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Fish Passage Center

Weekly Report #15–25

September 4, 2015

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 27% and 220% of average at individual sub-basins over September. Precipitation above The Dalles has been 145% of average over September. Over the 2015 water year, precipitation has ranged between 71% and 93% 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 2015 September 1–3, 2015		Water Year 2015 October 1, 2014 to September 3, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.52	220	34.3	93
Snake River above Ice Harbor	0.09	78	17.6	80
Columbia above The Dalles	0.22	145	22.6	84
Kootenai	0.45	182	35.5	93
Clark Fork	0.14	82	19.3	71
Flathead	0.29	134	28.5	81
Pend Oreille River Basin above Waneta Dam	0.18	95	24.8	77
Salmon River Basin	0.31	198	21.6	77
Upper Snake Tributaries	0.04	27	21.8	83
Clearwater	0.21	104	31.1	78
Willamette River above Portland	0.28	123	49.9	79

Grand Coulee Reservoir is at 1,279.1 feet (9-3-15) and has refilled 1.5 feet over the last week. Outflows at Grand Coulee have ranged between 61.0 and 106.3 Kcfs over the last week. The midnight August 31st elevation was 1,277.5 feet.

Draft of 2015 CSS Annual Report

A draft of the 2015 CSS Annual Report has been posted to the FPC Web site. Please have your comments to Michele DeHart by October 15.

The Libby Reservoir is currently at elevation 2,440.5 feet (9-3-15) and has drafted 0.6 feet over the previous week. Daily average outflows at Libby Dam have been 6.1 to 7.2 Kcfs over the last week. The midnight August 31st elevation was 2,440.7 feet.

Hungry Horse is currently at an elevation of 3,540.8 feet (9-3-15) and drafted 1.3 feet over the last week. Outflows at Hungry Horse have been 2.4 to 2.5 Kcfs over the last week. The midnight August 31st elevation was 3,541.4 feet.

Dworshak is currently at an elevation of 1,531.1 feet (9-3-15) and drafted 5.5 feet over the last week. Outflows have been 5.8 Kcfs over the last week. The midnight August 31st elevation was 1,533.4 feet.

The Brownlee Reservoir was at an elevation of 2,055.6 feet on September 3, 2015, and has drafted 0.6 feet over the last week. Hells Canyon outflows have ranged between 7.7 and 9.6 Kcfs over the last 4 days.

The Summer Biological Opinion flow period began on June 21st and ended on August 31st, with a flow objective of 50 Kcfs. Over the Summer Flow Period, flows at Lower Granite Dam have averaged 25.9 Kcfs.

The Summer Biological Opinion Flow Objective (which began July 1st and ended on August 31st) was 200 Kcfs at McNary Dam. Over the summer flow period, flows at McNary have averaged 142.6 Kcfs.

Spill

The 2015 summer fish spill program ended at midnight on August 31st.

Until the spill program ended, Lower Granite and Little Goose dams continued at reduced spill levels—spilling all water in excess of that needed to operate one turbine unit. Daily average spill at Lower Granite Dam ranged from 6.2 to 7.9 Kcfs while that at Little Goose Dam ranged from 5.5 Kcfs to 7.2 Kcfs.

Summer spill volumes at Lower Monumental Dam were equal to all flow in excess of the amount needed to operate one turbine unit. Daily average spill ranged from 6.0 Kcfs to 7.7 Kcfs. At Ice Harbor Dam spill for the remainder of the summer is supposed to be 45 cfs/gas cap. However, flows are sufficiently low that the 45 Kcfs/gas cap spill condition is not implementable. Spill is occurring as all flow in excess of the amount needed to operate one turbine unit. Spill averaged from 8.8 Kcfs to 10.2 Kcfs at this project.

Project	Summer Spill Level (June 21–August 31) Day/Night
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	45 Kcfs/Gas Cap

At the middle Columbia River projects spill occurred to summer spill levels as described in the 2015 FOP. At Bonneville Dam low flows at times are precluding the stated spill levels, particularly the 121 Kcfs during nighttime hours. During these times spill is equal to all flow in excess of that needed to meet minimum project operations.

Project	Summer Spill Level (June 16–August 31) Day/Night
McNary	50%/50%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	**June 16–Aug 31:** 85 Kcfs/121 Kcfs and 95 Kcfs/95 Kcfs

High temperatures and low fish numbers have precluded sampling for GBT this past week. All TDG measurements have been considerably below the waiver limits as a result of low flow and, therefore, low spill levels.

Smolt Monitoring

All Smolt Monitoring Program bypass facilities continued sampling this week, except Rock Island Dam. Sampling at Rock Island Dam was terminated after the August 31st sample. Sampling at all four Smolt Monitoring Program traps has been terminated for the season.

Passage of spring migrants (e.g., yearling Chinook, steelhead, coho, and sockeye) was extremely low at all of the SMP sites this week. Subyearling Chinook dominated the collections at all the SMP dam sites this week. When compared to last week, subyearling Chinook passage decreased at all SMP bypass facilities.

The Bonneville Dam (BON) Juvenile Fish Facility continued to operate under the high temperature sampling protocol for most of this week. The daily average temperature at the BON forebay monitor fell below 69.5°F on September 2nd, which means that normal index sampling (i.e., every day sampling) would resume thereafter. Samples at BON continued to be dominated by subyearling Chinook. In fact, subyearling Chinook have been the only target species encountered in the samples at BON since July 8th. This week's daily average passage index for subyearling Chinook was approximately 50 fish per day, which as a decrease over last week's daily average passage index of about 120 per day.

The high temperature sampling protocol remained in effect at John Day Dam (JDA) this week. Under the high temperature sampling protocol, SMP sampling at JDA is modified from a daily 24-hour sample to a condition only sample (for up to 6 hours) every Monday and Thursday. The first condition only sample occurred on Monday, June 29th. This high temperature protocol will remain in place until the daily average temperature in the forebay falls below 69.5°F. Because the high temperature protocol calls for a partial day sample, it is not appropriate to use the passage index as a measure of the magnitude of juvenile passage. Subyearling

Chinook continued to dominate the collections at John Day Dam (JDA) this week. The only other target species that were encountered in this week's samples was one Pacific lamprey macropthalmia in the sample from August 28th.

Sampling at McNary Dam (MCN) was also under the high temperature sampling protocol for much of this week. The daily average temperature at the MCN forebay monitor fell below 69.5°F on August 31st, which means that normal index sampling would resume thereafter. However, passage numbers are sufficiently low at this time that the regular target sample sizes of 300–500 fish per sample are not likely to be obtainable. This week's samples at MCN were dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 15 per day, which is a decrease over last week's daily average passage index of about 30 per day. The only spring migrants that were encountered in this week's samples were steelhead, which were encountered in the sample from August 31st. Finally, Pacific lamprey macropthalmia were encountered in two of this week's three samples, with a daily average collection of about four per day. To date, MCN has not sampled any Pacific lamprey ammocoetes for 2015.

Samples at Lower Granite Dam (LGR) continued to be dominated by subyearling Chinook juveniles this week. This week's daily average passage index for subyearling Chinook at LGR was about 550 per day, which was slightly lower than last week's daily average passage index of about 600 per day. The only other salmonids that were encountered in this week's samples were coho and steelhead, but in very low numbers. Finally, Pacific lamprey ammocoetes and macropthalmia were each encountered in one of this week's samples, ammocoetes in the sample from August 28th and macropthalmia in the sample from August 29th.

Sampling at Little Goose Dam (LGS) was limited to a 24-hour sample every other day from April 2nd to April 30th. Little Goose Dam began collecting fish for transportation on May 1st and, therefore, collections at LGS are every day for the rest of the season. Subyearling Chinook continued to dominate the samples at LGS this week. This week's daily average passage index for subyearling Chinook at LGS was about 90 fish per day, which is a decrease over last week's daily average passage index of about 200 per day. The only spring migrants that were encountered in this week's samples were coho and steelhead. Coho were encountered in only one of this week's samples (August 28th) while steelhead were encountered in three of this week's samples. Finally, both Pacific lamprey macropthalmia and ammocoetes were encountered in this week's samples. One ammocoete was encountered in the sample from August 29th while macropthalmia were encountered in six of this week's samples, with daily collections ranging from 0 to 3 fish per day.

Sampling at Lower Monumental Dam (LMN) was limited to a 24-hour sample every third day from April 4th to April 13th and every other day from April 15th to May 1st. At 1500 on May 1st, LMN began collecting fish for transportation and, therefore, collections at LMN are every day for the rest of the season. As with the last several weeks, this week's samples at LMN were dominated by subyearling Chinook, with a daily average passage index of about 25 per day, which is a decrease over last week's daily average passage index of about 50 per day. The only other salmonids that were encountered in this week's samples were steelhead, which were only encountered once (September 3rd). Finally, one Pacific lamprey macropthalmia was encountered in the sample from September 3rd.

Sampling at Rock Island Dam (RIS) ended after the August 31st sample. Over the last four days of sampling, the daily average passage index for subyearling Chinook was only 3 fish per day. The only other salmonids that were encountered in this week's samples were sockeye, although their passage numbers were even lower than subyearling Chinook. Finally, no lamprey juveniles were encountered in the last four samples at RIS.

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. No new releases were scheduled for this zone this week. However, approximately 500,000 spring

Chinook pre-smolts are scheduled for release into the Clearwater River and its tributaries, beginning on or around September 10th. These pre-smolts are 100% unmarked and are not expected to out-migrate until spring of 2016.

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 were scheduled to begin in this zone this week. No new releases of juvenile salmonids are scheduled to begin in this zone over the next 2 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 were scheduled for this zone this week and no releases are scheduled for this zone over the next 2 weeks.

Adult Passage

Fall Chinook counts began at Bonneville Dam (BON) on August 1st. Through September3rd, the 2015 cumulative adult fall Chinook count at BON is 212,618, which is about 1.5 times greater than the 2014 count of 144,628 and 1.6 times greater than the 10-year average count of 128,564. The 2015 Bonneville Dam fall Chinook jack count of 15,040 is about 88% of the 2014 count of 17,042 and 82% of the 10-year average count of 18,278. At 10,579, the cumulative adult fall Chinook count at Ice Harbor Dam (through September 3rd) is about 1.8 times greater than the 2014 count and 1.9 times greater than the 10-year average count for the same period. At Lower Granite Dam, the cumulative 2015 fall Chinook adult count (through September 3rd) is 4,825, which is about 1.5 times greater than the cumulative count for 2014 and 2.5 times greater than the 10-year average cumulative count.

Through September 3rd, the 2015 cumulative adult steelhead count at BON is 197,855, which is about 88% of the 2014 count of 224,471 and 73% of the 10-year average count of 269,514. The 2015 cumulative adult wild steelhead count at BON is 77,799, which is about 77% of the 2014 count and 83% of the 10-year average count. Daily adult steelhead counts at Lower Granite Dam (LGR) ranged from 129 to 896 adults per day last week. This year's LGR cumulative steelhead count is 15,191 (through September 3rd), which is about 78% of the 2014 count and 66% of the 10-year average count. The 2015 cumulative adult wild steelhead count at LGR is 7,405, which is about 77% of the 2014 count and 88% of the 10-year average count. At Willamette Falls, the 2015 cumulative count for steelhead is 7,152 (through August 31st). To date, this year's steelhead count is 27% of the 2014 count and 31% of the 10-year average count.

Daily adult sockeye passage numbers at BON ranged between 9 and 24 last week. Through September 3rd, the 2015 cumulative adult sockeye count at BON is 510,665, which is about 83% of the 2014 count but 2.1 times greater than the 10-year average count. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2015 cumulative adult sockeye count at McNary Dam (through September 3rd) is 278,668, which is about 51% of the 2014 count but 1.5 times greater than the 10-year average count. The LGR cumulative adult sockeye count for 2015 is 418, which is about 15% of the 2014 count and 44% of the 10-year average.

Adult coho passage at BON has increased over the last week, with daily passage numbers ranging from 220 to 1,875 per day. Through September 3rd, the cumulative adult coho count at BON is 6,143, which is about 56% of the 2014 count and 34% of the 10-year average count. Finally, through August 31st, the cumulative adult shad count at BON was 1,815,001.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From 8/22/2015 to 9/04/2015

No Releases

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 9/5/2015 to 9/17/2015

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Dworshak NFH	CH1	SP	2016	200,000	09-10-15	09-10-15	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	CH1	SP	2016	300,000	09-10-15	09-10-15	Selway River	Clearwater River M F
Nez Perce Tribe Total					**500,000**				
Grand Total					**500,000**				

CH = Chinook, ST = Steelhead, CO = Coho, SO = Sockeye, CT = Cutthroat Trout, CM = Chum

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/21/2015	117.9	0.0	115.4	1.5	113.1	0.0	116.1	0.0	120.9	0.0	122.4	1.9	119.8	2.5
08/22/2015	110.3	0.0	116.9	1.4	125.0	0.0	116.0	0.0	120.5	0.0	133.2	1.8	132.5	2.5
08/23/2015	100.9	0.0	104.8	0.0	106.0	0.0	108.0	0.0	114.3	0.0	127.7	3.7	128.3	2.5
08/24/2015	120.8	0.0	112.2	7.6	112.3	0.0	105.3	0.0	109.9	0.0	111.8	1.8	113.3	1.4
08/25/2015	131.1	0.0	124.6	16.6	125.3	0.0	117.8	0.0	121.8	0.0	122.6	1.5	119.8	1.4
08/26/2015	102.4	0.0	112.1	5.2	114.2	0.0	116.2	0.0	122.7	0.0	126.2	1.7	125.4	1.6
08/27/2015	102.0	0.0	95.2	0.0	103.7	0.0	97.1	0.0	102.5	0.0	121.9	1.4	124.6	1.6
08/28/2015	101.5	0.0	104.1	0.0	105.8	0.0	102.8	0.0	107.4	0.0	112.4	1.2	110.6	1.8
08/29/2015	88.7	0.0	89.0	0.0	86.8	0.0	79.9	0.0	83.4	0.0	82.3	1.2	82.1	2.2
08/30/2015	77.1	0.0	78.0	0.0	81.5	0.0	79.5	0.0	83.9	0.0	87.1	1.5	90.7	2.4
08/31/2015	106.3	0.0	95.3	1.2	104.3	0.0	97.2	0.0	99.7	0.0	88.8	1.6	80.2	2.5
09/01/2015	76.8	0.1	84.2	0.2	94.8	0.0	91.7	0.0	98.4	0.0	99.4	2.0	97.9	2.8
09/02/2015	71.5	0.0	73.4	0.0	83.6	0.0	78.3	0.0	81.6	0.0	88.0	1.9	90.1	2.8
09/03/2015	61.0	0.0	63.3	39.6	68.2	0.0	70.8	0.0	76.4	0.0	87.6	1.8	91.4	2.7

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/21/2015	5.2	0.0	---	7.8	18.8	5.7	17.4	4.5	18.8	6.6	18.6	9.3
08/22/2015	5.7	0.0	---	7.7	17.6	4.8	15.9	3.7	17.3	5.0	17.3	7.8
08/23/2015	5.8	0.0	---	8.0	18.5	5.8	16.9	4.7	17.3	5.0	17.6	7.8
08/24/2015	5.2	0.0	---	7.6	21.1	8.2	21.3	7.3	21.0	8.7	19.1	9.3
08/25/2015	4.6	0.0	---	7.7	16.6	4.0	18.2	5.1	19.6	7.1	20.8	11.0
08/26/2015	5.3	0.0	---	8.4	17.1	3.9	15.0	2.8	15.9	3.6	16.7	7.0
08/27/2015	5.8	0.0	---	8.3	19.4	6.8	18.2	5.6	18.1	5.7	18.4	8.6
08/28/2015	5.8	0.0	---	8.1	20.4	7.9	19.6	7.1	20.0	7.7	20.1	10.2
08/29/2015	5.8	0.0	---	8.3	19.3	6.7	19.4	7.2	19.7	7.6	19.7	10.2
08/30/2015	5.8	0.0	---	8.3	18.9	6.2	17.7	5.6	19.6	7.5	19.9	10.2
08/31/2015	5.9	0.0	---	8.3	19.0	6.3	18.1	5.5	18.3	6.0	18.4	8.8
09/01/2015	5.8	0.0	---	8.1	18.8	0.0	17.1	0.0	18.3	0.1	18.7	0.0
09/02/2015	5.8	0.0	---	8.1	17.1	0.0	16.1	0.0	16.6	0.0	13.9	0.0
09/03/2015	5.8	0.0	---	8.1	16.0	0.0	12.8	0.0	13.1	0.0	13.7	0.0

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

	McNary		John Day		The Dalles		Bonneville			
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
08/21/2015	142.9	71.8	136.4	40.9	123.2	49.3	133.7	89.8	0.8	30.7
08/22/2015	148.9	74.8	139.1	42.0	128.9	51.5	143.3	90.8	0.9	39.3
08/23/2015	152.4	76.5	148.2	44.6	134.1	53.8	144.0	96.2	0.9	34.5
08/24/2015	155.1	77.6	148.7	44.6	136.4	54.3	150.1	95.2	0.9	41.7
08/25/2015	157.2	78.8	149.9	45.0	138.1	55.2	152.7	89.2	0.9	50.2
08/26/2015	142.8	71.7	140.6	42.1	128.4	51.4	139.9	91.3	0.9	35.3
08/27/2015	160.7	80.3	140.3	42.1	128.8	51.4	141.9	94.1	0.9	34.4
08/28/2015	140.8	70.4	143.6	43.0	129.4	51.6	142.2	95.7	0.9	33.3
08/29/2015	116.6	58.4	101.6	30.4	96.9	38.7	116.0	72.2	0.8	30.5
08/30/2015	111.0	55.5	100.0	30.0	93.3	37.0	104.0	61.1	0.8	29.6
08/31/2015	117.2	58.5	111.7	33.6	101.6	40.4	111.8	68.4	0.8	30.2
09/01/2015	110.7	0.2	95.3	1.0	91.0	0.0	100.5	2.7	34.4	56.0
09/02/2015	95.3	0.0	92.8	1.1	93.0	0.0	97.7	1.4	33.2	55.7
09/03/2015	110.0	0.0	107.6	1.0	105.3	0.0	109.6	1.3	44.9	56.0

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

	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	103.8	104.0	104.5	23	---	---	---	0	105.9	106.3	106.5	24	104.4	104.8	105.1	24	104.5	104.9	105.2	24
8/22	103.8	104.1	104.2	24	---	---	---	0	104.8	105.0	105.4	24	103.0	103.6	103.9	24	102.7	103.2	103.5	24
8/23	103.3	103.8	104.0	24	---	---	---	0	104.5	104.8	105.2	23	103.2	103.8	104.2	24	102.9	103.4	103.8	24
8/24	103.2	103.5	103.8	24	---	---	---	0	103.9	104.3	104.8	24	103.0	103.4	103.7	24	103.2	103.6	103.9	24
8/25	102.6	102.8	102.9	24	---	---	---	0	102.9	103.2	104.0	24	102.6	103.0	103.3	24	103.0	103.5	103.9	24
8/26	103.0	103.8	104.0	24	---	---	---	0	103.7	104.1	105.1	24	102.6	103.1	104.4	24	103.0	103.4	103.7	24
8/27	103.8	103.9	104.1	24	---	---	---	0	103.7	103.9	104.0	24	102.8	103.3	104.9	24	102.9	103.4	103.8	24
8/28	103.9	104.1	104.3	24	---	---	---	0	103.9	104.1	104.4	24	103.2	103.7	105.4	24	102.8	102.9	103.2	24
8/29	103.4	103.7	104.2	24	---	---	---	0	104.1	104.6	105.0	24	104.1	104.7	105.3	24	103.4	103.6	103.7	24
8/30	103.6	103.8	104.1	24	---	---	---	0	103.1	103.5	104.0	24	103.6	104.2	104.8	24	102.7	103.0	103.3	24
8/31	104.2	104.7	106.0	24	---	---	---	0	103.1	103.3	103.6	24	103.1	103.4	104.2	24	102.1	102.2	102.2	24
9/1	104.1	104.7	105.3	24	---	---	---	0	102.9	103.1	103.3	24	103.3	104.0	105.2	24	102.5	103.0	103.3	24
9/2	103.7	104.1	104.9	24	---	---	---	0	103.3	103.5	103.6	24	104.1	104.5	105.6	24	102.5	102.8	103.0	24
9/3	102.2	102.8	103.2	23	---	---	---	0	103.4	103.5	103.6	23	103.2	103.6	104.0	23	102.6	103.0	103.3	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	104.1	104.6	107.1	24	104.3	104.8	105.1	24	105.1	105.8	106.0	24	106.3	107.3	108.0	24	105.8	106.7	107.5	24
8/22	102.9	103.7	107.7	24	102.5	102.9	103.2	24	102.7	103.2	103.5	24	102.9	103.2	104.0	24	102.7	103.0	103.6	24
8/23	102.4	103.0	103.4	24	103.0	103.6	104.1	24	103.2	103.9	104.4	24	103.0	103.1	103.4	24	102.6	102.8	103.0	24
8/24	104.3	106.4	108.0	24	102.9	103.3	103.7	23	103.1	103.5	104.0	23	103.0	103.2	103.3	24	102.6	102.7	102.8	24
8/25	106.8	107.8	108.0	24	103.1	103.8	104.2	24	103.2	103.8	104.2	24	102.9	103.0	103.1	24	102.5	102.7	102.7	24
8/26	104.0	105.2	107.6	24	103.9	104.4	104.9	23	104.0	104.6	105.2	23	102.7	103.0	103.3	24	102.2	102.4	102.6	24
8/27	102.9	103.3	104.3	24	103.6	104.0	104.4	24	103.8	104.2	104.4	24	103.2	103.5	103.8	24	102.7	102.9	103.1	24
8/28	102.6	102.8	103.9	24	103.1	103.4	103.7	24	103.5	103.7	103.9	24	104.0	104.2	104.4	24	103.4	103.7	103.9	24
8/29	103.8	104.4	105.7	24	103.2	103.5	103.6	24	103.5	103.7	104.0	24	104.3	104.7	104.9	24	103.6	103.9	104.2	24
8/30	103.4	104.2	105.1	24	101.9	102.1	102.5	24	102.2	102.5	103.0	24	102.6	102.9	103.3	24	102.1	102.5	103.0	24
8/31	102.4	103.1	107.6	24	101.1	101.3	101.5	24	101.4	101.6	101.8	24	101.9	102.0	102.2	24	101.4	101.6	101.9	24
9/1	103.6	104.2	105.1	24	101.2	101.6	101.9	24	101.4	101.7	101.8	24	101.4	101.6	101.6	24	101.3	101.5	101.6	24
9/2	104.2	105.3	106.6	24	101.4	101.7	102.0	24	101.0	101.3	101.5	24	101.2	101.4	101.6	24	101.0	101.3	101.5	24
9/3	104.4	105.3	106.4	23	101.5	102.0	102.6	23	101.1	101.7	102.2	23	100.5	100.7	100.8	23	100.4	100.6	101.1	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	105.9	106.4	107.4	24	106.0	106.6	108.0	24	103.1	103.6	104.5	24	102.7	103.1	103.6	24	102.3	102.9	103.5	24
8/22	103.1	103.5	104.4	24	103.2	103.6	104.5	24	104.3	106.0	106.7	24	102.7	103.8	104.6	24	100.8	101.7	102.3	24
8/23	102.6	103.2	103.5	24	102.6	103.2	103.5	24	106.0	106.6	107.3	24	105.0	105.4	107.3	24	103.3	104.3	104.7	24
8/24	102.8	103.2	103.4	24	102.8	103.2	103.4	24	104.9	105.5	105.9	24	104.5	104.9	106.4	24	103.9	104.6	105.1	24
8/25	102.6	103.2	103.5	24	102.6	103.2	103.4	24	103.9	104.7	105.5	24	102.9	103.2	103.5	24	101.4	102.9	103.6	24
8/26	102.5	102.9	103.1	24	102.5	102.9	103.1	24	104.0	104.7	105.4	24	102.9	103.3	103.5	24	102.1	102.9	103.3	24
8/27	102.7	103.3	103.6	24	102.8	103.3	103.5	24	103.4	103.5	104.0	14	102.7	102.8	103.1	14	102.4	102.5	103.1	14
8/28	103.3	103.7	104.3	24	103.3	103.6	104.2	24	---	---	---	0	---	---	---	0	---	---	---	0
8/29	103.8	104.1	104.2	24	103.8	104.2	104.5	24	---	---	---	0	---	---	---	0	---	---	---	0
8/30	102.3	102.8	103.5	24	102.5	102.9	103.5	24	---	---	---	0	---	---	---	0	---	---	---	0
8/31	101.7	101.9	101.9	24	101.7	101.8	101.9	24	---	---	---	0	---	---	---	0	---	---	---	0
9/1	101.5	101.7	102.0	24	101.5	101.8	101.9	24	---	---	---	0	---	---	---	0	---	---	---	0
9/2	100.9	101.2	101.8	24	101.0	101.3	101.8	24	---	---	---	0	---	---	---	0	---	---	---	0
9/3	100.4	100.5	100.8	22	100.3	100.5	100.8	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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	102.5	103.0	103.5	24	---	---	---	0	100.0	100.5	101.1	24	101.5	103.0	104.6	24	101.4	101.6	102.7	13
8/22	101.0	101.6	102.0	24	---	---	---	0	99.0	99.3	99.6	24	100.3	101.5	102.6	24	100.3	101.3	102.5	23
8/23	103.4	104.2	104.4	24	---	---	---	0	99.3	99.7	100.0	24	100.4	101.5	102.6	24	101.0	102.3	103.5	24
8/24	104.2	104.6	105.0	24	---	---	---	0	99.5	99.8	100.8	24	100.6	101.7	102.7	24	100.9	101.7	102.5	23
8/25	103.2	103.5	103.8	24	---	---	---	0	99.4	99.7	100.3	24	100.7	101.7	103.2	20	100.9	102.0	103.0	24
8/26	103.0	103.3	103.6	24	---	---	---	0	99.4	99.8	100.2	24	101.8	101.8	102.6	9	100.9	101.9	103.0	23
8/27	102.5	102.6	103.1	14	---	---	---	0	99.3	99.6	100.0	24	102.3	102.3	103.5	8	100.6	101.6	102.6	24
8/28	---	---	---	0	---	---	---	0	99.4	99.6	99.8	24	100.4	101.1	101.8	23	100.3	100.8	101.3	24
8/29	---	---	---	0	---	---	---	0	99.9	100.3	100.5	24	100.7	101.3	102.1	24	100.1	100.4	100.6	24
8/30	---	---	---	0	---	---	---	0	99.4	99.7	100.0	24	100.3	101.2	102.1	24	99.9	100.4	100.9	24
8/31	---	---	---	0	---	---	---	0	99.2	99.7	100.1	24	100.4	101.8	102.9	24	100.7	101.9	103.0	23
9/1	---	---	---	0	---	---	---	0	100.0	100.6	101.1	24	100.9	102.4	103.7	24	101.5	102.9	104.4	23
9/2	---	---	---	0	---	---	---	0	99.9	100.1	100.9	24	100.1	100.7	101.3	24	100.3	100.8	101.5	23
9/3	---	---	---	0	---	---	---	0	99.5	99.7	99.9	23	99.8	100.5	101.2	23	100.3	101.2	102.2	23

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	102.3	104.0	105.2	24	99.4	99.7	99.9	24	103.5	104.0	104.3	24	101.5	101.8	102.0	24	105.7	106.3	107.0	24
8/22	101.8	103.6	105.0	24	98.7	98.9	99.2	24	102.4	103.1	103.4	24	102.1	102.5	103.2	24	104.7	105.4	105.9	24
8/23	101.6	102.9	103.9	24	101.3	103.7	104.5	24	103.3	104.0	105.4	24	103.0	103.6	103.9	24	105.5	106.5	107.3	24
8/24	101.6	103.0	104.0	24	100.1	100.9	103.1	24	105.4	105.9	106.5	24	103.7	104.2	104.5	24	107.8	108.4	108.9	24
8/25	102.1	104.1	105.6	24	98.2	98.6	99.4	24	103.1	103.7	105.0	24	101.8	102.4	103.4	24	106.0	106.9	107.5	24
8/26	101.6	102.9	104.0	24	99.2	99.2	99.4	5	102.3	102.9	104.5	24	99.6	100.2	100.8	24	103.0	103.4	103.7	24
8/27	102.0	103.9	105.3	24	---	---	---	0	103.3	104.4	104.8	24	98.1	98.6	99.3	24	105.1	106.7	107.3	24
8/28	101.7	102.8	103.7	24	98.7	98.8	99.1	13	104.3	104.5	104.7	24	98.6	99.0	100.1	23	106.6	106.8	107.1	24
8/29	101.7	102.4	103.2	24	99.0	99.3	99.6	24	104.1	104.5	104.8	24	101.9	103.8	105.7	24	106.9	107.2	107.5	24
8/30	101.2	102.1	102.8	24	98.5	98.8	99.1	24	103.6	103.7	104.0	24	99.2	99.7	100.2	24	105.9	106.2	106.4	24
8/31	102.5	104.6	106.1	24	98.8	99.3	99.4	24	103.9	104.3	104.5	24	99.4	100.0	100.7	24	105.8	106.2	106.5	24
9/1	102.9	105.1	106.9	24	99.4	99.7	100.0	24	98.9	99.5	103.6	24	100.6	100.8	100.8	24	100.0	100.6	105.9	24
9/2	101.5	102.3	103.1	24	99.1	99.4	99.8	24	98.4	98.7	98.9	24	100.3	100.5	101.0	24	99.0	99.3	99.5	24
9/3	101.2	102.1	103.4	22	98.4	98.5	98.8	23	97.7	97.8	98.1	23	99.2	99.5	100.1	23	98.1	98.4	98.9	23

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

	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	104.8	105.1	105.3	24	106.4	107.4	109.1	24	103.9	104.4	104.7	24	107.1	107.9	108.6	24	---	---	---	0
8/22	103.8	104.0	104.3	24	104.4	105.0	105.5	24	102.2	102.5	102.9	24	106.1	107.0	107.8	24	---	---	---	0
8/23	104.9	105.2	105.5	24	104.6	105.2	105.9	24	103.6	103.8	104.1	24	106.2	106.9	107.8	24	---	---	---	0
8/24	103.4	103.9	104.6	24	106.9	108.1	109.2	24	103.5	103.7	103.9	24	106.4	107.3	107.8	24	---	---	---	0
8/25	101.8	102.3	102.7	24	106.3	108.0	109.3	24	102.8	103.3	103.8	24	107.9	109.4	110.3	24	---	---	---	0
8/26	102.5	102.8	103.0	24	104.4	105.0	105.6	24	101.7	101.9	102.1	24	105.6	106.3	106.9	24	---	---	---	0
8/27	101.8	102.0	102.4	24	104.9	106.7	107.4	24	101.7	102.0	102.4	24	106.2	107.5	108.6	24	---	---	---	0
8/28	103.0	103.6	104.2	24	106.8	107.0	107.2	24	103.1	103.4	104.0	23	107.6	108.0	108.6	24	---	---	---	0
8/29	104.1	104.6	104.9	24	106.9	107.3	107.5	24	103.2	103.9	104.3	24	107.1	107.5	107.7	24	---	---	---	0
8/30	103.1	103.4	103.6	24	105.5	106.2	106.5	24	102.5	103.1	103.2	24	106.8	107.1	107.6	24	---	---	---	0
8/31	102.2	102.2	102.4	23	104.6	105.1	105.8	24	102.1	102.2	102.3	24	106.5	107.0	107.8	24	---	---	---	0
9/1	101.5	101.7	102.0	24	101.1	101.6	104.2	24	102.2	102.4	102.5	24	103.0	103.8	105.8	24	---	---	---	0
9/2	100.2	100.7	101.0	24	100.9	101.3	102.5	24	101.6	101.8	102.1	24	101.9	102.4	103.4	24	---	---	---	0
9/3	100.0	100.2	100.3	23	100.0	100.4	101.2	23	100.8	100.9	101.0	23	101.3	102.0	103.2	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

	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
8/21	103.6	103.9	104.6	24	113.5	114.1	114.9	24	102.3	102.6	103.1	24	111.6	112.0	112.4	24	103.2	103.5	104.0	24
8/22	102.3	102.8	103.4	24	113.8	114.5	115.3	24	101.6	102.4	102.9	24	111.5	111.8	112.1	24	103.4	104.4	105.2	24
8/23	102.5	103.2	103.8	24	114.5	115.4	115.8	24	102.9	103.5	104.0	24	111.7	112.7	113.1	24	107.0	107.7	108.1	24
8/24	102.1	102.3	103.1	24	115.2	115.7	116.1	24	103.1	103.4	103.7	24	111.4	112.6	113.1	24	107.0	107.3	107.7	24
8/25	102.2	102.4	102.6	24	115.2	115.8	116.2	24	102.6	103.1	103.5	24	111.8	112.8	113.2	24	106.2	106.4	106.5	24
8/26	102.8	103.0	104.0	24	114.2	114.9	115.3	24	102.6	103.0	103.5	24	110.7	111.5	112.1	24	106.9	107.3	107.6	24
8/27	103.3	103.8	104.8	24	114.6	115.7	116.1	24	102.6	103.0	103.2	24	110.3	111.5	112.0	24	106.7	107.2	107.6	24
8/28	104.2	104.7	105.2	24	113.3	114.4	115.4	24	103.7	104.3	105.2	24	111.3	112.2	112.9	24	106.9	107.3	107.5	24
8/29	103.9	104.8	105.6	24	112.4	112.8	113.2	24	105.0	105.3	105.7	24	109.2	110.1	111.1	24	108.0	108.3	108.6	24
8/30	101.9	102.2	102.6	24	112.5	112.7	113.0	24	104.1	104.3	104.5	24	108.0	108.4	108.8	24	105.5	105.9	106.6	24
8/31	101.0	101.3	101.4	24	112.6	112.9	113.1	24	103.9	104.2	104.4	24	107.8	108.2	108.8	24	105.6	106.3	106.5	24
9/1	101.2	101.3	101.4	24	102.4	103.7	112.5	24	103.7	103.9	104.1	24	101.6	104.2	105.1	24	106.8	107.1	107.3	24
9/2	100.6	100.8	101.2	24	100.3	100.5	100.8	24	102.9	103.1	103.5	24	103.0	103.3	103.7	24	104.3	105.6	106.8	24
9/3	99.7	99.9	100.1	23	99.9	100.3	100.6	23	102.2	102.3	102.5	23	102.6	102.9	103.3	23	101.0	101.2	101.5	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
8/21	109.7	110.1	110.6	24	104.3	104.9	106.5	24	115.4	115.6	115.9	24	111.3	112.5	113.4	24	114.9	116.0	117.0	24
8/22	109.9	110.6	110.9	24	103.0	103.3	103.6	24	115.0	115.6	116.6	24	110.2	110.9	112.3	24	114.9	116.0	116.7	24
8/23	111.8	112.6	112.9	24	104.3	105.2	106.1	24	116.0	116.7	117.4	24	109.5	111.5	113.2	24	116.8	117.0	117.1	24
8/24	112.0	112.5	113.0	24	106.8	107.4	107.8	24	115.9	116.3	116.8	24	112.1	113.0	113.7	24	117.0	117.2	117.4	24
8/25	111.8	112.6	112.9	24	106.6	107.0	107.3	24	114.9	115.4	115.7	24	112.0	113.1	113.7	24	115.3	116.4	117.2	24
8/26	111.8	112.5	113.0	24	106.6	107.1	107.4	24	116.0	116.4	116.7	24	112.3	114.1	115.4	24	115.1	116.4	117.8	24
8/27	111.8	112.4	112.8	24	107.4	108.0	108.4	24	116.9	117.1	117.7	24	113.6	115.2	116.5	24	116.2	117.2	117.5	24
8/28	112.1	112.8	113.4	24	107.6	108.4	109.6	24	117.4	117.9	118.3	24	114.5	115.7	116.9	24	117.1	117.3	117.6	24
8/29	111.7	112.0	112.8	24	108.2	109.0	109.8	24	116.3	117.0	118.3	24	112.9	114.6	116.4	24	114.0	115.1	117.4	24
8/30	110.6	111.0	111.6	24	106.9	107.3	107.7	24	116.4	116.8	117.2	24	109.4	110.0	110.5	24	112.6	112.6	112.7	24
8/31	110.6	111.1	111.4	24	106.8	107.2	107.4	24	117.2	117.8	118.2	24	112.7	114.4	115.4	24	113.0	113.4	113.6	24
9/1	107.2	108.1	110.5	24	106.7	106.8	107.3	24	111.1	113.4	117.0	24	114.2	115.2	115.6	24	108.1	109.1	111.7	24
9/2	105.0	105.7	106.4	24	105.2	105.6	106.0	24	107.5	107.8	108.2	24	106.9	108.1	112.3	24	107.3	107.8	109.0	24
9/3	101.7	102.1	102.5	23	104.5	104.7	104.9	23	107.1	107.5	108.1	23	105.1	105.7	106.0	23	108.2	108.9	110.4	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center Updated: 9/4/2015 6:58

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.
See Sampling Comments: http://www.fpc.org/currentDaily/smpcomments.htm
For clip information see: http://www.fpc.org/CurrentDaily/catch.htm
For sockeye and yearling chinook (Snake only) race information see: http://www.fpc.org/smoltqueries/currentsmpsubmitdata.asp

				COMBINED YEARLING CHINOOK								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/21/2015	*	---	---	---	---	0	0	0	0	0	0	0
08/22/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/23/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/24/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/25/2015	*	---	---	---	---	0	0	0	0	0	0	0
08/26/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/27/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/28/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/29/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/30/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/31/2015	*	---	---	---	---	0	0	0	0	0	---	0
09/01/2015	*	---	---	---	---	0	0	0	---	---	0	---
09/02/2015	*	---	---	---	---	0	0	0	---	0	---	0
09/03/2015	*	---	---	---	---	0	0	0	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YTD		**40,054**	**68,276**	**7,458**	**1,081**	**1,769,194**	**1,156,885**	**1,126,664**	**16,457**	**1,340,101**	**664,378**	**1,712,479**

				COMBINED SUBYEARLING CHINOOK								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/21/2015	*	---	---	---	---	783	105	50	7	58	40	134
08/22/2015	*	---	---	---	---	376	78	73	9	---	---	---
08/23/2015	*	---	---	---	---	507	101	59	5	42	---	84
08/24/2015	*	---	---	---	---	657	178	71	2	---	---	---
08/25/2015	*	---	---	---	---	684	390	30	4	16	4	90
08/26/2015	*	---	---	---	---	648	393	37	2	---	---	---
08/27/2015	*	---	---	---	---	583	175	20	5	8	---	168
08/28/2015	*	---	---	---	---	622	70	27	4	---	6	---
08/29/2015	*	---	---	---	---	770	170	13	2	0	---	64
08/30/2015	*	---	---	---	---	811	196	37	5	---	---	---
08/31/2015	*	---	---	---	---	637	60	23	1	8	---	26
09/01/2015	*	---	---	---	---	407	39	17	---	---	12	---
09/02/2015	*	---	---	---	---	264	20	41	---	40	---	66
09/03/2015	*	---	---	---	---	322	46	24	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**8,071**	**2,021**	**522**	**46**	**172**	**62**	**632**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**577**	**144**	**37**	**4**	**25**	**16**	**90**
YTD		**1**	**114**	**1,292**	**2,077**	**1,151,134**	**959,863**	**331,963**	**20,817**	**1,563,107**	**826,264**	**2,189,083**

Two-Week Summary of Passage Indices

				COMBINED COHO								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/21/2015	*	---	---	---	---	0	1	0	0	0	0	0
08/22/2015	*	---	---	---	---	0	3	0	0	---	---	---
08/23/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/24/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/25/2015	*	---	---	---	---	0	0	0	0	0	0	0
08/26/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/27/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/28/2015	*	---	---	---	---	3	2	0	0	---	0	---
08/29/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/30/2015	*	---	---	---	---	3	0	0	0	---	---	---
08/31/2015	*	---	---	---	---	0	0	0	0	0	---	0
09/01/2015	*	---	---	---	---	3	0	0	---	---	0	---
09/02/2015	*	---	---	---	---	0	0	0	---	0	---	0
09/03/2015	*	---	---	---	---	0	0	0	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**9**	**6**	**0**	**0**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
YTD		**0**	**0**	**0**	**47**	**40,407**	**60,310**	**37,631**	**14,704**	**66,248**	**70,109**	**692,863**

				COMBINED STEELHEAD								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/21/2015	*	---	---	---	---	0	1	0	0	0	1	0
08/22/2015	*	---	---	---	---	0	1	0	0	---	---	---
08/23/2015	*	---	---	---	---	0	0	1	0	8	---	0
08/24/2015	*	---	---	---	---	9	1	0	1	---	---	---
08/25/2015	*	---	---	---	---	6	3	0	0	0	0	0
08/26/2015	*	---	---	---	---	0	3	0	0	---	---	---
08/27/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/28/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/29/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/30/2015	*	---	---	---	---	0	3	0	0	---	---	---
08/31/2015	*	---	---	---	---	0	1	0	0	8	---	0
09/01/2015	*	---	---	---	---	0	0	0	---	---	0	---
09/02/2015	*	---	---	---	---	0	1	0	---	0	---	0
09/03/2015	*	---	---	---	---	2	0	1	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**17**	**14**	**2**	**1**	**16**	**1**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**0**
YTD		**2,567**	**40,594**	**672**	**11,678**	**1,300,219**	**1,073,526**	**576,053**	**12,756**	**456,625**	**201,081**	**1,021,904**

Two-Week Summary of Passage Indices

				COMBINED SOCKEYE								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/21/2015	*	---	---	---	---	0	0	0	2	0	0	0
08/22/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/23/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/24/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/25/2015	*	---	---	---	---	0	0	0	1	0	0	0
08/26/2015	*	---	---	---	---	0	0	0	1	---	---	---
08/27/2015	*	---	---	---	---	0	0	0	1	0	---	0
08/28/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/29/2015	*	---	---	---	---	0	0	0	1	0	---	0
08/30/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/31/2015	*	---	---	---	---	0	0	0	1	0	---	0
09/01/2015	*	---	---	---	---	0	0	0	---	---	0	---
09/02/2015	*	---	---	---	---	0	0	0	---	0	---	0
09/03/2015	*	---	---	---	---	0	0	0	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**
YTD		**74**	**0**	**4**	**47**	**16,237**	**19,851**	**11,030**	**3,932**	**128,914**	**104,375**	**149,234**

				COMBINED LAMPREY JUVENILES								
		WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(Samp)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
08/21/2015	*	---	---	---	---	1	2	0	2	12	0	0
08/22/2015	*	---	---	---	---	0	1	0	0	---	---	---
08/23/2015	*	---	---	---	---	0	1	0	1	28	---	0
08/24/2015	*	---	---	---	---	0	3	0	0	---	---	---
08/25/2015	*	---	---	---	---	0	0	0	1	20	0	0
08/26/2015	*	---	---	---	---	0	1	0	1	---	---	---
08/27/2015	*	---	---	---	---	1	2	0	1	4	---	0
08/28/2015	*	---	---	---	---	1	0	0	0	---	1	---
08/29/2015	*	---	---	---	---	2	3	0	0	8	---	0
08/30/2015	*	---	---	---	---	0	3	0	0	---	---	---
08/31/2015	*	---	---	---	---	0	1	0	0	4	---	0
09/01/2015	*	---	---	---	---	0	2	0	---	---	0	---
09/02/2015	*	---	---	---	---	0	1	0	---	0	---	0
09/03/2015	*	---	---	---	---	0	3	1	---	---	---	---
09/04/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**5**	**23**	**1**	**6**	**76**	**1**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**11**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**11**	**0**	**0**
YTD		**0**	**1**	**0**	**0**	**42**	**8,207**	**2,335**	**169**	**8,991**	**19,951**	**4,105**

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:
Sample counts (Samp) are provided for juvenile lamprey at LGR. See note below for details †.
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 macropthalmia, and unidentified lamprey species.
† In 2013 it was confirmed that juvenile lamprey can escape the sample tank at LGR which would lead to unreliable estimates of collection. Therefore, only sample counts are provided in this report.

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: 9/4/15 7:00 AM

08/21/15 TO 09/04/15

		Species			
Site	Data	**CH0**	CO	ST	**Grand Total**
LGR	Sum of NumberCollected	5,649	6	12	5,667
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	0	0	5	5
	Sum of Numbertrucked	5,611	6	6	5,623
	Sum of SampleMorts	14	0	1	15
	Sum of FacilityMorts	14	0	0	14
	Sum of ResearchMorts	10	0	0	10
	Sum of TotalProjectMorts	38	0	1	39
LGS	Sum of NumberCollected	1,435	4	11	1,450
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	0	0	0	0
	Sum of Numbertrucked	1,429	4	9	1,442
	Sum of SampleMorts	5	0	0	5
	Sum of FacilityMorts	1	0	2	3
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	6	0	2	8
LMN	Sum of NumberCollected	365		2	367
	Sum of NumberBarged	0		0	0
	Sum of NumberBypassed	0		0	0
	Sum of Numbertrucked	361		2	363
	Sum of SampleMorts	4		0	4
	Sum of FacilityMorts	0		0	0
	Sum of ResearchMorts	0		0	0
	Sum of TotalProjectMorts	4		0	4
Total Sum of NumberCollected		7,449	10	25	7,484
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		0	0	5	5
Total Sum of Numbertrucked		7,401	10	17	7,428
Total Sum of SampleMorts		23	0	1	24
Total Sum of FacilityMorts		15	0	2	17
Total Sum of ResearchMorts		10	0	0	10
Total Sum of TotalProjectMorts		48	0	3	51

YTD Transportation Summary

Source: Fish Passage Center Updated: 9/4/15 7:00 AM

TO: 09/04/15

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	681,399	1,150,138	26,321	10,915	826,781	2,695,554
	Sum of NumberBarged	656,833	473,291	22,805	10,483	363,282	1,526,694
	Sum of NumberBypassed	8,363	676,470	3,499	160	463,123	1,151,615
	Sum of NumberTrucked	14,445	0	6	0	43	14,494
	Sum of SampleMorts	241	43	1	8	32	325
	Sum of FacilityMorts	1,492	318	10	257	261	2,338
	Sum of ResearchMorts	25	16	0	7	40	88
	Sum of TotalProjectMorts	1,758	377	11	272	333	2,751
LGS	Sum of NumberCollected	644,988	807,530	42,069	13,866	748,830	2,257,283
	Sum of NumberBarged	639,246	545,396	40,318	13,819	535,296	1,774,075
	Sum of NumberBypassed	136	261,966	1,720	40	213,220	477,082
	Sum of NumberTrucked	3,115	0	5	0	26	3,146
	Sum of SampleMorts	146	21	0	2	14	183
	Sum of FacilityMorts	2,345	147	26	5	274	2,797
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,491	168	26	7	288	2,980
LMN	Sum of NumberCollected	174,224	642,436	22,120	6,690	322,642	1,168,112
	Sum of NumberBarged	172,399	581,534	21,816	6,640	285,463	1,067,852
	Sum of NumberBypassed	617	60,572	300	30	36,797	98,316
	Sum of NumberTrucked	512	0	0	0	2	514
	Sum of SampleMorts	68	45	2	0	39	154
	Sum of FacilityMorts	628	315	2	20	341	1,306
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	696	360	4	20	380	1,460
Total Sum of NumberCollected		1,500,611	2,600,104	90,510	31,471	1,898,253	6,120,949
Total Sum of NumberBarged		1,468,478	1,600,221	84,939	30,942	1,184,041	4,368,621
Total Sum of NumberBypassed		9,116	999,008	5,519	230	713,140	1,727,013
Total Sum of NumberTrucked		18,072	0	11	0	71	18,154
Total Sum of SampleMorts		455	109	3	10	85	662
Total Sum of FacilityMorts		4,465	780	38	282	876	6,441
Total Sum of ResearchMorts		25	16	0	7	40	88
Total Sum of TotalProjectMorts		4,945	905	41	299	1,001	7,191

Cumulative Adult Passage at Mainstem Dams Through: 09/03

		Spring Chinook						Summer Chinook						Fall Chinook					
	END	2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.	
DAM	DATE	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	09/03	220480	13314	188083	26094	132065	23978	161735	17730	109734	25342	87270	20126	212618	15040	144628	17042	128564	18278
TDA	09/03	194116	12307	143142	21080	101070	20309	123915	15458	96134	19525	74749	16059	103243	10940	62560	9256	54941	10743
JDA	09/03	166015	11514	123224	19103	88117	19021	108768	10988	86033	17655	66973	16286	70249	5477	34404	5274	31882	7978
MCN	09/03	156151	8767	107147	16033	79364	15788	96287	8723	87974	17022	63834	12059	43027	3186	20507	4277	19516	4072
IHR	09/03	116462	5745	79298	12428	55061	10384	21408	2807	17433	4474	17149	4587	10579	711	5809	646	5484	1521
LMN	09/03	111511	8697	79942	14020	55282	9560	17764	4835	16064	8136	18788	5227	8535	1244	4373	623	4029	1563
LGS	09/03	105124	8553	77966	13649	51473	10681	15494	4464	17058	7477	17984	5853	7159	841	3493	339	3139	769
LGR	09/03	104873	8379	79167	13732	50576	11930	14958	4222	14668	7106	15904	6380	4825	720	3229	456	1963	543
PRD	09/02	27716	1570	23742	2649	15720	1631	78139	3550	78434	4889	53883	2434	8854	630	4306	2114	4279	1982
WAN	09/02	25982	1077	0	0	15431	2202	76636	2180	0	0	49981	2003	7870	473	0	0	2956	1649
RIS	09/02	31750	1092	23247	2934	15126	2669	88691	2476	77982	6494	51644	5343	6161	394	3223	2093	2292	1542
RRH	09/02	15244	609	12376	2377	6372	1183	76246	1937	58569	5017	40639	3786	4753	241	2777	1553	1912	962
WEL	09/01	19971	1520	15377	2544	5959	1398	62129	3311	49255	5989	31068	3500	881	46	409	301	401	198
WFA	08/31	51046	2042	30071	1598	33725	1204	0	0	0	0	0	0	123	11	208	31	149	31

		Coho						Sockeye			Steelhead						Lamprey		
	END	2015		2014		10-Yr Avg.				10-Yr			10-Yr	Wild	Wild	10-Yr			10-Yr
DAM	DATE	Adult	Jack	Adult	Jack	Adult	Jack	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.
BON	09/03	6143	885	10941	1253	17867	1112	510665	614174	241300	197855	224471	269514	77799	100911	93542	37742	31172	20601
TDA	09/03	925	350	1605	437	3184	570	429536	586159	206905	85506	100904	135010	37786	50615	51449	11802	10812	5697
JDA	09/03	491	132	537	113	1821	429	365871	557509	205459	45288	56984	102198	20519	27326	37676	7617	7794	5121
MCN	09/03	271	87	94	29	437	92	278668	545987	181615	37044	50118	73011	16831	24311	26310	1529	1510	1494
IHR	09/03	8	1	12	6	11	3	1052	2390	742	18201	25315	41206	7434	9072	11402	707	676	240
LMN	09/03	0	0	6	3	2	0	885	2803	898	17756	29467	37651	8178	11789	11818	234	213	74
LGS	09/03	0	0	3	1	0	0	577	2809	879	10164	16697	21430	5208	8418	7677	109	126	36
LGR	09/03	-1	0	0	0	0	0	418	2751	943	15191	19348	22917	7405	9599	8443	55	75	11
PRD	09/02	33	5	4	0	73	10	301224	608122	215739	7097	8217	9856	0	0	0	5992	5690	2985
WAN	09/02	37	4	0	0	26	2	296303	0	191339	6872	0	9747	0	0	0	4462	0	1548
RIS	09/02	1	0	0	0	4	4	263963	581033	212277	5892	5521	7855	2853	2861	3707	0	2285	797
RRH	09/02	2	0	0	0	0	0	215790	492786	181093	4120	3264	5729	1939	1644	2507	0	2931	529
WEL	09/01	0	0	0	0	0	0	186440	490609	174931	3079	2313	3353	1415	1216	1502	0	5	3
WFA	08/31	6	14	13	5	51	42	0	0	0	7152	26690	23288	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.

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