847 NE 19th Ave., Suite 250
Portland, OR 97232
(503) 833-3900

Fish Passage Center

Weekly Report #16–26

September 9, 2016

Starting September 9, the weekly reports will be published every other week; the next report will be September 23.

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 42% and 149% of average at individual sub-basins over September. Precipitation above The Dalles has been 121% of average over early September. Over the 2016 water year, precipitation has ranged between 85% and 104% of average.

Table 1. Summary of September precipitation and cumulative October through September 7th precipitation with respect to average (1981–2010), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2016 September 1–7, 2016		Water Year 2016 October 1, 2015 to September 7, 2016	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.73	149	35.2	97
Snake River above Ice Harbor	0.23	97	19.5	89
Columbia above The Dalles	0.38	121	25.3	95
Kootenai	0.74	144	34.9	96
Clark Fork	0.58	141	22.8	85
Flathead	0.55	103	36.0	103
Pend Oreille River Basin above Waneta Dam	0.54	119	30.1	95
Salmon River Basin	0.46	148	24.8	88
Upper Snake Tributaries	0.16	42	18.7	95
Clearwater	0.45	104	37.9	95
Willamette River above Portland	0.46	95	67.4	104

Grand Coulee Reservoir is at 1,278.1 feet (9-8-16) and refilled 0.7 feet over the last week. Outflows at Grand Coulee have ranged between 51.1 and 66.4 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,446.2 feet (9-8-16) and has drafted 0.3 feet over the previous week. Daily average outflows at Libby Dam have been 6.0-6.5 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,552.8 feet (9-8-16) and has drafted 0.9 feet over the last week. Outflows at Hungry Horse have been 2.2-2.3 Kcfs over the last week.

Dworshak is currently at an elevation of 1,528.0 feet (9-8-16) and has drafted 4.5 feet over the last week. Dworshak outflows over the last week have been 6.2 Kcfs.

The Brownlee Reservoir was at an elevation of 2,050.9 feet on September 8th, 2016, and has drafted 0.2 ft. over the last week. Ouflows at Hells Canyon have ranged between 7.1 and 14.1 Kcfs over the last week.

The Summer Biological Opinion flow period began on June 21st and ended August 31st with a flow objective of 50.4 Kcfs at Lower Granite. Over the Summer Flow Period, flows at Lower Granite Dam averaged 31.0 Kcfs

The Summer Biological Opinion Flow Objective was 200 Kcfs at McNary Dam (began July 1st and ended August 31st) . Over the Summer Flow Period, flows at McNary averaged 148.9 Kcfs.

Smolt Monitoring

Smolt Monitoring Program (SMP) sampling was ongoing at most SMP bypass facilities this week. High temperature sampling protocols were lifted at Bonneville, John Day, and McNary dams this week.

The high temperature sampling protocol was lifted at Bonneville Dam (BON) on September 5th, at which

time every day sampling resumed. Subyearling Chinook were the only salmonids encountered in this week's samples at BON. This week's daily average passage index for subyearling Chinook at BON was 65 per day, which is an increase over last week's daily average passage index of about 20 subyearlings per day. No lamprey juveniles were encountered at BON this week.

The high temperature sampling protocol remained in effect at John Day Dam (JDA) until September 8th, when the daily average temperature in the JDA forebay dropped below 69.5°F. With forebay temperatures below 69.5°F, every-other-day sampling has resumed at JDA and will remain either until temperatures increase to above 70°F or until September 15th when sampling at JDA is scheduled to end for the 2016 season. Because the high temperature protocol at JDA calls for a partial sample (i.e., 6-hour sample), it is not appropriate to use the passage index as a measure of magnitude of juvenile passage. Subyearling Chinook were the only salmonids encountered in this week's two condition samples. Furthermore, no lamprey juveniles were sampled at JDA this week.

The high temperature sampling protocol was lifted at McNary Dam (MCN) on September 3rd, at which time sample rates could be increased to accomplish a total sample count in the 300-500 fish range. This week's samples at MCN were dominated by subyearling Chinook, with a daily average passage index of about 10 per day. This is lower than last week's daily average passage index of about 50 subyearling Chinook per day. No spring migrants were encountered at MCN this week. Pacific lamprey macropthalmia were encountered in every sample this week, with a daily average collection of about 12 per day.

This week's samples at Lower Granite Dam (LGR) were again dominated by subyearling Chinook, with a daily average passage index of approximately 300 per day. This is an increase over last week's daily average passage index of about 180 subyearling Chinook per day. The only spring migrants that were encountered in this week's samples were steelhead, but in very low numbers. Finally, Pacific lamprey macropthalmia were encountered in two of this week's samples (September 3rd and 6th) and no ammocoetes were encountered.

Subyearling Chinook dominated this week's collections at Little Goose Dam (LGS). This week's daily average passage index for subyearling Chinook at LGS was about 160 per day, which is lower than last week's daily passage index of about 220. The only spring migrants that were encountered in this week's samples were steelhead, but in very low numbers. Finally, Pacific macropthalmia were encountered every day this week, with a daily average collection of four fish per day. No pacific ammocoetes were encountered this week.

This week's samples at Lower Monumental Dam (LMN) were again dominated by subyearling Chinook, with a daily average passage index of only about 40 per day, which is higher than last week's daily average passage of about 15 subyearlings per day. The only spring migrants that were encountered in this week's samples at LMN were yearling Chinook, which were encountered in only one sample (September 6th). Finally, Pacific lamprey macropthalmia were encountered in three of this week's samples, but in low numbers.

Hatchery Release

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. No new releases were scheduled for this zone this week. Furthermore, no releases are 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 were scheduled for this zone this week and no new releases are scheduled 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 were scheduled for this zone this week and no new releases are scheduled over the next two weeks.

Adult Passage

The adult fall Chinook count of 256,814 is about 74.3% of the 2015 count of 345,586, while being 1.1 times greater than the 10-year average count of 230,833. The 2016 Bonneville Dam fall Chinook jack count of 30,116 is 1.2 times greater than the 2015 count of 24,506 and has 332 fewer fish than the 10-year average count of 30,448. The 2016 adult fall

Chinook count of 13,580 at Ice Harbor Dam in the Snake River is about 70.9% of the 2015 count, while having 1,835 more fish than the 10-year average count. The 2016 Lower Granite fall Chinook adult count of 7,518 is about 82.1% of the 2015 count, while being 1.5 times greater than the 10-year average count.

The 2016 Bonneville Dam adult steelhead count of 129,172 is about 61.2% of the 2015 count of 211,165 and about 45.2% of the 10-year average count of 285,516. The 2016 Bonneville Dam adult wild steelhead count of 39,941 is about 49.3% of the 2015 count of 80,986 and about 40.4% of the 10-year average count of 98,799. Daily adult steelhead counts at Lower Granite Dam ranged from 114 to 210 adults per day last week. This year's Lower Granite steelhead count of 12,499 is about 66.5% of the 2015 count of 18,778 and 41.6% of the 10-year average count of 30,043. The 2016 Lower Granite Dam adult wild steelhead count of 5,929 is 68.5% of the 2015 count of 8,657 and is about 55.3% of the 10-year average count of 10,723. At Willamette Falls, the 2016 count for steelhead was 26,067 as of September 6th. This year's steelhead count is about 3.5 times greater than the 2015 count of 7,527 and about 1.2 times greater than the 10-year average count of 22,206.

The 2016 adult sockeye count at Bonneville Dam of 342,491 is about 67% of the 2015 count and 1.2 times greater than the 10-year average count. The 2016 adult sockeye count at McNary Dam of 261,663 is about 93.8% of the 2015 count, while being about 1.3 times greater than the 10-year average count. The Lower Granite Dam 2016 adult sockeye count of 814 has 394 more fish than the 2015 count of 420 and 69 fewer fish than the 10-year average count of 983.

Adult coho passage at Bonneville has increased over the last week, with daily passage numbers ranging from 475 to 3,120 per day. As of September 8th, the cumulative adult coho count at Bonneville Dam is 14,978, which is about 1.2 times greater than the 2015 count, while being 43.8% of the 10-year average count.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 8/27/2016 to 09/09/16

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Dworshak NFH	CH1	SP	2017	300,000	09-01-16	09-01-16	Selway River	Clearwater River M F
Nez Perce Tribe Total					**300,000**				
Grand Total					**300,000**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary
From: 9/10/2016 to 9/23/2016

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

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
08/26/2016	104.7	0.0	102.0	0.0	103.3	0.0	100.1	0.0	102.2	0.0	115.8	2.1	113.2	2.3
08/27/2016	81.6	0.1	---	---	71.0	0.0	76.3	0.0	80.5	0.0	79.1	1.5	74.7	2.4
08/28/2016	83.2	0.1	93.3	0.0	90.2	0.0	94.0	0.0	96.1	0.0	91.0	1.8	85.1	2.5
08/29/2016	85.2	0.1	84.7	0.0	89.9	0.0	89.7	0.0	93.4	0.0	108.9	1.4	109.6	2.4
08/30/2016	76.8	0.1	71.4	0.0	76.8	0.0	77.3	0.0	80.3	0.0	93.1	1.4	92.1	1.7
08/31/2016	80.0	0.1	83.7	0.0	75.5	0.0	72.6	0.0	75.0	0.0	63.8	1.8	60.3	2.4
09/01/2016	75.5	0.1	82.3	0.0	79.5	0.0	78.3	0.0	80.3	0.0	75.4	2.1	72.2	2.6
09/02/2016	64.6	0.1	60.2	0.0	60.3	0.0	62.7	0.0	65.5	0.0	72.0	2.2	70.7	2.6
09/03/2016	66.4	0.1	66.7	0.0	69.9	0.0	67.9	0.0	71.2	0.0	80.6	2.3	80.3	2.7
09/04/2016	58.8	0.1	62.8	0.0	64.7	0.0	63.9	0.0	68.2	0.0	70.3	2.2	68.5	2.6
09/05/2016	51.1	0.1	49.1	0.0	60.8	0.0	60.9	0.0	63.1	0.0	63.6	2.1	61.3	2.6
09/06/2016	59.2	0.1	55.5	0.0	57.9	0.0	56.1	0.0	56.8	0.0	82.1	1.7	86.3	2.3
09/07/2016	60.9	0.1	57.5	0.0	57.1	0.0	52.7	0.0	54.9	0.0	57.4	1.3	60.0	2.1
09/08/2016	62.8	0.1	65.9	0.0	60.7	0.0	57.0	0.0	58.1	0.0	50.3	1.5	42.5	2.2

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
08/26/2016	7.0	0.0	---	9.8	22.3	9.6	20.6	7.3	19.1	6.9	21.1	10.1
08/27/2016	7.0	0.0	---	8.7	23.4	10.5	22.5	7.3	20.8	8.7	22.9	12.3
08/28/2016	6.7	0.0	---	8.8	21.5	8.7	22.5	7.3	21.1	9.0	24.8	14.0
08/29/2016	6.7	0.0	---	10.6	21.5	8.6	20.3	7.3	20.1	7.9	22.8	12.6
08/30/2016	6.7	0.0	---	9.7	21.3	8.6	19.9	7.3	19.2	7.0	20.9	11.0
08/31/2016	6.6	0.0	---	10.6	21.3	8.6	20.1	7.3	19.2	6.9	19.9	10.2
09/01/2016	6.2	1.5	---	11.0	23.0	0.0	24.2	0.0	23.1	0.0	21.8	0.0
09/02/2016	6.2	1.6	---	9.2	23.2	0.0	22.4	0.0	21.8	0.0	20.5	0.0
09/03/2016	6.2	1.5	---	8.9	20.2	0.0	19.6	0.0	18.7	0.0	17.0	0.0
09/04/2016	6.2	1.5	---	9.2	19.0	0.0	17.1	0.0	17.4	0.0	16.7	0.0
09/05/2016	6.2	1.5	---	10.2	16.8	0.0	15.7	0.0	15.2	0.0	13.0	0.0
09/06/2016	6.2	1.5	---	9.5	20.9	0.0	20.3	0.1	18.9	0.0	18.8	0.0
09/07/2016	6.2	1.5	---	9.9	21.9	0.0	17.0	0.0	16.3	0.0	16.6	0.0
09/08/2016	6.2	1.5	---	10.1	22.6	0.0	21.1	0.0	19.6	0.0	20.1	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
08/26/2016	142.2	71.2	127.2	38.2	111.9	44.7	123.2	78.5	0.9	31.3
08/27/2016	120.1	60.1	103.4	31.1	96.3	38.8	107.9	63.8	0.9	30.6
08/28/2016	113.7	56.9	108.5	32.7	104.2	41.9	112.1	68.0	0.9	30.7
08/29/2016	136.6	68.4	129.7	38.7	121.0	48.3	125.3	81.3	0.9	30.7
08/30/2016	127.1	63.7	113.3	34.0	105.4	42.0	124.2	79.6	0.9	31.2
08/31/2016	114.8	57.7	104.0	31.2	95.3	38.1	102.8	58.8	0.9	30.6
09/01/2016	92.8	0.1	87.9	0.9	84.0	0.0	98.7	1.5	0.9	88.9
09/02/2016	100.8	0.0	89.8	1.0	86.4	0.0	94.2	1.3	0.9	84.6
09/03/2016	79.3	0.0	85.5	1.0	89.4	0.0	94.4	1.3	0.9	84.8
09/04/2016	89.3	0.0	80.8	1.0	79.9	0.0	91.0	1.3	0.9	81.4
09/05/2016	87.3	0.0	82.1	1.0	81.9	0.0	89.6	1.3	0.9	80.1
09/06/2016	87.7	0.0	87.1	1.0	86.8	0.0	90.1	1.3	15.9	65.4
09/07/2016	86.8	0.0	84.8	1.3	84.5	0.0	94.0	1.3	34.7	50.6
09/08/2016	76.0	0.0	75.4	1.0	77.6	0.0	84.8	1.5	20.5	55.5

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
8/26	105.3	105.7	106.2	24	---	---	---	0	104.4	104.8	105.5	24	102.7	103.5	103.8	24	103.5	103.9	104.1	22
8/27	105.0	105.2	105.3	24	---	---	---	0	104.9	105.1	105.6	24	102.9	103.3	104.0	24	103.8	104.1	104.2	21
8/28	104.7	105.2	106.0	24	---	---	---	0	104.1	104.3	104.6	24	102.1	102.6	102.9	24	102.8	103.0	103.2	24
8/29	103.7	104.0	104.3	24	---	---	---	0	103.7	103.9	104.3	24	102.1	102.8	103.4	24	102.8	103.3	103.6	24
8/30	103.4	103.7	104.1	24	---	---	---	0	103.6	103.8	104.4	24	102.1	102.8	103.1	24	102.8	103.1	103.2	24
8/31	103.7	104.1	104.3	24	---	---	---	0	103.6	103.9	104.1	24	102.3	103.0	103.6	24	103.2	103.7	103.9	24
9/1	103.9	104.5	105.3	24	---	---	---	0	103.4	103.6	103.7	24	102.0	102.4	103.0	24	103.0	103.2	103.5	24
9/2	104.4	104.8	105.2	24	---	---	---	0	103.1	103.4	103.9	24	102.3	102.8	103.4	24	102.4	102.7	103.0	24
9/3	103.9	104.4	104.9	24	---	---	---	0	102.8	103.2	103.4	24	102.4	103.1	103.7	24	102.4	102.8	103.1	24
9/4	103.9	104.5	105.0	24	---	---	---	0	102.0	102.5	102.8	24	102.5	103.1	103.8	24	102.3	102.6	102.8	24
9/5	103.0	103.7	104.4	24	---	---	---	0	102.7	103.3	103.5	24	102.7	103.3	103.8	24	102.4	102.9	103.3	24
9/6	102.6	102.8	102.9	20	---	---	---	0	102.6	103.1	103.3	24	102.6	103.3	104.6	24	102.3	102.9	103.6	24
9/7	---	---	---	0	---	---	---	0	101.7	102.3	106.6	24	101.9	102.6	104.2	24	102.4	102.9	103.5	24
9/8	102.9	102.9	103.2	14	---	---	---	0	101.7	102.3	102.8	23	101.5	102.2	103.5	23	102.5	102.9	103.6	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
8/26	102.8	103.3	103.7	22	103.7	104.4	105.1	22	103.9	104.6	105.3	22	103.8	104.2	104.6	22	103.7	104.2	104.5	22
8/27	103.9	104.3	104.9	21	103.9	103.9	104.9	10	103.9	103.9	105.1	10	104.5	104.5	104.5	2	104.3	104.3	104.4	2
8/28	102.9	103.2	103.6	24	102.5	102.6	103.1	15	102.6	102.7	103.3	15	103.2	103.2	103.2	4	103.1	103.1	103.2	4
8/29	102.7	103.1	103.5	23	103.0	103.9	104.6	23	103.0	104.0	104.8	23	102.8	103.1	103.4	24	102.6	103.1	103.3	24
8/30	102.9	103.3	104.0	24	103.3	103.6	104.2	18	103.3	103.6	104.1	18	103.2	103.3	103.4	24	102.8	103.4	103.5	24
8/31	103.3	103.8	104.5	24	103.2	103.5	104.0	22	103.3	103.8	104.4	22	103.0	103.2	103.3	24	102.5	103.1	103.3	24
9/1	103.2	103.8	104.4	24	102.6	102.9	103.0	24	102.5	102.8	103.1	24	102.9	103.0	103.1	24	102.4	102.8	103.1	24
9/2	102.8	103.5	104.2	24	102.5	102.6	102.9	23	102.3	102.7	103.3	23	102.4	102.6	102.8	24	102.1	102.3	102.7	24
9/3	102.4	103.1	104.3	24	102.3	102.8	103.5	24	102.2	102.9	103.7	24	101.8	101.9	102.2	24	101.5	101.8	102.0	24
9/4	102.4	103.0	104.2	24	102.2	102.4	102.9	24	101.7	102.4	103.1	24	101.8	102.1	102.4	24	101.3	101.7	102.0	24
9/5	102.1	102.5	103.5	24	102.4	102.9	103.7	24	102.0	102.9	103.5	24	102.2	102.4	102.8	24	101.2	101.8	102.3	24
9/6	102.7	103.6	104.7	24	102.3	102.8	103.8	24	102.0	102.6	103.4	24	102.3	102.5	103.3	24	101.3	101.6	102.0	24
9/7	102.5	103.2	104.5	24	101.9	102.3	102.8	24	101.6	102.3	102.7	24	101.8	102.2	102.8	24	101.0	101.8	102.3	24
9/8	102.6	103.1	103.8	23	101.8	102.2	102.8	22	101.7	102.3	103.1	22	101.7	101.9	102.3	23	101.0	101.5	101.9	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
8/26	103.2	103.8	104.5	22	102.9	103.3	103.9	22	104.1	105.4	107.0	24	103.6	104.2	104.6	24	104.4	104.7	105.0	24
8/27	104.3	104.3	104.3	2	103.9	103.9	103.9	2	101.3	102.0	102.3	24	102.8	103.1	103.3	24	104.7	104.9	104.9	24
8/28	103.2	103.2	103.4	4	102.8	102.8	102.8	4	100.3	101.8	102.4	24	101.3	101.8	102.0	24	103.2	103.3	103.8	24
8/29	102.6	103.0	103.2	24	102.7	102.9	103.1	24	101.8	102.6	103.4	24	102.0	102.5	103.0	24	102.9	103.0	103.2	24
8/30	102.5	102.8	103.1	24	102.5	102.7	103.0	24	101.7	102.7	103.0	24	102.1	102.5	102.7	24	102.3	102.5	102.6	24
8/31	102.6	102.8	103.0	24	102.9	103.8	108.9	24	100.4	102.4	103.2	24	102.0	102.9	103.1	24	101.4	101.6	101.7	24
9/1	102.2	102.3	102.4	24	101.9	102.0	102.4	24	99.6	100.8	101.1	24	101.8	102.2	103.0	24	100.6	100.8	100.9	24
9/2	101.7	101.9	102.3	24	102.0	102.2	102.3	24	98.9	100.2	101.0	24	101.9	102.2	102.8	24	100.6	100.9	101.0	24
9/3	101.6	101.7	101.9	24	101.5	101.9	102.0	24	99.1	102.0	102.9	24	101.6	102.1	102.2	24	100.9	101.2	101.6	24
9/4	101.3	101.5	101.9	24	101.6	101.8	101.9	24	99.4	101.7	102.9	24	101.9	102.3	102.5	24	101.3	101.5	101.5	24
9/5	101.3	101.5	101.6	24	101.3	101.6	101.7	24	98.9	100.4	101.5	24	101.4	101.8	102.0	24	100.9	101.1	101.4	24
9/6	101.3	101.8	101.9	24	101.7	102.0	102.6	23	99.9	101.3	101.9	24	101.1	101.5	101.6	24	100.8	101.0	101.1	24
9/7	101.3	101.6	102.3	24	101.4	101.8	102.3	24	99.8	100.7	101.3	24	100.7	101.1	101.5	24	100.5	100.6	100.8	24
9/8	101.0	101.3	101.7	23	101.1	101.5	102.0	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
8/26	104.4	105.1	105.6	24	---	---	---	0	100.1	100.3	101.1	17	97.3	97.8	101.0	16	101.4	101.8	104.4	16
8/27	104.2	104.7	105.1	24	---	---	---	0	100.6	101.0	101.4	24	97.8	99.0	100.9	23	101.6	102.7	104.1	22
8/28	102.4	102.8	103.1	24	---	---	---	0	99.9	100.2	100.6	24	96.8	98.1	99.9	24	101.2	102.5	103.8	24
8/29	102.4	102.8	103.1	24	---	---	---	0	100.0	100.6	101.0	24	97.7	99.6	102.3	24	101.5	102.9	104.4	24
8/30	102.4	102.9	103.2	24	---	---	---	0	100.3	100.8	101.2	24	96.9	97.9	98.9	24	101.0	101.9	103.1	24
8/31	102.5	103.2	103.6	24	---	---	---	0	100.6	101.0	101.6	24	95.9	97.4	99.5	24	100.8	102.0	103.3	23
9/1	101.9	102.2	102.5	24	---	---	---	0	104.3	104.9	105.4	24	95.7	97.1	99.2	24	101.0	102.3	103.8	24
9/2	101.8	102.1	102.4	24	---	---	---	0	104.3	104.7	105.2	24	95.0	96.1	96.8	24	100.8	101.8	103.0	24
9/3	101.8	102.3	102.5	24	---	---	---	0	104.3	104.7	105.1	24	94.5	95.9	97.3	24	100.9	102.2	103.5	24
9/4	102.1	102.7	103.2	24	---	---	---	0	104.6	105.2	105.9	24	93.7	95.9	98.0	24	101.0	102.1	103.4	23
9/5	101.6	102.1	102.5	24	---	---	---	0	104.1	104.4	104.8	24	92.5	92.9	93.4	24	100.9	102.1	103.2	24
9/6	101.4	101.7	101.9	24	---	---	---	0	103.9	104.0	104.3	24	93.4	94.0	94.9	24	100.0	100.3	100.7	24
9/7	101.3	101.9	102.4	24	---	---	---	0	103.8	104.0	104.5	24	94.0	94.7	96.4	24	101.0	102.4	103.5	24
9/8	---	---	---	0	---	---	---	0	103.6	103.9	104.5	22	92.6	92.6	94.7	13	101.4	102.6	103.9	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
8/26	101.4	101.9	105.6	15	101.3	101.4	101.7	18	104.9	105.4	106.5	18	106.3	106.3	106.8	14	108.6	108.7	109.6	14
8/27	102.4	104.2	105.9	24	101.4	101.6	101.7	24	106.2	106.6	107.1	24	106.2	106.5	106.7	24	108.0	108.3	108.4	24
8/28	102.4	104.2	105.8	24	99.7	100.0	100.3	24	105.2	105.3	105.5	24	104.4	104.7	104.9	24	107.6	108.1	108.6	24
8/29	102.6	104.6	106.1	24	99.7	99.9	100.5	24	105.3	105.5	105.8	24	105.0	105.1	105.2	24	108.0	108.5	108.9	24
8/30	101.6	102.7	104.0	22	100.5	100.7	100.9	24	105.2	105.5	105.8	24	104.8	104.9	105.3	24	108.1	108.4	108.9	24
8/31	101.7	103.6	105.3	24	100.4	100.6	100.7	24	105.0	105.3	105.5	24	105.1	105.2	105.4	24	108.2	108.7	109.4	24
9/1	102.2	104.2	105.5	24	99.9	100.2	100.3	24	99.0	99.6	104.1	24	104.0	104.4	105.0	24	103.4	104.0	107.0	24
9/2	102.6	104.2	105.9	24	100.0	100.2	100.5	24	98.2	98.5	98.7	24	104.0	104.3	104.5	24	102.6	103.0	103.4	24
9/3	102.5	104.4	106.2	24	99.9	100.1	100.2	24	98.0	98.7	98.9	24	104.0	104.2	104.3	24	102.8	103.3	103.5	24
9/4	102.4	104.4	105.9	24	99.9	100.2	100.4	24	98.0	98.6	99.2	24	104.5	105.0	105.4	24	103.1	103.8	104.4	24
9/5	102.5	104.2	105.7	24	99.1	99.3	99.7	24	96.8	97.1	97.4	24	103.0	103.3	103.7	24	102.1	102.4	102.8	24
9/6	100.8	101.4	102.1	24	98.9	99.3	99.6	24	96.6	96.8	97.1	24	103.6	103.9	104.1	24	102.0	102.2	102.4	24
9/7	102.3	104.3	105.9	24	100.6	100.6	101.6	9	97.9	99.5	99.9	24	102.8	103.1	103.6	24	101.3	101.7	102.1	24
9/8	100.7	100.7	101.5	7	---	---	---	0	98.6	99.0	99.3	23	100.4	100.4	101.9	10	99.4	99.8	100.3	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
8/26	105.4	105.5	105.8	18	107.8	108.1	108.5	18	106.4	106.5	106.6	18	106.6	107.0	108.0	18	---	---	---	0
8/27	105.9	106.1	106.4	24	108.8	109.3	109.5	24	106.2	106.3	106.5	24	106.6	107.5	108.1	24	---	---	---	0
8/28	105.3	105.6	106.0	24	109.6	110.1	110.4	24	105.7	105.9	106.1	24	107.5	108.2	108.9	24	---	---	---	0
8/29	105.4	105.6	105.7	24	109.0	109.6	110.4	24	106.0	106.2	106.5	24	106.8	107.4	108.0	24	---	---	---	0
8/30	105.2	105.4	105.7	24	107.8	108.0	108.3	24	106.1	106.3	106.4	24	106.3	106.8	107.4	24	---	---	---	0
8/31	104.9	105.1	105.3	24	107.5	107.7	108.0	24	105.2	105.4	105.7	24	105.7	106.3	106.9	24	---	---	---	0
9/1	103.8	104.0	104.4	24	103.7	104.2	106.8	24	104.5	104.8	105.0	24	104.1	104.5	105.0	24	---	---	---	0
9/2	104.2	104.3	104.6	24	103.5	103.6	103.9	24	105.2	105.3	105.4	24	103.6	104.4	105.1	24	---	---	---	0
9/3	104.0	104.1	104.1	24	103.2	103.8	104.7	24	105.6	105.8	105.9	24	103.2	104.6	105.1	24	---	---	---	0
9/4	103.8	103.9	104.1	24	103.2	103.7	104.1	24	105.5	105.6	105.8	24	103.0	104.3	104.9	24	---	---	---	0
9/5	103.5	103.5	103.7	24	102.5	103.0	103.5	24	104.0	104.3	104.9	24	102.1	103.3	103.6	24	---	---	---	0
9/6	102.8	103.1	103.4	24	101.2	101.5	102.0	24	103.1	103.2	103.5	16	102.5	102.9	103.3	24	---	---	---	0
9/7	102.2	102.3	102.4	24	100.7	101.1	101.4	24	---	---	---	0	101.9	103.5	105.2	24	---	---	---	0
9/8	101.4	101.6	101.8	23	100.0	100.6	101.6	23	---	---	---	0	102.2	102.6	103.8	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
8/26	103.7	104.1	104.8	23	113.9	114.5	115.0	23	106.6	106.8	107.3	24	113.4	114.0	114.5	24	109.1	109.6	111.1	19
8/27	103.9	104.3	104.6	24	112.7	113.0	113.4	24	106.2	107.0	107.7	24	112.8	113.1	113.6	24	108.0	108.0	109.0	7
8/28	102.9	103.1	103.8	24	112.9	113.3	113.7	24	104.2	104.4	104.6	24	112.1	112.4	112.7	24	105.6	106.0	106.7	24
8/29	103.5	103.8	104.8	24	113.3	113.9	114.3	24	104.4	104.8	105.2	24	112.9	113.5	114.1	24	106.6	107.7	108.1	24
8/30	103.6	103.9	104.5	24	112.8	112.9	113.1	24	103.3	103.6	104.1	24	112.6	112.8	113.1	24	105.9	106.3	106.7	24
8/31	102.6	102.7	102.8	24	112.7	113.1	113.6	24	103.1	103.6	104.1	24	112.0	112.4	112.7	24	104.3	104.6	104.9	24
9/1	102.3	102.4	102.7	24	103.8	105.1	112.0	24	102.6	102.8	103.1	24	104.5	105.0	109.4	24	104.3	104.6	104.8	24
9/2	101.6	101.8	102.2	24	102.1	102.4	102.8	24	102.4	102.5	102.8	24	103.0	103.2	103.4	24	103.4	104.0	104.4	24
9/3	101.1	101.2	101.5	24	117.1	132.9	143.8	24	102.0	102.2	102.4	24	102.2	102.4	102.7	24	101.2	101.4	101.6	24
9/4	101.1	101.2	101.6	24	143.4	143.8	144.2	24	101.6	101.7	101.9	24	101.6	101.8	102.1	24	100.6	100.8	100.9	24
9/5	100.8	100.9	101.0	24	144.2	144.6	145.0	24	100.9	101.0	101.3	24	101.1	101.5	101.7	24	100.1	100.2	100.4	24
9/6	101.0	101.0	101.4	10	101.9	102.1	102.7	15	100.6	100.7	100.9	24	101.0	101.2	101.3	24	99.9	100.0	100.1	24
9/7	---	---	---	0	101.8	102.0	102.4	20	100.0	100.2	100.4	24	100.6	100.9	101.1	24	99.4	99.7	99.9	24
9/8	---	---	---	0	101.5	101.9	102.2	23	99.8	99.9	100.0	23	100.5	100.8	101.1	23	99.2	99.4	99.6	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
8/26	113.0	113.2	114.1	19	110.7	111.2	111.7	24	116.5	117.2	117.9	24	113.4	114.9	115.3	24	113.7	113.8	114.0	24
8/27	110.5	110.5	110.9	7	110.1	110.9	111.5	24	116.5	117.1	117.4	24	113.7	114.5	115.2	24	112.8	112.9	113.1	24
8/28	110.8	111.2	111.4	24	107.0	107.2	107.8	24	116.3	116.6	117.1	24	112.0	113.3	114.3	24	112.8	113.0	113.1	24
8/29	111.3	111.8	112.4	24	106.3	106.6	106.8	24	116.0	116.2	116.4	24	113.6	114.7	115.7	24	114.8	115.8	116.7	24
8/30	111.5	111.7	112.1	24	104.6	104.9	105.7	24	115.4	115.7	116.0	24	112.0	112.9	113.5	24	114.0	114.9	116.5	24
8/31	110.6	111.0	111.4	24	104.5	104.7	104.9	24	115.6	116.1	116.6	24	112.1	112.8	113.4	24	112.5	112.9	113.1	24
9/1	107.0	108.8	110.0	24	102.7	102.8	103.2	24	107.6	110.5	115.6	24	111.6	112.1	113.0	24	106.9	108.1	111.9	24
9/2	104.2	104.5	105.3	24	102.9	103.1	103.4	24	104.2	104.5	104.7	24	103.7	105.1	109.3	24	107.0	108.7	110.9	24
9/3	102.5	102.8	103.2	24	103.1	103.3	103.6	24	103.9	104.3	104.7	24	102.8	103.7	103.9	24	107.3	108.4	110.4	24
9/4	101.6	101.8	101.9	24	103.3	103.5	103.6	24	104.1	104.4	104.7	24	102.9	103.3	103.8	24	106.4	107.4	113.8	24
9/5	101.3	101.7	102.7	24	101.5	101.8	102.5	24	102.7	103.3	103.7	24	103.0	103.6	103.9	24	109.0	110.6	113.8	24
9/6	100.7	100.9	101.0	24	100.7	101.1	101.3	24	102.9	103.6	104.3	24	102.1	102.7	103.5	24	106.9	107.7	108.3	24
9/7	100.2	100.3	100.4	24	99.6	99.7	100.0	24	103.0	103.5	103.8	24	101.7	102.4	102.9	24	106.4	106.9	107.3	24
9/8	100.3	100.5	101.0	23	99.5	99.6	99.7	23	102.8	103.4	104.2	23	101.8	102.1	102.2	23	106.6	107.7	108.5	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center Updated: 9/9/2016 13:11

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)
08/26/2016	*	---	---	---	---	0	0	0	0	---	0	0
08/27/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/28/2016	*	---	---	---	---	0	0	0	0	---	---	0
08/29/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/30/2016	*	---	---	---	---	0	0	0	0	---	0	0
08/31/2016	*	---	---	---	---	0	0	0	0	0	---	---
09/01/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/02/2016	*	---	---	---	---	0	0	0	---	0	0	---
09/03/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/04/2016	*	---	---	---	---	0	0	0	---	0	---	---
09/05/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/06/2016	*	---	---	---	---	0	0	1	---	0	0	0
09/07/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/08/2016	*	---	---	---	---	0	0	0	---	0	---	0
09/09/2016	*	---	---	---	---	---	0	---	---	---	0	0
Total:		**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YTD		**27,295**	**56,779**	**16,183**	**7,757**	**5,899,060**	**3,490,956**	**4,892,142**	**44,784**	**2,181,660**	**1,456,048**	**2,660,728**

				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)
08/26/2016	*	---	---	---	---	152	148	18	0	---	1	15
08/27/2016	*	---	---	---	---	213	380	5	1	33	---	---
08/28/2016	*	---	---	---	---	202	231	9	1	---	---	26
08/29/2016	*	---	---	---	---	188	154	11	2	59	---	---
08/30/2016	*	---	---	---	---	90	197	23	1	---	0	16
08/31/2016	*	---	---	---	---	244	275	18	2	50	---	---
09/01/2016	*	---	---	---	---	192	168	11	---	---	---	16
09/02/2016	*	---	---	---	---	174	178	34	---	16	0	---
09/03/2016	*	---	---	---	---	254	238	26	---	---	---	33
09/04/2016	*	---	---	---	---	342	158	64	---	8	---	---
09/05/2016	*	---	---	---	---	339	86	42	---	---	---	49
09/06/2016	*	---	---	---	---	370	135	45	---	12	4	62
09/07/2016	*	---	---	---	---	415	168	28	---	---	---	117
09/08/2016	*	---	---	---	---	272	157	59	---	8	---	64
09/09/2016	*	---	---	---	---	---	440	---	---	---	0	27
Total:		**0**	**0**	**0**	**0**	**3,447**	**3,113**	**393**	**7**	**186**	**5**	**425**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**246**	**208**	**28**	**1**	**27**	**1**	**43**
YTD		**0**	**78**	**698**	**2,869**	**1,181,578**	**879,508**	**328,152**	**20,979**	**4,329,553**	**939,661**	**3,125,840**

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)
08/26/2016	*	---	---	---	---	0	0	0	0	---	0	0
08/27/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/28/2016	*	---	---	---	---	0	0	0	0	---	---	0
08/29/2016	*	---	---	---	---	2	0	0	0	0	---	---
08/30/2016	*	---	---	---	---	0	0	0	0	---	0	0
08/31/2016	*	---	---	---	---	0	0	0	0	0	---	---
09/01/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/02/2016	*	---	---	---	---	0	0	0	---	0	0	---
09/03/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/04/2016	*	---	---	---	---	0	0	0	---	0	---	---
09/05/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/06/2016	*	---	---	---	---	0	0	0	---	0	0	0
09/07/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/08/2016	*	---	---	---	---	0	0	0	---	0	---	0
09/09/2016	*	---	---	---	---	---	0	---	---	---	0	0
Total:		**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YTD		**0**	**0**	**0**	**316**	**198,074**	**147,678**	**60,123**	**45,366**	**154,245**	**58,662**	**802,520**

				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)
08/26/2016	*	---	---	---	---	0	2	0	0	---	0	0
08/27/2016	*	---	---	---	---	2	0	0	0	8	---	---
08/28/2016	*	---	---	---	---	0	0	2	1	---	---	0
08/29/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/30/2016	*	---	---	---	---	0	2	3	0	---	0	0
08/31/2016	*	---	---	---	---	0	2	0	0	0	---	---
09/01/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/02/2016	*	---	---	---	---	0	0	0	---	0	0	---
09/03/2016	*	---	---	---	---	1	1	0	---	---	---	0
09/04/2016	*	---	---	---	---	0	0	0	---	0	---	---
09/05/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/06/2016	*	---	---	---	---	1	0	0	---	0	0	0
09/07/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/08/2016	*	---	---	---	---	0	0	0	---	0	---	0
09/09/2016	*	---	---	---	---	---	1	---	---	---	0	0
Total:		**0**	**0**	**0**	**0**	**4**	**8**	**5**	**1**	**8**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**
YTD		**755**	**26,537**	**3,377**	**9,186**	**3,957,231**	**2,295,505**	**1,838,111**	**17,664**	**735,196**	**502,821**	**622,598**

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)
08/26/2016	*	---	---	---	---	0	0	0	1	---	0	0
08/27/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/28/2016	*	---	---	---	---	0	0	0	0	---	---	0
08/29/2016	*	---	---	---	---	0	0	0	0	0	---	---
08/30/2016	*	---	---	---	---	0	0	0	0	---	0	0
08/31/2016	*	---	---	---	---	0	0	0	0	0	---	---
09/01/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/02/2016	*	---	---	---	---	0	0	0	---	0	0	---
09/03/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/04/2016	*	---	---	---	---	0	0	0	---	0	---	---
09/05/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/06/2016	*	---	---	---	---	0	0	0	---	0	0	0
09/07/2016	*	---	---	---	---	0	0	0	---	---	---	0
09/08/2016	*	---	---	---	---	0	0	0	---	0	---	0
09/09/2016	*	---	---	---	---	---	0	---	---	---	0	0
Total:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
YTD		**1**	**0**	**0**	**133**	**43,851**	**32,774**	**24,148**	**56,642**	**861,061**	**303,206**	**801,582**

					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)
08/26/2016	*	---	---	---	---	4	4	0	0	---	0	0
08/27/2016	*	---	---	---	---	0	7	0	1	12	---	---
08/28/2016	*	---	---	---	---	0	1	0	0	---	---	0
08/29/2016	*	---	---	---	---	0	4	1	0	12	---	---
08/30/2016	*	---	---	---	---	0	1	0	0	---	0	4
08/31/2016	*	---	---	---	---	1	3	0	0	12	---	---
09/01/2016	*	---	---	---	---	2	2	0	---	---	---	0
09/02/2016	*	---	---	---	---	2	5	0	---	16	0	---
09/03/2016	*	---	---	---	---	0	4	0	---	---	---	0
09/04/2016	*	---	---	---	---	0	2	2	---	8	---	---
09/05/2016	*	---	---	---	---	0	4	0	---	---	---	0
09/06/2016	*	---	---	---	---	0	2	1	---	12	0	0
09/07/2016	*	---	---	---	---	1	5	0	---	---	---	0
09/08/2016	*	---	---	---	---	2	3	1	---	12	---	0
09/09/2016	*	---	---	---	---	---	7	---	---	---	0	0
Total:		**0**	**0**	**0**	**0**	**12**	**54**	**5**	**1**	**84**	**0**	**4**
# Days:		**0**	**0**	**0**	**0**	**14**	**15**	**14**	**6**	**7**	**5**	**10**
Average:		**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**12**	**0**	**0**
YTD		**0**	**5**	**1**	**0**	**228**	**34,829**	**29,717**	**113**	**34,604**	**26,193**	**10,119**

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:
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: 9/9/16 1:12 PM

08/26/16 TO 09/09/16

		Species				
Site	Data	**CH0**	**CH1**	CO	ST	**Grand Total**
LGR	Sum of NumberCollected	2,928		1	3	2,932
	Sum of NumberBarged	0		0	0	0
	Sum of NumberBypassed	0		0	3	3
	Sum of Numbertrucked	2,873		1	0	2,874
	Sum of SampleMorts	55		0	0	55
	Sum of FacilityMorts	0		0	0	0
	Sum of ResearchMorts	0		0	0	0
	Sum of TotalProjectMorts	55		0	0	55
LGS	Sum of NumberCollected	2,576			5	2,581
	Sum of NumberBarged	0			0	0
	Sum of NumberBypassed	0			0	0
	Sum of Numbertrucked	2,132			4	2,136
	Sum of SampleMorts	4			0	4
	Sum of FacilityMorts	1			0	1
	Sum of ResearchMorts	0			0	0
	Sum of TotalProjectMorts	5			0	5
LMN	Sum of NumberCollected	356	1		3	360
	Sum of NumberBarged	0	0		0	0
	Sum of NumberBypassed	0	0		0	0
	Sum of Numbertrucked	344	1		3	348
	Sum of SampleMorts	12	0		0	12
	Sum of FacilityMorts	0	0		0	0
	Sum of ResearchMorts	0	0		0	0
	Sum of TotalProjectMorts	12	0		0	12
Total Sum of NumberCollected		5,860	1	1	11	5,873
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		0	0	0	3	3
Total Sum of Numbertrucked		5,349	1	1	7	5,358
Total Sum of SampleMorts		71	0	0	0	71
Total Sum of FacilityMorts		1	0	0	0	1
Total Sum of ResearchMorts		0	0	0	0	0
Total Sum of TotalProjectMorts		72	0	0	0	72

YTD Transportation Summary

Source: Fish Passage Center Updated: 9/9/16 1:12 PM

TO: 09/09/16

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	757,654	4,510,005	150,415	33,350	2,986,094	8,437,518
	Sum of NumberBarged	717,253	1,403,213	117,278	31,849	1,110,010	3,379,603
	Sum of NumberBypassed	31,770	3,104,914	33,069	650	1,875,876	5,046,279
	Sum of NumberTrucked	5,986	1	1	0	0	5,988
	Sum of SampleMorts	284	94	1	16	37	432
	Sum of FacilityMorts	2,159	1,361	66	830	103	4,519
	Sum of ResearchMorts	202	422	0	5	68	697
	Sum of TotalProjectMorts	2,645	1,877	67	851	208	5,648
LGS	Sum of NumberCollected	611,143	2,438,124	104,356	22,900	1,600,773	4,777,296
	Sum of NumberBarged	602,659	1,022,201	90,682	22,669	670,896	2,409,107
	Sum of NumberBypassed	2,872	1,415,436	13,600	7	929,747	2,361,662
	Sum of NumberTrucked	4,068	0	0	0	20	4,088
	Sum of SampleMorts	148	23	1	22	12	206
	Sum of FacilityMorts	957	464	73	202	97	1,793
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,105	487	74	224	109	1,999
LMN	Sum of NumberCollected	183,920	3,510,226	40,585	11,370	1,285,418	5,031,519
	Sum of NumberBarged	180,110	1,897,394	34,346	11,348	630,499	2,753,697
	Sum of NumberBypassed	2,568	1,612,351	6,238	0	654,785	2,275,942
	Sum of NumberTrucked	473	1	0	0	12	486
	Sum of SampleMorts	63	127	0	5	23	218
	Sum of FacilityMorts	144	353	1	18	99	615
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	207	480	1	23	122	833
Total Sum of NumberCollected		1,552,717	10,458,355	295,356	67,620	5,872,285	18,246,333
Total Sum of NumberBarged		1,500,022	4,322,808	242,306	65,866	2,411,405	8,542,407
Total Sum of NumberBypassed		37,210	6,132,701	52,907	657	3,460,408	9,683,883
Total Sum of NumberTrucked		10,527	2	1	0	32	10,562
Total Sum of SampleMorts		495	244	2	43	72	856
Total Sum of FacilityMorts		3,260	2,178	140	1,050	299	6,927
Total Sum of ResearchMorts		202	422	0	5	68	697
Total Sum of TotalProjectMorts		3,957	2,844	142	1,098	439	8,480

Cumulative Adult Passage at Mainstem Dams Through: 09/08

		Spring Chinook						Summer Chinook						Fall Chinook					
		2016		2015		10-Yr Avg.		2016		2015		10-Yr Avg.		2016		2015		10-Yr Avg.	
DAM	ENDDATE	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	09/08	137215	11145	220480	13314	146704	24884	119591	10834	161735	17730	95523	21451	256814	30116	345586	24506	230833	30448
TDA	09/08	105504	9999	194116	12307	114381	21222	95764	8800	123915	15458	80170	17256	140438	19835	184664	20532	104989	19809
JDA	09/08	93659	8262	166015	11514	99110	19896	90259	7715	108768	10988	71447	16841	79730	9868	133889	10703	66435	14413
MCN	09/08	82626	7237	156151	8767	89797	16347	83894	6501	96287	8723	67089	12624	58136	6706	94927	5613	44123	7896
IHR	09/08	67484	5029	116462	5745	63912	10829	13980	1538	21408	2807	18404	4767	13580	3023	19156	1429	11745	3402
LMN	09/08	66115	6268	111511	8697	63840	10328	12460	2344	17764	4835	19733	5633	11207	3282	15224	2434	9192	3217
LGS	09/08	62597	6365	105124	8553	59587	11445	12480	1919	15494	4464	18840	6201	9237	2152	13144	1417	7610	1997
LGR	09/08	62050	5480	104873	8379	58449	12640	12075	2107	14958	4222	16726	6692	7518	1960	9155	1343	4898	1696
PRD	09/06	16843	1003	27716	1570	17080	1731	80288	5126	78139	3550	55483	2565	4739	671	11546	783	6963	2529
WAN	09/06	17164	919	25982	1077	16645	2069	79255	4110	76636	2180	52935	2019	3465	714	9446	620	4468	1831
RIS	09/03	18646	715	31748	1092	17101	2726	79253	3434	88691	2476	55112	5343	2772	792	6796	474	2856	1631
RRH	09/03	9449	351	15244	609	7441	1202	58559	2827	76246	1937	44031	3757	2023	580	5369	296	2393	1023
WEL	09/07	11789	833	19971	1520	7481	1542	44646	2492	62129	3311	34173	3761	641	121	2249	130	1139	478
WFA	09/06	29294	2123	51046	2042	35288	1298	0	0	0	0	0	0	182	55	333	71	282	55

		Coho						Sockeye			Steelhead						Lamprey		
		2016		2015		10-Yr Avg.				10-Yr			10-Yr	Wild	Wild	10-Yr			10-Yr
DAM	ENDDATE	Adult	Jack	Adult	Jack	Adult	Jack	2016	2015	Avg.	2016	2015	Avg.	2016	2015	Avg.	2016	2015	Avg.
BON	09/08	14978	1978	12869	1702	34187	2001	342491	510681	285071	129172	211165	285516	39941	80986	98799	51775	38046	22157
TDA	09/08	3791	531	4403	855	8326	1251	288381	429664	243351	52591	112913	161755	18526	45034	58620	11094	11980	6198
JDA	09/08	784	217	2676	538	4869	855	289944	366057	235087	28345	65993	120615	11470	26490	43114	9076	7775	5254
MCN	09/08	302	110	896	244	1437	268	261663	278913	203154	22947	50423	87601	9214	21168	30524	1445	1583	1353
IHR	09/08	27	5	33	17	76	14	898	1052	840	13204	23683	50875	4709	8927	13948	828	716	266
LMN	09/08	5	5	4	2	30	3	1024	887	983	12187	21886	47743	5277	9445	14783	240	242	84
LGS	09/08	10	3	0	2	19	3	948	579	929	11212	13989	29267	5181	6359	9799	187	102	31
LGR	09/08	5	0	0	0	0	0	814	420	983	12499	18778	30043	5929	8657	10723	104	55	13
PRD	09/06	154	15	77	17	166	20	311071	301229	238396	3079	7770	11259	0	0	0	7190	6144	3603
WAN	09/06	76	5	64	5	85	13	322454	296314	202998	2834	7552	10811	0	0	0	6417	4634	2058
RIS	09/03	1	0	3	0	6	6	310282	264031	231561	2706	6216	8184	1203	3007	3773	2427	1964	843
RRH	09/03	0	0	2	0	0	0	235863	215830	197127	1994	4415	5988	818	2036	2573	2394	1910	704
WEL	09/07	2	2	0	0	0	0	215982	186610	188063	1609	3772	4427	685	1665	1914	3	0	0
WFA	09/06	18	45	20	49	145	87	0	0	0	26067	7527	22206	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.

Page last updated on: 09/09/16