1, 2012 to September 11, 2013	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.90	105	35.6	95
SNAKE RIVER above Ice Harbor	0.73	167	16.1	73
Columbia above The Dalles	0.79	141	22.8	83
Kootenai	0.95	105	39.7	102
Clark Fork	0.58	93	20.1	73
Flathead	0.88	112	33.9	94
Pend Oreille Basin	0.69	99	27.7	85
SNAKE BASIN above Hells Canyon	0.79	217	13.0	71
Salmon River Basin	0.68	118	19.2	67
Clearwater	0.49	65	33.2	82
Willamette River above Portland	1.38	163	57.4	90

Grand Coulee Reservoir is currently at an elevation of 1280.1 feet (9-12-13) and has refilled 1.1 feet last week. Outflows at Grand Coulee have ranged between 56.0 and 81.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2449.1 feet (9-12-13) and has refilled 0.3 feet last week. Outflows at Libby Dam have been 6.0 Kcfs over the last week. The COE plans to maintain outflows of 6.0 Kcfs through September while maintaining an elevation near 2449 feet by the end of September.

Hungry Horse is currently at an elevation of 3552.2 feet (9-12-13) and has drafted 0.6 feet over the last week. Outflows at Hungry Horse have been 1.9 Kcfs last week. The end of September draft target is 3550 feet at Hungry Horse.

Dworshak is currently at an elevation of 1523.2 feet (9-12-13) and has drafted 5.0 feet last week. Outflows from Dworshak have been reduced from 7.6 Kcfs to 4.8 Kcfs over the last week. The COE plans to draft Dworshak to elevation 1520 feet by mid-September.

The flow objective at Lower Granite over the summer period (June 21st to August 31st) was 50 Kcfs; over the summer period flows at Lower Granite averaged 29.9 Kcfs.

The flow objective at McNary over the summer period (July 1st to August 31st) was 200 Kcfs; over the summer period flows at McNary averaged 183.9 Kcfs.

Flows in both the Snake and Columbia Rivers continue to be low, ranging between 19.7 and 25.0 Kcfs at Lower Granite and 70.6 and 122.5 Kcfs at McNary over last week.

Smolt Monitoring

Smolt monitoring is ongoing at six SMP dams (BON, JDA, MCN, LMN, LGS, and LGR). SMP sampling at RIS ended on August 31st and all SMP traps are out of operation for the 2013 season.

Subyearling Chinook continued to be the dominant species of salmonid at all SMP dams over the past week. Passage of subyearling Chinook increased at Bonneville, Little Goose, and Lower Granite dams and decreased at McNary Dam this week. Although subyearling Chinook dominated the collections, many 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, index sampling occurred every other day. All fish were bypassed on non-sample days. Passage of subyearling Chinook increased 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 for subyearling Chinook was about 350 per day. No other species of salmonids were collected in this week's samples. In addition, no pacific lamprey juveniles were collected at BON 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 bias 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. In fact, no other species of salmonids were collected in this week's condition samples. In addition, no lamprey juveniles were collected at JDA this week. SMP sampling at JDA is scheduled to end after Sunday, September 15th. However, due to the high temperature sampling, it is likely that today's condition sample will be the last of the 2013 season.

Sampling at MCN for the 2013 season is every-other-day. Subyearling Chinook dominated the bypass samples at MCN this week. Subyearling Chinook passage at MCN decreased this week, when compared to last week. This week's daily average passage index for subyearling Chinook was about 370 per day. Last week's daily average passage index was about 745 per day. The only spring migrants that were collected in this week's samples were sockeye. Pacific lamprey macrophthalmia continue to be the only species and life-stage of lamprey collected at MCN this season. The daily average collection for pacific lamprey macrophthalmia for this week was about 10 per day.

Compared to last week, there was a slight increase in subyearling Chinook passage at LGR this week. This week's daily average passage index for subyearling Chinook was nearly 1,200 per day. Last week's daily average passage index was about 1,050 per day. A very small number of yearling Chinook, sockeye, and steelhead were collected at LGR this week. Finally, LGR had an estimated collection of eight pacific lamprey macrophthalmia on September 9th and four on September 10th. 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 also increased at LGS this week, when compared to last week. This week's daily average passage index for subyearling Chinook at LGS was just over 1,000 per day. Last week's daily average passage index was about 870 per day. A very small number of coho, sockeye, and steelhead were also collected at LGS this week. Finally, only pacific lamprey macrophthalmia were collected at LGS this week. The daily average collection for pacific macrophthalmia this week was five per day.

The operation of full index sampling every-other-day, with primary bypass on the non-sample days,

remained in place this week at LMN. All fish collected during the full index sampling were trucked. Due to the different levels of sampling last week, it is not possible to compare passage indices for this week to previous weeks. However, samples from this week were dominated by subyearling Chinook. The only other salmonid collected in this week's samples was one yearling Chinook on September 11th. Condition monitoring this week showed relatively low levels of Columnaris (0.0%–6.3%) compared to previous weeks. Among lamprey species, only Pacific lamprey *macrophthalmia* were collected this week, but in very 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

Daily adult fall Chinook counts at Bonneville Dam have exceeded the previous historic 1-day record count of 45,884 over three separate days last week, reaching a high count of 63,870 on September 9th, 2013. Adult Fall Chinook counts at Bonneville Dam ranged between 25,956 and 63,870 last week. Operators have initiated the operation of both powerhouses at

Bonneville Dam in effort to distribute fish passage over both ladders at Bonneville Dam. Over the last several days, approximately one-third of the Chinook have passed via the Bradford Island Fishway with the remaining two-thirds passing via the Washington Shore fishway. At Bonneville Dam, the adult fall Chinook count for the year is now 601,531 which is 284% of the 2012 count and 247% of the 10-year average count on the same date. The 2013 Bonneville Dam fall Chinook jack count of 62,381 is 120% of the 2012 fall Chinook jack count and 205% of the 10-year average fall Chinook jack count on the same date. Daily adult Fall Chinook counts at The Dalles Dam have exceeded 24,000 over the previous five days with 89%–98% of these fish passing via The Dalles East Fishway. Due to the very high percentage of adult Chinook passing the east ladder at The Dalles, potential ladder crowding was discussed at the 9-12-2013 FPOM meeting. With a large number of Chinook yet to pass The Dalles, some effort may be needed to better balance the distribution of fish over the two ladders at The Dalles Dam. The 2013 adult fall Chinook count at The Dalles is now at 279,183 which is 239% of the 2012 count and 247% of the 10-year average on the same date. The 2013 fall Chinook jack count at The Dalles is now 42,783 which is 115% of the 2012 count and 201% of 10-year average count.

Fish passage at Lower Granite Dam continues to be discussed by fishery managers. Powerhouse roof repair work coupled with high ladder temperatures have resulted in variable daily passage numbers. Over the last week at Lower Granite, daily adult fall Chinook numbers were increasing early in the week reaching as high as 2360 on the 9th of September, then decreased the following day to only 132 adult Chinook. The last daily count available was September 11th when adult fall Chinook counts increased to 1039. Currently there is a difference of slightly more than 14,000 combined adult and jack fall Chinook between Little Goose Dam and Lower Granite Dam. The combined adult and jack fall Chinook count at Little Goose Dam is slightly higher than 24,000, but the same count at Lower Granite is only slightly greater than 10,000 fish. The Lower Granite powerhouse roof repair involves reducing powerhouse flows to only that needed for station service (5 Kcfs) daily from approximately 10:00 AM to 8:00 PM. This operation has been shutting down powerhouse

units that are prioritized for adult attraction at Lower Granite during the daily work period. This issue was discussed at the September 12, 2013, FPOM meeting and, although decisions have not yet been finalized, most were in agreement concerning delaying the daily start time for this work by two additional hours each day, effectively running priority units for adult attraction daily to approximately noon. Also, discussed was potentially stopping the powerhouse roof repair for a several day period and running powerhouse units prioritized for adult attraction throughout the stoppage period in an attempt to move fish that have passed Little Goose Dam but have yet to pass Lower Granite Dam.

Daily steelhead counts at Bonneville Dam have ranged from 1,286 to 3,430 over the last week. The 2013 Bonneville Dam adult steelhead count of 205,994 is about 105% of the 2012 count but only 67% of the 10-year average count of 309,268. The 2013 Bonneville Dam adult wild steelhead count of 90,620 is 122% of the 2012 count and 92% of the 10-year average count of 99,067. In the Snake River, this year's Lower Granite steelhead count of 14,536 is 76% of the 2012 count but only 40% of the 10-year average count of 36,009. The 2013 Lower Granite Dam adult wild steelhead count of 6,823 is 89% of the 2012 count, while being 60% of the 10-year average count of 11,319. At Willamette Falls, the 2013 count for steelhead is 17,506 as of September 6th. This year's steelhead count at Willamette Falls is 56% of the 2012 count and 68% of the 10-year average count of 25,724.

Daily counts of coho have ranged between 471 and 4,101 over the last week at Bonneville Dam. The 2013 Bonneville Dam adult coho count of 20,173 is 85% of the 2012 count and 42% of the 10-year average count of 48,327. The 2013 Bonneville Dam coho jack count of 2,323 is 161% of the 2012 count and 96% of the 10-year average count of 2,431. It should be pointed out that the 2013 preseason forecast at the Columbia River mouth for coho is 433,600 as compared to the actual return in 2012 of 135,300.

Hatchery Releases Last Two Weeks

Hatchery Release Summary
From: 8/30/2013 to 09/12/13

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
No Releases Scheduled									

Hatchery Releases Next Two Weeks

Hatchery Release Summary
From: 9/13/2013 to 9/26/2013

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
No Releases Scheduled									

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
08/30/2013	104.7	0.1	103.7	0.0	105.0	0.0	109.1	0.0	113.9	0.0	118.5	2.1	114.7	7.9
08/31/2013	90.5	0.1	89.1	0.0	91.2	0.0	98.9	0.0	103.6	0.0	108.8	2.1	106.7	7.8
09/01/2013	51.7	0.2	51.3	0.0	56.6	0.0	58.6	0.0	63.4	0.0	88.4	1.9	88.3	7.6
09/02/2013	54.6	0.1	61.0	0.0	62.0	0.0	55.9	0.0	56.4	0.0	61.1	1.6	61.4	7.1
09/03/2013	80.0	0.1	78.1	0.0	78.5	0.0	79.1	0.0	83.6	0.0	85.7	1.7	81.5	7.2
09/04/2013	78.6	0.1	81.0	0.0	80.5	0.0	80.5	0.0	82.4	0.0	82.0	1.6	76.9	7.4
09/05/2013	75.6	0.2	67.5	0.0	68.5	0.0	70.8	0.0	73.8	0.0	78.4	1.7	76.3	7.4
09/06/2013	56.0	0.1	57.0	0.0	60.0	0.0	59.5	0.0	62.1	0.0	80.6	1.6	79.7	7.3
09/07/2013	57.3	0.1	60.4	0.0	60.6	0.0	59.6	0.0	64.1	0.0	54.4	1.7	52.1	7.0
09/08/2013	58.3	0.2	56.2	0.0	55.0	0.0	55.1	0.0	59.5	0.0	54.4	2.1	52.1	6.9
09/09/2013	70.4	0.1	79.6	0.0	81.1	0.6	83.3	2.2	86.1	0.0	90.2	3.6	82.5	7.8
09/10/2013	65.4	0.1	67.0	0.0	75.7	0.0	78.7	0.0	81.1	0.0	99.9	1.8	102.2	7.6
09/11/2013	72.7	0.1	73.6	0.0	73.4	0.0	74.8	0.0	78.2	0.0	84.2	1.6	82.8	7.3
09/12/2013	81.6	0.1	79.9	0.0	81.9	0.0	82.8	0.0	85.0	0.0	87.7	1.7	85.3	7.4

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
08/30/2013	7.5	0.0	---	---	21.8	12.3	20.1	7.5	19.6	7.2	18.2	8.2
08/31/2013	7.5	0.0	---	---	21.6	12.2	20.6	7.5	19.5	7.2	21.9	11.9
09/01/2013	7.5	0.0	---	---	22.1	0.0	12.8	0.0	12.3	0.0	10.1	0.0
09/02/2013	7.6	0.0	---	---	22.6	0.0	17.1	0.0	13.4	0.0	10.8	0.0
09/03/2013	7.6	0.0	---	---	20.8	7.2	19.6	0.0	20.2	0.0	17.3	0.0
09/04/2013	7.6	0.0	---	---	17.4	5.5	17.3	0.0	18.5	0.0	18.1	0.0
09/05/2013	7.6	0.0	---	---	20.0	3.0	20.4	0.0	20.7	0.0	21.3	0.0
09/06/2013	7.6	0.0	---	---	23.3	2.8	20.8	0.0	22.8	0.0	22.8	0.0
09/07/2013	7.6	0.0	---	---	21.6	6.3	19.2	0.0	20.2	0.0	19.2	0.0
09/08/2013	7.5	0.0	---	---	24.3	7.7	21.6	0.0	22.8	0.0	22.3	0.0
09/09/2013	5.9	0.0	---	---	25.0	7.7	23.2	8.0	22.4	0.0	22.4	0.0
09/10/2013	5.9	0.0	---	---	19.7	3.3	20.7	0.0	25.0	0.0	24.4	0.0
09/11/2013	6.0	0.0	---	---	23.9	3.3	22.5	0.4	23.6	0.0	23.6	0.0
09/12/2013	4.8	0.0	---	---	24.3	2.8	20.5	0.6	23.6	0.0	23.4	0.0

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
08/30/2013	133.1	66.3	131.4	39.3	125.8	50.2	138.4	91.4	0.0	34.6
08/31/2013	141.3	70.9	130.9	39.2	122.1	48.8	140.2	90.9	0.0	37.0
09/01/2013	100.3	0.0	98.6	0.9	97.4	0.0	105.6	1.6	15.0	81.6
09/02/2013	92.6	0.0	88.8	0.9	87.1	0.0	100.3	1.3	16.7	74.9
09/03/2013	83.6	0.0	90.6	1.0	92.6	0.0	100.3	1.3	16.4	75.2
09/04/2013	98.6	0.0	92.4	0.8	93.3	0.0	102.1	1.4	17.1	77.3
09/05/2013	100.8	0.0	94.2	0.7	91.4	0.0	96.9	1.4	7.3	81.9
09/06/2013	101.0	0.0	89.4	0.9	90.1	0.0	98.8	1.4	0.0	91.1
09/07/2013	88.0	0.0	95.3	0.9	91.8	0.0	96.3	1.3	0.0	88.7
09/08/2013	70.6	0.0	68.7	0.9	72.3	0.0	85.7	1.4	10.5	67.5
09/09/2013	85.4	0.0	80.7	0.8	79.7	0.0	88.0	1.3	16.6	63.7
09/10/2013	122.5	6.5	116.6	1.0	113.9	0.0	122.1	1.3	35.0	79.4
09/11/2013	117.1	0.0	127.0	0.9	124.5	0.0	131.0	1.4	42.3	81.1
09/12/2013	108.0	0.0	106.2	0.4	106.8	0.0	118.3	1.3	32.2	78.6

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											
Lower Monumental Dam											
McNary Dam											
	08/30/13	Chinook + Steelhead	51	1	1	1.96%	0.00%	1	0	0	0
Bonneville Dam											
Rock Island Dam											

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	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
8/30	105.2	105.2	105.4	8	---	---	---	0	104.4	104.6	104.8	24	103.6	104.0	104.2	24	104.4	104.6	104.8	24
8/31	---	---	---	0	---	---	---	0	104.2	104.4	104.8	24	103.1	104.0	104.5	24	104.3	104.7	105.0	24
9/1	---	---	---	0	---	---	---	0	105.0	105.3	105.6	24	103.7	104.0	104.3	24	105.0	105.6	106.2	24
9/2	---	---	---	0	---	---	---	0	104.4	104.6	104.8	24	104.0	104.3	104.5	24	105.1	105.5	106.0	24
9/3	---	---	---	0	---	---	---	0	103.9	104.0	104.1	24	104.2	104.8	105.1	24	104.9	105.1	105.4	24
9/4	---	---	---	0	---	---	---	0	103.9	104.0	104.3	24	103.5	103.9	104.2	24	105.1	105.4	105.7	24
9/5	---	---	---	0	---	---	---	0	103.8	104.0	104.4	24	103.7	104.2	104.5	24	105.7	106.5	106.8	24
9/6	---	---	---	0	---	---	---	0	103.3	103.6	103.8	24	102.8	103.0	103.4	24	105.3	105.7	106.3	24
9/7	---	---	---	0	---	---	---	0	102.4	102.6	102.7	24	102.1	102.4	102.7	24	104.0	104.3	104.7	24
9/8	---	---	---	0	---	---	---	0	102.5	102.5	102.6	4	102.6	103.1	103.4	24	103.9	104.4	104.8	24
9/9	---	---	---	0	---	---	---	0	103.1	103.1	103.6	15	103.1	104.2	109.3	24	104.4	105.1	105.5	24
9/10	---	---	---	0	---	---	---	0	102.6	102.7	102.9	24	101.6	101.9	102.3	24	104.4	104.9	105.4	24
9/11	---	---	---	0	---	---	---	0	102.4	102.6	102.9	24	101.6	102.1	102.5	24	104.8	105.3	105.5	24
9/12	---	---	---	0	---	---	---	0	102.6	102.9	103.3	23	102.1	102.7	102.9	23	105.1	105.4	105.6	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	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
8/30	104.8	105.4	105.8	24	104.4	104.6	105.2	17	104.5	104.8	105.4	17	104.8	104.9	105.0	24	104.0	104.2	104.3	24
8/31	105.1	105.3	105.6	24	104.7	105.1	106.4	16	104.6	105.0	106.7	16	104.7	105.0	105.1	24	103.9	104.3	104.5	24
9/1	105.9	106.5	107.1	24	105.8	106.5	108.4	19	105.4	106.0	107.4	19	105.1	105.6	106.0	24	103.6	104.3	105.2	24
9/2	105.8	106.5	107.3	24	106.2	106.3	107.1	14	106.0	106.2	107.3	14	105.1	105.4	105.9	24	103.3	103.9	104.6	24
9/3	105.2	105.7	106.3	24	105.8	106.1	107.0	17	105.7	106.1	107.5	17	105.1	105.3	105.6	24	104.0	104.4	104.6	24
9/4	105.8	106.1	106.7	24	105.5	105.6	106.1	18	105.3	105.6	106.4	18	104.9	105.3	105.6	24	103.8	104.6	105.0	24
9/5	106.5	107.2	107.9	24	105.4	105.8	106.3	21	105.3	105.8	106.3	21	105.1	105.3	105.7	24	103.9	104.5	105.0	24
9/6	105.5	106.1	106.5	24	104.9	105.1	106.0	20	104.5	104.9	106.1	20	104.3	104.5	105.1	24	102.8	103.3	103.6	24
9/7	103.8	104.5	105.0	24	104.6	104.9	105.4	23	104.3	104.9	105.5	23	103.8	103.9	104.0	24	102.3	102.8	103.1	24
9/8	104.5	105.0	105.4	24	104.9	105.6	106.9	22	104.7	105.4	106.0	22	103.6	104.1	104.6	24	102.1	103.0	103.4	24
9/9	104.6	105.1	105.9	24	104.8	105.6	106.1	23	105.3	106.0	106.7	23	104.2	104.6	105.0	24	104.1	105.3	109.7	24
9/10	104.7	105.1	105.9	24	105.2	105.7	106.4	20	105.0	105.6	106.4	20	104.5	104.9	105.1	24	103.5	104.0	104.2	24
9/11	105.0	105.3	106.1	24	105.0	105.7	106.3	22	104.3	105.5	106.3	22	104.2	104.5	104.7	24	103.0	103.6	103.8	24
9/12	104.9	105.2	105.8	23	105.4	105.8	107.0	19	104.8	105.8	107.1	19	104.7	105.2	105.7	23	103.6	104.3	104.7	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			#	Rock I. Tlwr			#	Wanapum			#	Wanapum Tlwr			#	Priest Rapids			#
	24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High		24 h	12 h	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
8/30	104.0	104.4	104.8	24	104.3	104.8	105.1	24	104.1	104.5	105.2	24	104.7	104.8	105.0	24	103.6	104.1	104.7	24
8/31	104.1	104.6	105.1	24	104.5	105.0	105.5	24	104.1	105.3	106.3	24	104.6	104.9	105.1	24	103.8	104.3	104.8	24
9/1	104.5	104.7	105.0	24	104.9	105.1	105.4	24	104.1	106.4	107.5	24	104.9	105.5	105.8	24	103.8	104.7	105.4	24
9/2	104.5	104.8	105.0	24	104.8	105.1	105.7	24	102.5	104.1	104.9	24	104.4	104.8	105.4	24	102.9	103.9	104.5	24
9/3	104.1	104.3	104.4	24	104.5	104.7	104.7	24	104.0	106.8	107.9	24	104.8	105.5	106.3	24	103.8	105.3	106.3	24
9/4	104.2	104.6	105.2	24	104.7	105.0	105.6	24	106.7	108.4	109.0	24	104.8	105.4	105.8	24	104.5	105.0	106.2	24
9/5	104.6	104.8	105.2	24	105.0	105.2	105.5	24	105.6	106.4	107.4	24	104.8	105.1	105.5	24	104.5	104.9	105.2	24
9/6	103.6	103.8	104.6	24	104.1	104.4	105.0	23	103.7	104.1	105.0	24	103.8	104.1	104.8	24	103.1	103.3	103.5	24
9/7	102.9	103.0	103.1	24	103.4	103.5	103.6	24	101.6	103.0	103.6	24	103.1	103.2	103.5	14	102.4	102.8	103.0	24
9/8	103.0	103.4	103.6	24	103.4	103.8	104.2	24	101.5	103.7	104.3	24	103.2	103.2	103.7	8	102.5	103.0	103.6	24
9/9	103.4	104.2	105.2	24	104.1	104.6	105.6	24	103.2	104.6	105.8	24	103.3	103.3	103.4	5	103.1	103.8	105.0	24
9/10	103.8	104.1	104.7	24	104.2	104.5	104.8	24	104.1	106.1	108.6	24	102.7	102.9	104.1	16	102.9	103.3	103.7	24
9/11	103.9	104.0	104.4	24	104.4	104.5	104.8	24	---	---	---	0	---	---	---	0	---	---	---	0
9/12	103.7	104.1	104.6	23	104.2	104.6	105.1	23	---	---	---	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>Clrwr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/30	106.6	107.1	107.6	24	---	---	---	0	100.0	100.2	100.6	24	101.3	102.5	103.6	24	101.3	102.8	104.1	24
8/31	107.0	107.5	108.3	24	---	---	---	0	100.2	100.7	101.0	24	101.4	102.7	103.7	24	101.8	103.2	104.8	24
9/1	107.5	108.1	108.8	24	---	---	---	0	100.7	101.0	101.5	24	101.7	102.7	103.7	24	101.6	102.7	103.8	24
9/2	106.6	107.2	107.6	24	---	---	---	0	100.6	100.7	101.0	24	101.3	102.0	102.9	24	100.8	101.4	102.0	24
9/3	106.4	106.8	107.4	24	---	---	---	0	100.3	100.4	100.7	24	101.0	101.6	102.7	24	100.9	101.8	103.1	24
9/4	106.2	106.8	107.4	24	---	---	---	0	100.3	100.6	101.0	24	101.4	102.5	103.5	24	101.3	102.5	103.5	24
9/5	106.1	106.6	107.3	24	---	---	---	0	100.2	100.5	101.0	24	101.1	101.8	103.0	24	101.0	102.0	103.4	24
9/6	105.0	105.3	105.7	24	---	---	---	0	99.9	100.1	100.5	24	101.0	101.9	102.9	24	100.6	101.5	103.0	24
9/7	104.5	104.8	104.8	24	---	---	---	0	99.9	100.3	100.7	24	101.1	102.3	103.5	24	101.3	102.6	104.0	24
9/8	104.6	105.1	105.5	24	---	---	---	0	100.0	100.2	100.5	24	101.0	101.8	102.7	23	101.3	102.4	103.6	24
9/9	105.0	105.3	105.4	24	---	---	---	0	100.1	100.5	100.9	24	101.2	102.4	103.6	24	101.4	102.7	104.0	24
9/10	105.1	105.2	105.3	24	---	---	---	0	100.1	100.5	101.1	24	101.2	102.4	103.6	24	101.5	102.7	104.0	24
9/11	---	---	---	0	---	---	---	0	101.1	102.3	102.9	24	101.7	103.3	104.7	24	101.1	101.4	103.9	15
9/12	---	---	---	0	---	---	---	0	100.5	101.0	102.1	23	101.8	102.9	104.2	23	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/30	100.9	102.7	104.1	24	99.3	99.5	99.7	24	110.8	113.6	114.3	24	106.1	106.9	107.5	24	106.9	107.2	107.7	24
8/31	101.7	103.5	104.8	24	99.5	99.5	99.8	11	111.0	113.8	114.7	23	106.9	107.7	108.4	23	107.2	107.7	108.1	23
9/1	101.7	102.8	103.2	24	---	---	---	0	100.5	101.1	108.5	24	106.7	107.1	107.9	24	104.1	104.7	106.5	24
9/2	100.5	101.2	102.5	24	---	---	---	0	99.4	99.5	99.8	24	106.4	106.7	107.2	24	103.8	104.3	105.1	24
9/3	99.6	100.8	102.0	24	99.9	99.9	100.0	11	105.5	111.4	113.0	24	106.5	106.8	108.2	24	103.7	104.3	104.7	24
9/4	100.4	101.6	102.5	24	99.5	99.7	100.0	24	106.6	112.3	115.4	24	105.8	106.0	106.2	24	102.5	103.2	103.8	24
9/5	100.9	102.0	102.7	24	99.4	99.6	99.9	24	106.0	110.8	114.3	24	106.1	106.1	108.0	11	103.6	105.7	106.6	24
9/6	99.7	100.5	101.5	24	98.8	99.0	99.2	24	104.4	109.6	113.9	24	---	---	---	0	104.8	105.0	105.2	23
9/7	100.6	102.5	104.0	24	99.1	99.4	99.5	24	106.4	113.6	115.9	24	---	---	---	0	104.3	104.6	105.3	24
9/8	101.0	102.0	102.8	24	99.1	99.2	99.3	24	106.4	111.8	113.6	24	---	---	---	0	102.2	102.8	103.1	24
9/9	100.9	102.7	104.0	24	99.3	99.5	99.8	24	108.3	116.2	119.6	24	---	---	---	0	107.7	113.8	115.1	24
9/10	102.1	103.5	104.7	24	98.9	99.1	99.5	24	107.2	114.2	117.3	24	---	---	---	0	100.4	100.8	101.3	24
9/11	101.8	103.4	104.5	24	99.6	99.6	99.9	11	107.4	113.9	117.2	24	---	---	---	0	100.8	101.6	103.4	24
9/12	100.8	100.8	102.6	12	---	---	---	0	107.4	113.4	117.8	23	---	---	---	0	101.0	101.9	103.5	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/30	105.7	105.9	106.1	24	111.6	111.9	112.2	24	105.6	105.9	106.3	24	109.1	109.8	110.5	24	---	---	---	0
8/31	107.2	107.7	107.8	23	112.1	112.6	113.1	23	105.8	106.1	106.4	23	109.9	110.7	111.4	23	---	---	---	0
9/1	106.7	107.1	107.6	24	106.2	107.1	110.9	24	106.5	107.0	107.6	24	106.7	107.5	108.1	24	---	---	---	0
9/2	105.8	106.0	106.2	24	105.0	105.5	106.1	24	107.7	107.9	108.2	24	106.3	107.2	108.3	24	---	---	---	0
9/3	105.3	105.5	105.9	24	104.6	105.1	105.5	24	107.8	108.0	108.1	24	106.9	107.7	109.0	24	---	---	---	0
9/4	105.1	105.2	105.3	24	104.5	105.3	106.1	24	107.4	107.6	108.1	24	106.8	107.8	109.2	24	---	---	---	0
9/5	105.3	105.6	106.2	24	104.6	105.3	106.2	24	107.2	107.6	107.9	24	106.9	107.4	108.2	24	---	---	---	0
9/6	104.2	104.2	104.6	10	103.1	103.4	104.0	24	106.7	107.0	107.4	24	106.1	106.4	106.9	24	---	---	---	0
9/7	---	---	---	0	103.2	103.8	104.1	24	106.3	106.5	107.4	24	106.1	106.9	108.0	24	---	---	---	0
9/8	---	---	---	0	103.3	103.9	105.8	24	105.1	105.3	105.6	24	105.7	106.4	107.4	24	---	---	---	0
9/9	---	---	---	0	102.7	103.3	104.1	24	103.7	104.0	104.7	24	104.5	105.1	106.6	24	---	---	---	0
9/10	---	---	---	0	102.9	103.5	104.3	24	102.4	102.6	102.8	24	103.4	104.0	104.6	24	---	---	---	0
9/11	---	---	---	0	102.7	103.4	105.1	24	102.3	102.4	102.7	24	103.2	104.0	104.4	24	---	---	---	0
9/12	---	---	---	0	102.6	103.1	103.5	23	102.9	103.4	103.8	23	103.6	104.4	105.2	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>AVG</u>	<u>High</u>	<u>hr</u>				
8/30	104.1	104.4	104.7	24	114.4	115.2	115.5	24	103.5	103.8	104.0	24	114.5	114.9	115.6	24	106.3	106.6	106.7	24
8/31	105.4	105.8	106.5	23	114.0	114.5	115.3	23	104.4	105.2	105.7	23	114.8	115.2	115.5	23	107.4	108.1	108.4	23
9/1	105.1	105.3	105.8	24	105.1	106.0	111.3	24	107.1	107.7	108.4	24	106.5	107.0	110.5	24	108.6	109.1	109.6	24
9/2	104.9	105.2	105.5	24	104.0	104.4	104.8	24	105.0	105.2	105.5	24	105.3	105.7	106.0	24	106.5	107.2	108.1	24
9/3	104.2	104.3	104.5	24	103.7	104.1	104.5	24	105.0	105.4	105.6	24	105.5	105.8	106.4	24	102.7	103.1	104.2	24
9/4	104.5	105.1	105.9	24	104.5	105.4	105.9	24	105.5	105.9	106.4	24	105.9	106.2	106.4	24	102.3	102.7	102.9	24
9/5	105.7	106.4	107.7	24	105.1	105.4	105.9	24	105.5	105.8	106.0	24	105.4	105.8	106.4	24	102.8	103.1	103.8	24
9/6	103.5	103.9	104.3	24	103.6	104.1	104.5	24	104.2	104.4	104.6	24	104.1	104.4	104.6	24	102.0	102.2	102.4	24
9/7	102.9	103.0	103.2	24	102.6	103.0	103.4	24	104.1	104.5	105.0	24	104.4	104.9	105.3	24	102.1	102.5	102.8	24
9/8	102.6	102.8	103.1	24	102.2	102.5	102.7	24	104.3	104.7	105.0	24	104.0	104.4	104.8	24	102.6	103.1	103.4	24
9/9	102.5	102.9	103.5	24	102.4	102.8	103.0	24	104.3	104.8	105.2	24	105.2	105.6	106.0	24	103.4	103.6	103.7	24
9/10	101.9	102.1	102.6	24	103.6	105.4	106.3	24	105.4	106.3	107.6	24	104.6	105.0	105.5	24	103.5	104.0	104.3	24
9/11	104.5	105.5	107.6	24	103.5	104.0	104.2	24	105.3	105.9	107.2	24	104.5	104.8	105.2	24	103.7	104.0	104.2	24
9/12	104.4	104.8	105.5	23	103.2	103.5	103.7	23	103.7	104.1	104.4	23	103.3	103.6	103.7	23	104.2	104.6	105.1	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/30	109.7	110.2	110.8	24	107.4	107.8	107.9	24	117.4	117.9	118.6	24	114.6	116.0	116.8	24	---	---	---	0
8/31	110.8	111.7	112.9	23	107.9	108.1	108.5	23	117.5	118.0	118.9	23	115.0	116.0	116.8	23	---	---	---	0
9/1	107.1	108.2	110.7	24	108.4	109.0	109.3	24	110.9	112.7	118.2	24	114.1	114.9	116.0	24	---	---	---	0
9/2	103.7	104.2	104.8	24	107.8	108.3	108.5	24	108.6	109.2	109.8	24	108.7	109.3	111.1	24	---	---	---	0
9/3	100.9	101.6	101.9	24	106.2	106.5	106.7	24	106.5	106.9	107.1	23	107.1	107.5	108.0	24	---	---	---	0
9/4	99.7	100.3	101.2	24	104.4	105.1	105.4	24	104.6	104.8	105.2	24	105.2	105.7	106.7	24	---	---	---	0
9/5	101.9	103.6	105.0	24	102.2	102.5	103.0	24	102.4	102.8	103.8	24	124.3	144.9	156.3	24	---	---	---	0
9/6	103.0	103.2	103.4	24	100.5	100.9	101.3	24	100.5	100.8	101.2	24	121.5	142.5	156.7	24	---	---	---	0
9/7	103.6	103.8	104.0	24	100.2	100.6	100.9	24	100.5	101.2	101.7	24	100.6	101.4	102.0	24	---	---	---	0
9/8	104.1	104.7	105.2	24	100.9	101.4	101.8	24	101.2	101.8	102.5	24	101.1	101.7	102.2	24	---	---	---	0
9/9	105.6	106.0	106.4	24	101.9	102.3	102.5	24	101.8	102.4	102.8	24	101.8	102.4	102.8	24	---	---	---	0
9/10	105.0	105.3	105.7	24	102.8	103.1	103.4	24	102.6	103.2	103.7	24	102.7	103.5	104.0	24	---	---	---	0
9/11	104.9	105.2	105.4	24	102.6	102.9	103.0	24	102.5	102.9	103.2	24	102.3	102.8	103.0	24	---	---	---	0
9/12	105.1	105.8	106.1	23	103.5	104.0	104.2	23	103.2	103.8	104.2	23	102.2	102.9	103.4	23	---	---	---	0

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 9/13/2013 7:28

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)	
08/30/2013	*	---	---	---	---	0	0	0	0	---	0	---
08/31/2013	*	---	---	---	---	0	0	---	0	0	---	0
09/01/2013	*	---	---	---	---	0	0	---	---	---	---	---
09/02/2013	*	---	---	---	---	2	0	0	---	0	---	0
09/03/2013	*	---	---	---	---	3	0	---	---	---	0	---
09/04/2013	*	---	---	---	---	6	0	---	---	0	---	0
09/05/2013	*	---	---	---	---	0	0	0	---	---	---	---
09/06/2013	*	---	---	---	---	0	0	---	---	0	0	0
09/07/2013	*	---	---	---	---	0	0	0	---	---	---	---
09/08/2013	*	---	---	---	---	0	0	---	---	0	---	0
09/09/2013	*	---	---	---	---	0	0	0	---	---	---	---
09/10/2013	*	---	---	---	---	0	0	---	---	0	0	0
09/11/2013	*	---	---	---	---	2	0	1	---	---	---	---
09/12/2013	*	---	---	---	---	---	0	---	---	0	---	0
09/13/2013		---	---	---	---	---	---	---	---	---	---	---
<hr/>												
Total:		0	0	0	0	13	0	1	0	0	0	0
# Days:		0	0	0	0	13	14	6	2	7	4	7
Average:		0	0	0	0	1	0	0	0	0	0	0
YTD		50,632	55,648	26,301	2,797	2,607,102	1,498,294	614,255	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)	
08/30/2013	*	---	---	---	---	1,030	933	439	18	---	11	---
08/31/2013	*	---	---	---	---	1,094	648	---	10	1,286	---	468
09/01/2013	*	---	---	---	---	694	256	---	---	---	---	---
09/02/2013	*	---	---	---	---	544	271	15	---	420	---	394
09/03/2013	*	---	---	---	---	1,068	612	---	---	---	44	---
09/04/2013	*	---	---	---	---	1,489	1,684	---	---	528	---	195
09/05/2013	*	---	---	---	---	1,439	1,674	51	---	---	---	---
09/06/2013	*	---	---	---	---	1,535	1,949	---	---	504	12	455
09/07/2013	*	---	---	---	---	2,408	1,758	37	---	---	---	---
09/08/2013	*	---	---	---	---	1,599	398	---	---	432	---	247
09/09/2013	*	---	---	---	---	708	816	87	---	---	---	---
09/10/2013	*	---	---	---	---	433	759	---	---	276	8	1,394
09/11/2013	*	---	---	---	---	471	638	162	---	---	---	---
09/12/2013	*	---	---	---	---	---	759	---	---	280	---	278
09/13/2013		---	---	---	---	---	---	---	---	---	---	---
<hr/>												
Total:		0	0	0	0	14,512	13,155	791	28	3,726	75	3,431
# Days:		0	0	0	0	13	14	6	2	7	4	7
Average:		0	0	0	0	1,116	940	132	14	532	19	490
YTD		2	61	195	2,668	722,129	637,166	272,683	18,794	3,695,974	2,426,997	4,861,837

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)
08/30/2013 *	---	---	---	---	0	0	0	0	---	0	---
08/31/2013 *	---	---	---	---	0	0	---	0	0	---	0
09/01/2013 *	---	---	---	---	0	0	---	---	---	---	---
09/02/2013 *	---	---	---	---	0	0	0	---	0	---	0
09/03/2013 *	---	---	---	---	0	0	---	---	---	0	---
09/04/2013 *	---	---	---	---	0	0	---	---	0	---	0
09/05/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/06/2013 *	---	---	---	---	0	0	---	---	0	0	0
09/07/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/08/2013 *	---	---	---	---	0	0	---	---	0	---	0
09/09/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/10/2013 *	---	---	---	---	0	1	---	---	0	0	0
09/11/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/12/2013 *	---	---	---	---	---	0	---	---	0	---	0
09/13/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	1	0	0	0	0	0
# Days:	0	0	0	0	13	14	6	2	7	4	7
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	0	0	0	107	61,826	54,078	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)
08/30/2013 *	---	---	---	---	2	0	0	0	---	0	---
08/31/2013 *	---	---	---	---	2	0	---	0	0	---	0
09/01/2013 *	---	---	---	---	0	0	---	---	---	---	---
09/02/2013 *	---	---	---	---	0	0	0	---	0	---	0
09/03/2013 *	---	---	---	---	1	0	---	---	---	0	---
09/04/2013 *	---	---	---	---	0	1	---	---	0	---	0
09/05/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/06/2013 *	---	---	---	---	2	0	---	---	0	0	0
09/07/2013 *	---	---	---	---	2	0	0	---	---	---	---
09/08/2013 *	---	---	---	---	0	0	---	---	0	---	0
09/09/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/10/2013 *	---	---	---	---	3	3	---	---	0	0	0
09/11/2013 *	---	---	---	---	2	2	0	---	---	---	---
09/12/2013 *	---	---	---	---	---	1	---	---	0	---	0
09/13/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	14	7	0	0	0	0	0
# Days:	0	0	0	0	13	14	6	2	7	4	7
Average:	0	0	0	0	1	1	0	0	0	0	0
YTD	3,789	40,840	3,547	9,925	2,037,025	1,713,537	610,906	14,984	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)
08/30/2013 *	---	---	---	---	0	2	0	0	---	0	---
08/31/2013 *	---	---	---	---	0	0	---	1	0	---	0
09/01/2013 *	---	---	---	---	0	0	---	---	---	---	---
09/02/2013 *	---	---	---	---	0	0	0	---	20	---	0
09/03/2013 *	---	---	---	---	0	0	---	---	---	0	---
09/04/2013 *	---	---	---	---	0	1	---	---	4	---	0
09/05/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/06/2013 *	---	---	---	---	0	0	---	---	12	0	0
09/07/2013 *	---	---	---	---	2	0	0	---	---	---	---
09/08/2013 *	---	---	---	---	0	4	---	---	4	---	0
09/09/2013 *	---	---	---	---	3	2	0	---	---	---	---
09/10/2013 *	---	---	---	---	0	0	---	---	4	0	0
09/11/2013 *	---	---	---	---	0	0	0	---	---	---	---
09/12/2013 *	---	---	---	---	---	1	---	---	8	---	0
09/13/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	5	10	0	1	52	0	0
# Days:	0	0	0	0	13	14	6	2	7	4	7
Average:	0	0	0	0	0	1	0	1	7	0	0
YTD	1	0	0	326	54,705	33,019	11,379	25,107	633,846	414,310	396,143

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)
08/30/2013 *	---	---	---	---	0	4	1	0	---	0	---
08/31/2013 *	---	---	---	---	0	11	---	1	60	---	0
09/01/2013 *	---	---	---	---	0	7	---	---	---	---	---
09/02/2013 *	---	---	---	---	1	2	0	---	40	---	0
09/03/2013 *	---	---	---	---	0	1	---	---	---	0	---
09/04/2013 *	---	---	---	---	1	4	---	---	8	---	0
09/05/2013 *	---	---	---	---	0	12	1	---	---	---	---
09/06/2013 *	---	---	---	---	8	2	---	---	20	0	0
09/07/2013 *	---	---	---	---	0	2	1	---	---	---	---
09/08/2013 *	---	---	---	---	0	12	---	---	8	---	0
09/09/2013 *	---	---	---	---	0	6	2	---	---	---	---
09/10/2013 *	---	---	---	---	4	2	---	---	0	0	0
09/11/2013 *	---	---	---	---	0	2	0	---	---	---	---
09/12/2013 *	---	---	---	---	---	6	---	---	16	---	0
09/13/2013	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	14	73	5	1	152	0	0
# Days:	0	0	0	0	13	14	6	2	7	4	7
Average:	0	0	0	0	1	5	1	1	22	0	0
YTD	0	8	0	0	4,983	55,336	63,718	185	86,462	173,701	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:

9/13/13 7:25 AM

08/30/13 TO 09/13/13

		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	10,554	11			11	4	10,580
	Sum of NumberBarged	0	0			0	0	0
	Sum of NumberBypassed	4	0			1	0	5
	Sum of Numbertrucked	10,804	10			10	4	10,828
	Sum of SampleMorts	74	1			0	1	76
	Sum of FacilityMorts	7	0			0	0	7
	Sum of ResearchMorts	0	0			0	0	0
	Sum of TotalProjectMorts	81	1			0	1	83
LGS	Sum of NumberCollected	12,194			1	6	9	12,210
	Sum of NumberBarged	0			0	0	0	0
	Sum of NumberBypassed	23			0	0	0	23
	Sum of Numbertrucked	12,554			1	6	7	12,568
	Sum of SampleMorts	88			0	1	2	91
	Sum of FacilityMorts	57			0	0	0	57
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	145			0	1	2	148
LMN	Sum of NumberCollected	623	1					624
	Sum of NumberBarged	0	0					0
	Sum of NumberBypassed	15	0					15
	Sum of Numbertrucked	816	1					817
	Sum of SampleMorts	93	0					93
	Sum of FacilityMorts	0	0					0
	Sum of ResearchMorts	0	0					0
	Sum of TotalProjectMorts	93	0					93
MCN	Sum of NumberCollected	3,061					52	3,113
	Sum of NumberBarged	0					0	0
	Sum of NumberBypassed	3,049					51	3,100
	Sum of Numbertrucked	0					0	0
	Sum of SampleMorts	8					0	8
	Sum of FacilityMorts	4					1	5
	Sum of ResearchMorts	0					0	0
	Sum of TotalProjectMorts	12					1	13
Total Sum of NumberCollected		26,432	12		1	17	65	26,527
Total Sum of NumberBarged		0	0		0	0	0	0
Total Sum of NumberBypassed		3,091	0		0	1	51	3,143
Total Sum of Numbertrucked		24,174	11		1	16	11	24,213
Total Sum of SampleMorts		263	1		0	1	3	268
Total Sum of FacilityMorts		68	0		0	0	1	69
Total Sum of ResearchMorts		0	0		0	0	0	0
Total Sum of TotalProjectMorts		331	1		0	1	4	337

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/13/13 7:25 AM

TO: 09/13/13

Site	Data	Species						Grand Total
		CH0	CH1	CO	SO	ST	LU	
LGR	Sum of NumberCollected	466,731	1,865,140	48,077	42,658	1,444,861		3,867,467
	Sum of NumberBarged	437,793	1,554,582	47,807	42,574	1,087,929		3,170,685
	Sum of NumberBypassed	13,697	308,258	210	52	356,575		678,792
	Sum of NumberTrucked	14,237	10	1	11	10		14,269
	Sum of SampleMorts	616	174	2	6	40		838
	Sum of FacilityMorts	350	2,066	57	15	259		2,747
	Sum of ResearchMorts	38	52	0	0	47		137
	Sum of TotalProjectMorts	1,004	2,292	59	21	346		3,722
LGS	Sum of NumberCollected	444,292	1,026,511	36,886	22,627	1,174,694		2,705,010
	Sum of NumberBarged	426,163	979,239	36,685	22,607	1,108,345		2,573,039
	Sum of NumberBypassed	275	46,698	200	2	66,202		113,377
	Sum of NumberTrucked	17,177	0	1	11	12		17,201
	Sum of SampleMorts	246	14	0	3	11		274
	Sum of FacilityMorts	431	560	0	4	124		1,119
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	677	574	0	7	135		1,393
LMN	Sum of NumberCollected	169,190	470,898	8,000	8,064	459,577	1	1,115,730
	Sum of NumberBarged	151,939	469,284	7,999	8,058	458,179	0	1,095,459
	Sum of NumberBypassed	13,438	1,079	0	2	1,144	139	15,802
	Sum of NumberTrucked	2,507	1	0	0	1	0	2,509
	Sum of SampleMorts	425	16	0	0	18	0	459
	Sum of FacilityMorts	362	518	1	4	235	0	1,120
	Sum of ResearchMorts	0	0	0	0	0	0	0
	Sum of TotalProjectMorts	787	534	1	4	253	0	1,579
MCN	Sum of NumberCollected	1,777,907	1,098,880	43,803	314,629	255,352		3,490,571
	Sum of NumberBarged	0	0	0	0	0		0
	Sum of NumberBypassed	1,777,346	1,098,057	43,799	314,379	255,297		3,488,878
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	383	62	1	34	8		488
	Sum of FacilityMorts	178	761	3	216	47		1,205
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	561	823	4	250	55		1,693
Total Sum of NumberCollected		2,858,120	4,461,429	136,766	387,978	3,334,484	1	11,178,778
Total Sum of NumberBarged		1,015,895	3,003,105	92,491	73,239	2,654,453	0	6,839,183
Total Sum of NumberBypassed		1,804,756	1,454,092	44,209	314,435	679,218	139	4,296,849
Total Sum of NumberTrucked		33,921	11	2	22	23	0	33,979
Total Sum of SampleMorts		1,670	266	3	43	77	0	2,059
Total Sum of FacilityMorts		1,321	3,905	61	239	665	0	6,191
Total Sum of ResearchMorts		38	52	0	0	47	0	137
Total Sum of TotalProjectMorts		3,029	4,223	64	282	789	0	8,387

Cumulative Adult Passage at Mainstem Dams Through: 09/13

DAM	End Date	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	09/12	83345	33820	158089	7592	141713	20323	93097	26186	81663	12235	87543	17586	601531	62381	211705	52035	243207	30376
TDA	09/12	69202	32311	117087	7175	107368	16911	85639	20750	69222	10392	74538	13909	279183	42783	116503	37182	112880	21247
JDA	09/11	56991	28957	107655	6755	92410	15875	74764	19636	60814	10415	67514	14608	115853	29054	73200	27443	68982	15716
MCN	09/12	52176	22279	102763	4787	83990	13854	75741	14808	64428	5104	63310	10848	105958	15390	67898	12637	48610	9892
IHR	09/12	38017	18611	71957	2905	58986	8558	11912	6321	14182	1481	17476	4251	28506	7465	18243	6617	10976	4579
LMN	09/12	36470	19053	68608	2891	58025	7379	11765	7703	15150	1611	18803	4213	19309	5755	14409	6837	8802	3909
LGS	09/12	35072	19443	68247	3449	53406	8429	10120	7632	14748	1613	17544	4904	18781	5431	12079	5397	7328	2635
LGR	09/11	35031	19940	66366	3525	53382	9851	8423	7572	13163	1717	16010	5560	8067	2087	9778	3367	5177	2292
PRD	09/11	13725	1298	19495	1015	15225	1406	71083	3174	50667	1994	53926	2612	25511	6762	8310	3421	9777	2359
WAN	09/11	13715	1661	19804	973	15699	2278	69983	2189	50588	1515	47124	1979	8711	2978	4447	2310	4884	2367
RIS	09/01	13345	3100	19881	800	14248	2237	68380	3985	52184	3343	51396	5464	3083	5720	2375	1567	2103	842
RRH	09/01	6841	2101	6641	459	5306	853	59680	4044	45528	2775	39283	4310	2352	3333	1954	820	1713	536
WEL	08/23	7133	2980	5311	700	4618	880	48716	4134	37752	3078	28059	2614	0	0	0	0	0	0
WFA	09/06	27897	1664	35899	1314	46153	1141	0	0	0	0	0	0	254	41	338	84	211	31

DAM	End Date	Coho						Sockeye			Steelhead						Lamprey		
		2013		2012		10-Yr Avg.		2013	2012	10-Yr Avg.	2013	2012	10-Yr Avg.	Wild 2013	Wild 2012	10-Yr Avg.	2013	2012	10-Yr Avg.
BON	09/12	20173	2323	23810	1439	48327	2431	185501	515670	177593	205994	196507	309268	90620	74146	99067	23535	28728	33402
TDA	09/12	4136	581	15357	1771	11766	1518	161896	410099	146266	112318	139149	178078	51757	53419	59409	8508	5817	8134
JDA	09/11	1069	166	12874	1999	7649	1223	155374	394164	149056	64583	90392	143068	28910	37661	47318	5878	4226	6996
MCN	09/12	373	104	5126	379	3122	387	134194	364138	125774	56493	79175	105531	24619	29899	33597	1413	868	3077
IHR	09/12	79	34	340	23	208	21	895	453	425	38134	35006	65536	11330	9647	16687	284	399	388
LMN	09/12	55	9	161	29	111	10	1014	486	530	26795	28746	60147	10313	9220	16675	104	122	109
LGS	09/12	81	19	152	55	70	14	989	451	508	15955	21146	45239	7010	8036	12906	34	60	101
LGR	09/11	1	0	26	1	5	1	738	460	613	14536	19021	36009	6823	7686	11319	18	46	32
PRD	09/11	32	4	1674	437	459	85	163078	408258	154770	8133	11636	13344	0	0	0	5220	2930	2988
WAN	09/11	8	2	598	265	290	62	155694	450195	196435	6343	10304	13793	0	0	0	3160	1900	1783
RIS	09/01	0	0	2	0	2	2	159177	410574	152388	4737	8014	7848	2718	3642	3929	746	349	964
RRH	09/01	0	0	0	0	0	0	131644	363258	129815	3462	6575	5883	1875	3055	2761	594	263	406
WEL	08/23	0	0	0	0	0	0	129840	325922	123522	1660	2814	2250	927	1345	1112	14	0	11
WFA	09/06	75	149	75	173	120	59	0	0	0	17506	31296	25724	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.