



Fish Passage Center

Weekly Report #17-28

September 22 2017

*The weekly reports
will be published every other week;
the next report will be October 6.*

This Week's Highlights

Water Supply

Precipitation throughout the Columbia Basin has varied between 67% and 292% of average at individual sub-basins over September. Precipitation above The Dalles has been 122% of average over September. Over the 2017 water year, precipitation has ranged between 98% and 133% 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 2017 September 1-20, 2017		Water Year 2017 October 1, 2016 to September 20, 2017	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.26	90	38.9	105
SNAKE RIVER ABOVE ICE HARBOR	1.21	180	26.2	118
Columbia Above The Dalles	1.09	122	29.5	108
Kootenai	0.99	67	39.4	106
Clark Fork	1.27	109	27.0	98
Flathead	1.12	73	39.7	111
Pend Oreille River Basin above Waneta Dam	1.24	96	34.8	107
Salmon River Basin	1.87	210	35.1	122
Upper Snake Tributaries	2.29	215	31.7	120
Clearwater	1.77	143	42.9	106
Willamette River above Portland	4.02	292	86.7	133

Grand Coulee Reservoir is at 1,282.5 feet (9-20-17) and has refilled 4.4 feet over the last week. Outflows at Grand Coulee have ranged between 56.7 Kcfs and 92.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,443.5 feet (9-20-17) and has drafted 0.4 feet over the past week. Daily average outflows at Libby Dam have been 6.0 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,548.0 feet (9-20-17) and has refilled 0.9 feet last week. Outflows at Hungry Horse have been 2.2 Kcfs over the last week.

Dworshak is currently at an elevation of 1,520.2 feet (9-20-17) and has drafted 4.4 feet over the last week. Dworshak outflows have been 4.8-7.1 Kcfs.

The Brownlee Reservoir was at an elevation of 2,046.2 feet on September 20, 2017, and drafted 1.6 feet over the last week. Outflows at Hells Canyon have ranged between 9.1 and 19.5 Kcfs over the last four days.

Spill and Temperature

Although the voluntary spill season for the Snake and Middle Columbia rivers ended after August 31st, Lower Granite Dam continues to provide some spill during the construction activities to the juvenile bypass system. Spill at Lower Granite will be ~7.0 Kcfs during the daytime hours. Over the last two weeks, spill at Lower Granite Dam was through the traditional spill bays (spill bays 2 and 3), in an effort to keep temperatures in the tailrace below the 68°F standard. However, beginning on September 21st, spill was switched to the RSW (spill bay 1). Daily average temperatures in the Lower Granite tailrace have remained at or below 68°F since August 12th.

Beginning September 12th, the forebay total dissolved gas (TDG) monitors at Lower Granite, Ice Harbor, and McNary have been removed. However, the forebay temperature strings at these three projects continue to collect data. Herein, we report the daily

average temperatures for these three projects from the forebay temperature stings located at the 3 meter depth. The daily average temperatures at Lower Granite, Ice Harbor, and McNary dams exceeded the 68°F standard for most of this month, until September 18th or 19th. The daily average temperatures at these three sites on September 21st (at the 3 m string) were 65.8°F at Lower Granite, 66.4°F at Ice Harbor, and 66.1°F at McNary. The forebay TDG monitor at Bonneville continues to collect data. Similar to the other projects, the daily average temperature from the forebay TDG monitor at BON exceeded the 68°F standard for most of this month, until September 18th. The daily average temperature at Bonneville on September 21st was 66.5°F.

Smolt Monitoring

Sampling for the Smolt Monitoring Program (SMP) occurred at Bonneville, McNary, Lower Monumental, and Little Goose dams this week. Sampling at Lower Granite Dam ended in early August this year in order to accommodate construction to the juvenile bypass and juvenile fish facilities. Sampling at Rock Island and John Day dams ended after the samples on August 31st and September 15th, respectively. This week's samples at the bypass facilities were dominated by subyearling Chinook. When compared to the previous week, passage of subyearling Chinook decreased or stayed the same at the Mid-Columbia facilities (Bonneville and McNary) and remained the same at the Snake River facilities (Lower Monumental and Little Goose). Very few spring migrants (i.e., yearling Chinook, coho, sockeye, and steelhead) were encountered in this week's samples.

On September 15th, the daily average temperature in the Bonneville Dam (BON) forebay dropped below 69.5°F. Therefore, the high temperature sampling protocol was lifted and SMP personnel resumed every-day sampling, beginning with the sample on Sept. 16th. This week's samples at Bonneville Dam (BON) were again dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 90 per day. This is a decrease over the previous week's daily average passage index of about 200. The only spring migrants that were encountered in this week's samples were steelhead, which were collected on September 16th. Finally, Pacific lamprey ammocoetes were encountered in one of this week's

samples (September 20th) while no macrophthalmia were encountered this week.

Sampling at McNary Dam (MCN) is every-other-day. The MCN juvenile fish facility was operating under the high temperature sampling protocol from about July 12th through about September 18th. Under this protocol, sampling at MCN remained every-other-day (24-hour sample) but the target sample size was reduced to 100 fish per day. This protocol remained in place until temperatures in the McNary Forebay dropped below 68.0°F. This week's samples were again dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 170 per day, which is similar to the previous week's daily average passage index of 160 subyearling Chinook per day. No spring migrants were encountered in this week's samples at MCN. Finally, Pacific lamprey macrophthalmia were also encountered in all three of this week's samples, with a daily average collection of about 30 fish per day. No pacific ammocoetes were encountered this week.

Similar to recent years, sampling at Little Goose Dam (LGS) was every-other-day until the start of transportation, at which time sampling went to every day. This week's samples at LGS were again dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 80 per day, which is a slight increase over the previous week's daily average passage index of 60 per day. Passage of spring migrants remained low this week. In fact, the only spring migrants that were encountered in this week's samples were sockeye. Finally, Pacific lamprey ammocoetes were encountered in only two of this week's samples (Sept. 17th and 19th) and macrophthalmia were encountered in five of this week's samples.

Similar to recent years, sampling at Lower Monumental Dam (LMN) was every-third-day from April 1st to April 16th, every-other-day from April 16th until transportation began, at which time sampling switched to every day. Under the current operation, site personnel at LMN will transmit two days of sample data to the FPC every other day. This week's samples at LMN were again dominated by subyearling Chinook. Passage of subyearling Chinook at LMN was very similar this week to the previous week. The daily average passage index for subyearling Chinook has been about 15 fish per day for the past several weeks. The only

spring migrants that were encountered in this week's samples were yearling Chinook and steelhead, which were encountered in only a couple of this week's samples. No lamprey juveniles were encountered in this week's samples at LMN. Finally, due to highway closures in the Columbia River Gorge, truck transportation from LGS and LMN was suspended from September 6th through September 20th. These sites resumed truck transportation on September 21st. Truck transportation is expected to continue until the end of the sampling season for each site, pending no future road closures.

Hatchery Release

Effective 2017, the FPC has reorganized our hatchery release zones in an effort to more closely match the geographical regions used by NOAA in their ESU designations. The new river zones are: 1) Lower Columbia, 2) Middle Columbia, 3) Upper Columbia, and 4) Snake River. In addition, the FPC now provides a summary of hatchery releases below Bonneville Dam (i.e., Lower Columbia River Zone) in the weekly report.

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 and no new releases are scheduled over the next two weeks.

Upper Columbia Zone: The Upper Columbia Zone encompasses the area of the Columbia River and its tributaries from Priest Rapids 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.

Middle Columbia Zone: The Middle Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to Priest Rapids Dam (excluding the Snake River). 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 below Bonneville Dam. No new releases were scheduled for this zone this week. Beginning in October, approximately 400,000 spring Chinook pre-smolts will be released into the Lewis River. These pre-smolts are not expected to out-migrate until the spring of 2018.

Adult Passage

The adult fall Chinook count of 253,487 is about 64.2% of the 2016 count of 394,540 and about 59% of the 10-year average count of 429,481. The 2017 Bonneville Dam fall Chinook jack count of 28,637 is about 62.5% of the 2016 count of 45,788 and 44.6% of the 10-year average count of 64,222. The 2017 adult fall Chinook count of 16,538 at Ice Harbor Dam in the Snake River is about 53.5% of the 2016 count and 55.5% of the 10-year average count of 29,772. The 2017 Lower Granite fall Chinook adult count of 9,944 is about 39.7% of the 2016 count and 46.1% of the 10-year average count of 21,553.

The 2017 Bonneville Dam adult steelhead count of 103,149 is about 64.3% of the 2016 count of 160,405 and 33.6% of the 10-year average count of 307,205. The 2017 Bonneville Dam adult unclipped steelhead count of 31,248 is about 68.4% of the 2016 count of 45,658 and 30% of the 10-year average count of 104,166. Daily adult steelhead counts at Lower Granite Dam ranged from 208 to 608 adults per day last week. This year's Lower Granite steelhead count of 12,277 is about 46.3% of the 2016 count of 26,493 and about 20% of the 10-year average count of 61,400. The 2017 Lower Granite Dam adult unclipped steelhead count of 4,745 is about 55.3% of the 2016 count of 8,581 and 25.3% of the 10-year average count of 18,731. At Willamette Falls, the 2017 count for steelhead was 2,753 as of September 20th. This year's steelhead count is about 10.1% of the 2016 count of 27,199 and 12.2% of the 10-year average count of 22,599.

As of September 21st, the cumulative adult coho count at Bonneville Dam is 33,865, which is about 1.3 times greater than the 2016 count but only 53.2% of the 10-year average count of 63,599. A total of 82,429 lampreys have been counted at Bonneville Dam so far this year. The Bonneville 2017 lamprey count is about 1.6 times greater than the 2016 count of 52,059 and 3.4 times greater than the 10-year average count of 24,090.

Hatchery Releases Last Two Weeks

Hatchery Release Summary
From: 9/9/2017 to 09/22/17

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

Hatchery Releases Next Two Weeks

Hatchery Release Summary
From: 9/23/2017 to 10/6/2017

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	Zone
Washington Dept. of Fish and Wildlife	Lewis River Hatchery	CH0	SP	2018	400,000	10-01-17	11-01-17	Lewis River Hatchery	Lewis River	LCOL
Washington Dept. of Fish and Wildlife Total					400,000					
Grand Total					400,000					

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

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
09/08/2017	73.8	0.1	72.8	0.0	78.9	0.0	74.8	0.0	79.0	0.0	75.4	1.1	76.8	2.6
09/09/2017	71.1	0.1	71.1	0.0	62.9	0.0	62.9	0.0	64.6	0.0	70.1	1.2	71.0	2.4
09/10/2017	80.9	0.1	82.1	0.0	83.1	0.0	77.3	0.0	79.8	0.1	70.6	4.6	61.9	4.0
09/11/2017	84.3	0.1	83.5	0.0	100.2	0.0	94.9	0.0	100.7	0.0	92.3	1.8	85.9	6.9
09/12/2017	81.1	0.1	80.5	0.0	79.0	0.0	78.7	0.0	83.0	0.0	99.9	1.9	101.2	18.3
09/13/2017	80.4	0.1	81.8	0.0	79.4	0.0	76.9	0.0	81.0	0.0	84.8	1.6	78.3	2.7
09/14/2017	92.6	0.1	86.7	0.0	80.5	0.0	83.0	0.0	89.0	0.8	96.5	1.7	90.2	14.5
09/15/2017	80.8	0.1	86.7	0.0	92.4	0.0	87.2	0.0	91.4	0.0	90.8	1.8	90.1	16.0
09/16/2017	57.4	0.1	54.0	0.0	53.5	0.0	57.5	0.0	57.8	0.0	85.0	1.5	89.8	13.8
09/17/2017	56.7	0.1	56.6	0.0	55.4	0.0	50.7	0.0	54.5	0.0	55.9	1.1	55.2	2.3
09/18/2017	57.0	0.1	60.3	0.0	61.2	0.0	60.2	0.0	65.3	0.0	62.6	1.4	60.0	2.6
09/19/2017	61.3	0.1	59.0	0.0	63.2	0.0	59.3	0.0	63.4	0.0	60.5	1.7	57.0	2.4
09/20/2017	58.7	0.1	57.3	0.0	64.7	0.0	64.9	0.0	70.1	0.0	71.0	1.9	65.6	1.8
09/21/2017	56.4	0.1	59.6	0.0	51.3	0.0	51.9	0.0	56.5	0.0	70.2	1.9	69.2	2.9

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

Date	Dworshak		Brownlee Inflow	Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill		Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	
09/08/2017	7.1	2.4	---	16.0	32.4	3.4	33.5	0.0	30.7	11.3	28.6	0.0	0.0
09/09/2017	6.9	2.2	---	13.5	26.3	3.3	24.6	0.0	25.3	6.9	27.1	0.0	0.0
09/10/2017	6.8	2.1	---	12.9	24.1	3.5	24.4	0.0	22.8	3.4	25.5	0.0	0.0
09/11/2017	6.8	2.1	---	15.8	28.7	3.4	27.8	0.0	29.2	9.7	29.4	0.0	0.0
09/12/2017	6.8	2.1	---	13.6	26.7	3.5	27.5	0.0	25.6	0.8	27.3	0.0	0.0
09/13/2017	6.8	2.1	---	13.8	23.0	3.3	20.2	0.0	20.4	0.0	17.0	0.0	0.0
09/14/2017	6.8	2.1	---	12.9	21.2	3.5	22.9	0.0	22.4	0.0	22.7	0.0	0.0
09/15/2017	6.8	2.1	---	13.0	32.1	3.5	30.2	0.0	30.3	0.0	30.5	0.0	0.0
09/16/2017	7.0	2.2	---	14.2	29.5	3.5	29.0	0.0	30.0	0.0	32.1	0.0	0.0
09/17/2017	7.1	2.3	---	12.3	26.3	3.5	31.2	0.0	32.3	0.0	30.7	0.0	0.0
09/18/2017	7.1	2.3	---	14.0	26.3	3.4	33.1	0.0	36.0	0.0	32.6	0.0	0.0
09/19/2017	4.8	0.0	---	16.7	23.2	3.2	25.5	0.0	29.0	0.0	33.4	0.0	0.0
09/20/2017	4.8	0.0	---	15.6	29.3	3.4	28.6	0.0	28.9	0.0	26.8	0.0	0.0
09/21/2017	3.0	0.0	---	15.9	25.9	3.5	28.7	0.0	28.4	0.0	29.7	0.0	0.0

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
09/08/2017	118.5	0.0	116.2	1.0	117.7	0.0	121.9	1.3	34.6	78.5
09/09/2017	99.5	0.0	93.9	1.0	94.2	0.0	102.4	1.3	17.6	76.1
09/10/2017	99.2	0.0	105.4	1.0	106.6	0.0	102.8	1.3	17.7	76.4
09/11/2017	113.8	0.0	113.3	1.0	115.9	0.0	122.4	1.3	34.7	79.0
09/12/2017	118.6	0.0	113.7	1.0	114.8	0.0	122.2	1.3	46.0	67.4
09/13/2017	113.9	0.0	110.3	1.0	108.6	0.0	113.7	1.3	40.7	64.3
09/14/2017	105.9	0.0	105.7	1.0	108.5	0.0	113.6	1.3	38.0	66.8
09/15/2017	118.5	0.0	114.3	1.0	113.7	0.0	118.1	1.3	32.2	77.2
09/16/2017	137.3	0.0	132.7	1.0	133.0	0.0	129.5	1.3	40.1	80.6
09/17/2017	102.4	0.0	101.7	0.9	103.3	0.0	108.6	1.3	25.0	74.9
09/18/2017	83.6	0.0	87.0	0.9	90.2	0.0	96.0	1.2	60.0	27.3
09/19/2017	91.3	0.0	87.1	0.9	88.8	0.0	95.6	1.3	59.7	27.2
09/20/2017	95.3	0.0	90.9	0.9	90.7	0.0	96.1	1.2	59.8	27.7
09/21/2017	96.1	0.0	97.8	0.9	101.1	0.0	108.7	1.2	67.6	32.5

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

Date	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
9/8	---	---	---	0	---	---	---	0	104.2	104.5	104.8	24	102.1	103.0	104.0	24	104.4	104.7	104.9	24
9/9	---	---	---	0	---	---	---	0	104.0	104.3	104.4	24	101.2	102.0	102.6	24	103.4	103.6	103.8	24
9/10	---	---	---	0	---	---	---	0	103.5	103.6	103.8	24	100.6	101.7	102.6	24	102.5	102.7	103.0	24
9/11	---	---	---	0	---	---	---	0	102.9	103.2	103.7	24	99.8	100.7	101.4	24	102.7	103.3	103.8	24
9/12	---	---	---	0	---	---	---	0	103.6	104.0	104.9	24	100.9	102.2	102.7	24	103.5	104.1	104.8	24
9/13	---	---	---	0	---	---	---	0	104.4	104.5	104.7	24	101.8	102.5	103.0	24	103.3	103.6	104.0	24
9/14	---	---	---	0	---	---	---	0	103.9	104.0	104.1	24	101.7	102.1	102.5	24	102.4	102.6	102.7	24
9/15	---	---	---	0	---	---	---	0	102.9	103.3	103.6	24	101.4	101.9	102.3	24	101.5	101.7	102.1	24
9/16	---	---	---	0	---	---	---	0	101.4	101.7	102.1	24	101.3	102.3	103.1	24	101.2	101.7	102.0	24
9/17	---	---	---	0	---	---	---	0	102.4	102.7	102.8	24	101.7	102.0	102.3	24	102.1	102.6	102.8	24
9/18	---	---	---	0	---	---	---	0	102.4	102.6	102.6	24	102.2	102.9	104.0	24	102.6	102.9	103.3	24
9/19	---	---	---	0	---	---	---	0	102.4	102.7	103.6	24	101.8	102.3	103.4	24	102.6	103.0	103.3	24
9/20	---	---	---	0	---	---	---	0	102.0	102.1	102.1	24	101.8	102.3	103.4	24	102.8	103.1	103.9	24
9/21	---	---	---	0	---	---	---	0	101.2	101.4	101.7	23	101.0	101.5	102.6	23	102.0	102.2	102.5	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
9/8	104.0	104.3	104.7	24	104.2	104.6	104.9	24	104.1	104.5	104.8	24	104.7	104.9	105.3	24	103.1	103.7	104.2	21
9/9	103.0	103.3	103.6	24	103.4	103.7	104.1	24	103.6	103.9	104.2	24	104.1	104.3	104.6	24	101.9	102.4	102.8	22
9/10	102.3	102.6	102.9	24	102.3	102.7	103.2	24	102.5	102.8	103.1	24	103.1	103.3	103.6	24	101.4	102.0	103.0	17
9/11	102.6	103.0	103.4	24	102.1	102.7	103.5	21	102.5	103.0	103.4	21	103.3	103.5	103.8	24	102.4	103.1	103.6	23
9/12	103.0	103.7	104.4	24	103.0	103.8	104.2	24	103.4	103.9	104.2	24	103.9	104.3	104.6	24	102.9	103.3	103.9	22
9/13	103.2	103.7	104.2	24	102.7	103.1	103.3	23	102.8	103.3	103.7	23	103.8	104.0	104.2	24	102.2	102.9	103.3	22
9/14	102.3	102.7	103.0	24	102.0	102.2	102.4	24	101.5	101.9	102.3	24	103.3	103.5	103.8	24	102.3	102.7	103.4	22
9/15	101.4	101.9	102.3	24	101.1	101.6	102.2	24	101.0	101.5	102.0	24	102.6	102.8	103.2	24	101.5	102.0	102.6	21
9/16	101.6	102.4	103.9	24	100.4	100.8	101.2	24	100.5	101.1	101.5	24	101.8	102.1	102.2	24	99.5	99.9	100.8	23
9/17	102.5	103.5	104.8	24	101.1	101.9	102.7	24	101.3	102.0	102.6	24	102.4	102.6	102.7	24	99.2	100.6	101.6	23
9/18	103.0	103.6	104.2	24	101.1	101.6	102.1	24	101.1	101.6	102.1	24	102.9	103.0	103.1	23	101.9	102.2	102.7	22
9/19	102.7	103.3	104.1	24	101.1	101.5	102.1	24	101.0	101.7	102.9	24	102.5	102.6	102.9	24	101.5	101.8	102.2	24
9/20	103.0	103.7	105.0	24	101.2	101.6	102.1	24	101.6	102.2	103.2	24	102.1	102.3	102.5	24	101.1	101.4	101.9	24
9/21	102.3	102.9	104.1	23	100.6	100.8	101.1	23	101.0	101.5	101.9	23	100.8	101.0	101.4	23	99.9	100.2	101.0	20

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
9/8	104.2	104.4	104.5	22	104.4	104.5	104.7	19	104.0	106.0	107.3	24	103.5	104.7	105.3	24	104.0	104.9	105.5	24
9/9	103.7	103.9	104.3	24	103.8	104.0	104.3	21	104.0	104.5	105.1	24	103.2	103.7	104.3	24	102.1	102.9	103.8	24
9/10	102.7	102.8	102.9	21	102.8	102.9	103.1	17	101.3	104.3	105.5	24	103.8	105.4	112.8	24	99.4	100.9	102.0	24
9/11	103.1	103.7	104.2	24	103.2	103.6	104.2	21	104.5	105.3	106.3	24	103.2	103.6	103.9	24	102.5	103.5	103.8	24
9/12	103.0	103.8	104.1	22	103.7	103.9	104.1	20	104.6	105.3	106.6	24	103.4	103.8	104.6	24	102.6	103.0	103.5	24
9/13	103.5	103.7	104.0	23	103.5	103.7	103.9	20	103.2	104.2	105.2	24	102.6	103.0	103.5	24	101.7	102.2	102.8	24
9/14	102.8	103.1	103.4	22	102.9	103.2	105.6	21	102.8	103.4	104.1	24	102.2	102.7	103.1	24	100.2	100.7	101.6	24
9/15	102.1	102.4	102.8	22	102.2	102.4	102.7	21	102.6	103.4	104.4	24	101.7	102.2	102.5	24	98.5	99.8	100.8	24
9/16	101.5	101.7	102.3	23	101.7	102.0	102.4	22	101.7	102.9	103.7	24	101.4	101.9	102.3	24	100.2	100.8	101.1	24
9/17	101.9	102.4	103.1	24	101.8	102.3	103.0	23	101.6	103.1	104.0	24	101.0	101.8	102.3	24	99.1	100.2	101.0	24
9/18	101.9	102.1	102.3	24	101.8	102.1	102.3	23	100.9	102.2	102.7	24	101.6	102.5	103.0	24	98.7	99.9	101.0	24
9/19	101.8	102.4	102.7	24	101.9	102.2	102.6	23	99.8	102.0	102.7	24	101.6	102.3	103.0	24	97.5	98.4	99.2	24
9/20	101.4	101.6	101.9	24	101.2	101.5	101.6	23	100.4	101.7	102.1	24	101.3	101.7	102.0	24	98.1	99.6	100.4	24
9/21	100.3	100.6	101.1	21	100.2	100.4	100.5	19	99.0	100.2	100.7	24	99.8	100.3	100.9	24	98.0	98.4	99.0	24

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

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

Date	Priest R. Dnst			Pasco			Dworshak			Clrwtr-Peck			Anatone			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
9/8	---	---	---	0	---	---	---	0	109.4	109.7	110.2	24	106.2	107.2	108.4	24	100.8	101.8	102.8	24
9/9	---	---	---	0	---	---	---	0	108.4	108.9	109.2	24	105.9	106.9	108.4	24	101.1	102.4	104.0	24
9/10	---	---	---	0	---	---	---	0	107.1	107.4	107.8	24	104.6	105.7	107.4	24	100.7	102.0	103.6	24
9/11	---	---	---	0	---	---	---	0	107.3	107.8	108.3	24	104.6	106.0	107.9	24	101.4	103.0	104.9	24
9/12	---	---	---	0	---	---	---	0	107.8	108.2	108.7	24	104.7	106.0	107.7	24	101.7	103.0	104.9	23
9/13	---	---	---	0	---	---	---	0	107.8	108.0	108.6	24	103.4	103.4	104.2	10	100.1	100.1	101.2	10
9/14	---	---	---	0	---	---	---	0	107.4	107.6	107.8	24	---	---	---	0	---	---	---	0
9/15	---	---	---	0	---	---	---	0	106.9	107.1	107.6	24	---	---	---	0	---	---	---	0
9/16	---	---	---	0	---	---	---	0	107.9	108.7	109.1	24	---	---	---	0	---	---	---	0
9/17	---	---	---	0	---	---	---	0	108.8	109.1	109.6	24	---	---	---	0	---	---	---	0
9/18	---	---	---	0	---	---	---	0	108.8	108.9	109.0	24	---	---	---	0	---	---	---	0
9/19	---	---	---	0	---	---	---	0	101.4	102.0	106.6	24	---	---	---	0	---	---	---	0
9/20	---	---	---	0	---	---	---	0	101.2	101.5	101.9	24	---	---	---	0	---	---	---	0
9/21	---	---	---	0	---	---	---	0	100.9	101.4	102.0	23	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
9/8	103.4	105.0	106.4	24	101.7	102.0	102.3	24	103.8	106.2	106.8	24	105.5	105.6	105.7	24	105.5	105.8	105.9	24
9/9	103.6	105.4	107.1	24	101.0	101.4	101.7	24	103.2	105.4	106.0	24	104.8	105.1	105.4	24	103.2	103.7	104.0	24
9/10	103.0	104.9	106.6	24	99.8	99.9	100.3	24	102.3	104.5	105.6	24	102.9	103.1	103.7	24	101.5	101.7	101.9	24
9/11	103.3	105.4	107.3	24	100.3	101.1	102.4	24	102.4	104.6	105.6	24	103.2	103.6	103.9	24	101.9	102.7	104.5	24
9/12	101.7	101.8	105.3	13	100.9	100.9	102.1	9	104.3	106.6	108.1	24	103.4	103.6	103.8	24	102.2	102.9	103.8	24
9/13	---	---	---	0	---	---	---	0	103.4	105.7	107.0	24	102.2	102.3	103.1	14	100.6	101.2	101.5	24
9/14	---	---	---	0	---	---	---	0	102.9	105.5	106.7	24	---	---	---	0	99.4	99.6	100.0	24
9/15	---	---	---	0	---	---	---	0	102.5	105.1	106.3	24	---	---	---	0	98.9	99.4	100.2	24
9/16	---	---	---	0	---	---	---	0	102.7	105.4	106.1	24	---	---	---	0	99.5	100.0	100.2	24
9/17	---	---	---	0	---	---	---	0	102.7	105.3	106.2	24	---	---	---	0	99.7	99.9	100.3	24
9/18	---	---	---	0	---	---	---	0	101.9	104.0	105.4	24	---	---	---	0	97.9	98.4	98.8	24
9/19	---	---	---	0	---	---	---	0	102.3	105.4	109.3	24	---	---	---	0	96.0	96.8	97.6	24
9/20	---	---	---	0	---	---	---	0	101.4	104.0	104.9	24	---	---	---	0	94.1	94.9	95.3	24
9/21	---	---	---	0	---	---	---	0	104.4	109.5	110.8	23	---	---	---	0	91.3	91.8	92.4	23

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

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
9/8	103.9	104.0	104.2	24	108.5	111.0	111.2	24	106.8	107.3	107.6	24	106.8	107.3	107.7	24	---	---	---	0
9/9	103.1	103.3	104.1	24	108.3	111.0	111.7	24	103.9	104.3	105.2	24	104.3	104.9	105.7	24	---	---	---	0
9/10	101.3	101.7	102.4	24	104.0	106.1	108.5	24	103.9	104.2	104.7	24	104.3	105.2	106.2	24	---	---	---	0
9/11	102.3	102.7	103.1	24	109.4	109.9	110.4	24	103.9	104.1	104.5	24	105.0	105.8	106.5	24	---	---	---	0
9/12	102.6	102.9	103.2	24	105.6	106.8	109.3	24	104.7	105.1	105.5	24	105.3	106.2	106.9	24	---	---	---	0
9/13	102.3	102.3	102.5	10	103.5	104.2	108.3	24	104.2	104.4	104.6	24	105.0	105.8	106.5	24	---	---	---	0
9/14	---	---	---	0	102.5	102.7	103.0	24	104.5	104.5	104.7	12	105.2	105.6	106.2	23	---	---	---	0
9/15	---	---	---	0	102.2	102.7	103.0	24	---	---	---	0	105.7	105.9	106.2	24	---	---	---	0
9/16	---	---	---	0	102.3	102.5	102.7	24	---	---	---	0	105.6	105.9	106.5	24	---	---	---	0
9/17	---	---	---	0	101.5	101.6	101.8	24	---	---	---	0	105.7	106.1	106.7	24	---	---	---	0
9/18	---	---	---	0	100.6	100.9	101.1	24	---	---	---	0	103.9	104.5	104.8	24	---	---	---	0
9/19	---	---	---	0	99.6	99.8	100.2	24	---	---	---	0	102.0	102.5	102.9	24	---	---	---	0
9/20	---	---	---	0	99.2	99.4	99.6	24	---	---	---	0	101.3	101.8	102.6	24	---	---	---	0
9/21	---	---	---	0	98.3	98.4	98.6	23	---	---	---	0	100.0	100.5	101.2	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>AVG</u>	<u>High</u>	<u>hr</u>				
9/8	104.6	104.8	105.1	24	103.9	104.2	104.5	24	105.8	106.0	106.1	24	105.3	105.7	106.2	24	103.7	104.0	104.4	24
9/9	103.5	103.9	104.3	24	102.8	103.2	103.6	24	105.0	105.3	105.6	24	104.5	104.8	105.0	24	102.4	102.7	103.0	24
9/10	102.7	102.9	103.1	24	102.3	102.7	103.2	24	103.6	103.8	104.2	24	103.2	103.5	103.7	24	102.0	102.5	102.9	24
9/11	103.8	105.1	105.6	24	103.3	104.5	104.9	24	103.6	104.2	105.6	24	102.9	103.6	104.0	24	103.0	103.8	104.2	24
9/12	105.5	105.8	106.1	24	105.0	105.6	106.1	24	103.1	103.4	103.6	24	102.6	103.0	103.5	24	103.5	103.9	104.3	24
9/13	105.3	105.6	106.1	24	104.8	105.3	105.7	24	102.2	102.4	102.5	24	101.9	102.3	102.9	24	101.9	102.2	102.5	24
9/14	103.7	104.0	104.6	24	103.5	103.8	104.2	24	101.4	101.6	102.0	24	101.4	101.8	102.3	24	100.7	100.9	101.1	24
9/15	102.3	102.3	102.8	9	102.8	103.2	103.6	24	101.0	101.3	101.9	24	100.8	101.2	101.7	24	100.6	101.0	101.3	24
9/16	---	---	---	0	102.6	102.9	103.0	24	101.0	101.3	101.6	24	100.9	101.5	101.9	24	100.9	101.4	101.7	24
9/17	---	---	---	0	102.3	102.7	103.2	24	101.2	101.4	101.6	24	101.1	101.4	101.6	24	101.2	101.6	101.7	24
9/18	---	---	---	0	101.4	101.6	101.9	24	100.6	100.8	101.1	24	100.8	101.1	101.3	24	100.9	101.1	101.5	24
9/19	---	---	---	0	100.8	101.0	101.5	24	100.4	100.5	100.8	24	101.5	102.7	103.7	24	100.5	100.7	100.8	24
9/20	---	---	---	0	100.8	101.1	101.3	24	100.6	100.8	101.1	24	106.2	110.1	112.8	24	100.4	100.6	100.7	24
9/21	---	---	---	0	99.8	100.1	100.5	23	99.9	100.1	100.3	23	100.4	100.7	101.3	23	99.4	99.6	99.9	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
9/8	103.7	104.0	104.3	24	102.4	102.7	103.3	24	104.2	104.3	104.6	24	103.7	104.1	104.5	24	105.6	106.2	106.9	24
9/9	102.5	102.9	103.2	24	101.1	101.5	102.0	24	103.4	103.7	104.2	24	102.8	103.3	103.8	24	106.7	107.6	113.3	24
9/10	102.1	102.5	102.8	24	100.3	100.6	100.9	24	103.1	103.5	103.8	24	102.2	103.0	103.7	24	110.2	112.7	114.5	24
9/11	102.6	103.4	103.7	24	101.2	101.8	102.2	24	104.3	105.1	105.9	24	103.4	104.3	104.9	24	109.5	111.4	114.1	24
9/12	103.1	103.6	104.0	24	102.3	102.9	103.3	24	104.2	104.7	105.3	24	103.9	104.6	105.3	24	107.7	108.9	113.6	24
9/13	102.1	102.4	102.6	24	101.9	102.2	102.5	24	103.9	103.9	104.1	5	103.2	104.2	104.6	24	108.4	109.7	112.5	24
9/14	100.7	100.9	101.1	24	101.0	101.2	101.7	24	103.7	104.1	104.6	24	103.3	104.0	104.2	24	108.4	109.7	110.8	24
9/15	100.3	100.8	101.2	24	100.0	100.3	100.5	24	102.8	103.2	103.7	24	102.9	103.7	104.1	24	108.0	109.2	110.2	24
9/16	100.5	100.8	101.2	24	100.2	100.4	100.5	24	102.7	103.1	103.4	24	101.6	102.1	103.4	24	107.9	108.8	110.2	24
9/17	100.8	101.3	101.5	24	100.3	100.6	100.8	24	102.9	103.3	103.7	24	101.2	101.6	101.8	24	107.5	108.7	110.3	24
9/18	100.6	100.9	101.1	24	100.2	100.4	100.7	24	102.8	103.5	104.0	24	101.2	101.5	101.6	24	108.1	110.9	114.0	24
9/19	100.3	100.5	100.7	24	99.6	99.7	100.0	24	102.0	102.6	103.0	24	101.1	101.3	101.7	24	106.3	108.2	109.3	24
9/20	100.4	100.6	101.0	24	99.6	99.8	100.1	24	102.6	102.9	103.3	24	100.8	101.1	101.5	24	106.2	108.2	109.3	24
9/21	99.4	99.7	100.1	23	98.9	99.1	99.2	23	102.5	102.9	103.4	23	100.0	100.0	100.4	9	107.1	108.7	109.5	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 9/22/2017 11:02

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											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
09/08/2017 *	---	---	---	---	---	0	0	---	0	0	---
09/09/2017	---	---	---	---	---	0	0	---	---	---	---
09/10/2017	---	---	---	---	---	0	0	---	0	---	0
09/11/2017	---	---	---	---	---	0	0	---	---	---	---
09/12/2017 *	---	---	---	---	---	0	0	---	0	0	0
09/13/2017	---	---	---	---	---	0	0	---	---	---	---
09/14/2017	---	---	---	---	---	0	0	---	0	---	0
09/15/2017 *	---	---	---	---	---	0	0	---	---	0	---
09/16/2017	---	---	---	---	---	0	0	---	0	---	0
09/17/2017	---	---	---	---	---	0	1	---	---	---	0
09/18/2017	---	---	---	---	---	0	0	---	0	---	0
09/19/2017	---	---	---	---	---	0	0	---	---	---	0
09/20/2017	---	---	---	---	---	0	0	---	0	---	0
09/21/2017	---	---	---	---	---	0	0	---	---	---	0
09/22/2017	---	---	---	---	---	---	---	---	---	---	0
Total:	0	0	0	0	0	0	1	0	0	0	0
# Days:	0	0	0	0	0	14	14	0	7	3	10
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	33,704	22,233	21,106	8	3,998,337	2,400,545	2,885,797	50,596	1,583,272	1,720,241	1,947,910

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
09/08/2017 *	---	---	---	---	---	78	12	---	152	15	---
09/09/2017	---	---	---	---	---	85	27	---	---	---	---
09/10/2017	---	---	---	---	---	58	10	---	144	---	378
09/11/2017	---	---	---	---	---	67	13	---	---	---	---
09/12/2017 *	---	---	---	---	---	63	17	---	128	22	128
09/13/2017	---	---	---	---	---	35	11	---	---	---	---
09/14/2017	---	---	---	---	---	37	16	---	216	---	147
09/15/2017 *	---	---	---	---	---	62	7	---	---	8	---
09/16/2017	---	---	---	---	---	71	6	---	248	---	55
09/17/2017	---	---	---	---	---	183	20	---	---	---	15
09/18/2017	---	---	---	---	---	64	6	---	160	---	104
09/19/2017	---	---	---	---	---	36	17	---	---	---	66
09/20/2017	---	---	---	---	---	87	12	---	92	---	118
09/21/2017	---	---	---	---	---	69	19	---	---	---	168
09/22/2017	---	---	---	---	---	---	---	---	---	---	148
Total:	0	0	0	0	0	995	193	0	1,140	45	1,327
# Days:	0	0	0	0	0	14	14	0	7	3	10
Average:	0	0	0	0	0	71	14	0	163	15	133
YTD	0	11	40	0	1,020,549	1,066,114	655,445	74,306	2,476,392	1,067,668	4,048,024

Two-Week Summary of Passage Indices

COMBINED COHO												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
09/08/2017	*	---	---	---	---	0	0	---	0	0	---	
09/09/2017		---	---	---	---	0	0	---	---	---	---	
09/10/2017		---	---	---	---	0	0	---	0	---	0	
09/11/2017		---	---	---	---	0	0	---	---	---	---	
09/12/2017	*	---	---	---	---	0	0	---	0	0	0	
09/13/2017		---	---	---	---	0	0	---	---	---	---	
09/14/2017		---	---	---	---	0	0	---	0	---	0	
09/15/2017	*	---	---	---	---	0	0	---	---	0	---	
09/16/2017		---	---	---	---	0	0	---	0	---	0	
09/17/2017		---	---	---	---	0	0	---	---	---	0	
09/18/2017		---	---	---	---	0	0	---	0	---	0	
09/19/2017		---	---	---	---	0	0	---	---	---	0	
09/20/2017		---	---	---	---	0	0	---	0	---	0	
09/21/2017		---	---	---	---	0	0	---	---	---	0	
09/22/2017		---	---	---	---	---	---	---	---	---	0	
Total:		0	0	0	0	0	0	0	0	0	0	
# Days:		0	0	0	0	14	14	0	7	3	10	
Average:		0	0	0	0	0	0	0	0	0	0	
YTD		0	0	2,232	0	128,502	86,636	69,601	35,300	86,630	96,620	356,050

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
09/08/2017	*	---	---	---	---	0	0	---	0	0	---	
09/09/2017		---	---	---	---	1	0	---	---	---	---	
09/10/2017		---	---	---	---	1	0	---	0	---	0	
09/11/2017		---	---	---	---	0	0	---	---	---	---	
09/12/2017	*	---	---	---	---	0	0	---	0	0	0	
09/13/2017		---	---	---	---	0	0	---	---	---	---	
09/14/2017		---	---	---	---	0	0	---	0	---	0	
09/15/2017	*	---	---	---	---	0	0	---	---	0	---	
09/16/2017		---	---	---	---	0	0	---	0	---	15	
09/17/2017		---	---	---	---	0	0	---	---	---	0	
09/18/2017		---	---	---	---	0	0	---	0	---	0	
09/19/2017		---	---	---	---	0	1	---	---	---	0	
09/20/2017		---	---	---	---	0	0	---	0	---	0	
09/21/2017		---	---	---	---	0	1	---	---	---	0	
09/22/2017		---	---	---	---	---	---	---	---	---	0	
Total:		0	0	0	0	2	2	0	0	0	15	
# Days:		0	0	0	0	14	14	0	7	3	10	
Average:		0	0	0	0	0	0	0	0	0	2	
YTD		7,117	15,916	7,614	1	4,065,200	1,853,172	2,517,521	32,136	442,841	1,317,075	264,534

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)	(INDEX)
09/08/2017	*	---	---	---	---	0	0	---	0	0	---	---
09/09/2017		---	---	---	---	0	0	---	---	---	---	---
09/10/2017		---	---	---	---	0	0	---	4	---	---	0
09/11/2017		---	---	---	---	0	0	---	---	---	---	---
09/12/2017	*	---	---	---	---	0	0	---	4	0	---	0
09/13/2017		---	---	---	---	0	0	---	---	---	---	---
09/14/2017		---	---	---	---	0	0	---	0	---	---	0
09/15/2017	*	---	---	---	---	0	0	---	---	0	---	---
09/16/2017		---	---	---	---	0	0	---	0	---	---	0
09/17/2017		---	---	---	---	0	0	---	---	---	---	0
09/18/2017		---	---	---	---	0	0	---	0	---	---	0
09/19/2017		---	---	---	---	0	0	---	---	---	---	0
09/20/2017		---	---	---	---	1	0	---	0	---	---	0
09/21/2017		---	---	---	---	1	0	---	---	---	---	0
09/22/2017		---	---	---	---	---	---	---	---	---	---	0
<hr/>												
Total:		0	0	0	0	2	0	0	8	0	0	0
# Days:		0	0	0	0	14	14	0	7	3	10	10
Average:		0	0	0	0	0	0	0	1	0	0	0
YTD		6	0	0	0	61,191	24,476	34,028	11,197	156,400	117,049	145,288

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)	(Coll)
09/08/2017	*	---	---	---	---	17	0	---	20	1	---	---
09/09/2017		---	---	---	---	21	0	---	---	---	---	---
09/10/2017		---	---	---	---	64	0	---	20	---	---	0
09/11/2017		---	---	---	---	21	0	---	---	---	---	---
09/12/2017	*	---	---	---	---	12	0	---	12	0	---	0
09/13/2017		---	---	---	---	5	0	---	---	---	---	---
09/14/2017		---	---	---	---	6	0	---	12	---	---	0
09/15/2017	*	---	---	---	---	15	0	---	---	0	---	---
09/16/2017		---	---	---	---	3	0	---	68	---	---	0
09/17/2017		---	---	---	---	7	0	---	---	---	---	0
09/18/2017		---	---	---	---	0	0	---	4	---	---	0
09/19/2017		---	---	---	---	3	0	---	---	---	---	0
09/20/2017		---	---	---	---	1	0	---	24	---	---	4
09/21/2017		---	---	---	---	0	0	---	---	---	---	0
09/22/2017		---	---	---	---	---	---	---	---	---	---	0
<hr/>												
Total:		0	0	0	0	175	0	0	160	1	4	4
# Days:		0	0	0	0	14	14	0	7	3	10	10
Average:		0	0	0	0	13	0	0	23	0	0	0
YTD		0	3	4	0	287	7,489	2,985	63	33,201	62,484	42,220

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.

Three 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 macrophthalmia, 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:

9/22/17 11:03 AM

09/08/17 TO 09/22/17

		Species				
Site	Data	CH0	CH1	ST	SO	Grand Total
LGS	Sum of NumberCollected	994		2	2	998
	Sum of NumberBarged	0		0	0	0
	Sum of NumberBypassed	910		2	1	913
	Sum of Numbertrucked	68		0	1	69
	Sum of SampleMorts	15		0	0	15
	Sum of FacilityMorts	1		0	0	1
	Sum of ResearchMorts	0		0	0	0
	Sum of TotalProjectMorts	16		0	0	16
LMN	Sum of NumberCollected	165	1	2		168
	Sum of NumberBarged	0	0	0		0
	Sum of NumberBypassed	131	1	1		133
	Sum of Numbertrucked	31	0	1		32
	Sum of SampleMorts	3	0	0		3
	Sum of FacilityMorts	0	0	0		0
	Sum of ResearchMorts	0	0	0		0
	Sum of TotalProjectMorts	3	0	0		3
Total Sum of NumberCollected		1,159	1	4	2	1,166
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		1,041	1	3	1	1,046
Total Sum of Numbertrucked		99	0	1	1	101
Total Sum of SampleMorts		18	0	0	0	18
Total Sum of FacilityMorts		1	0	0	0	1
Total Sum of ResearchMorts		0	0	0	0	0
Total Sum of TotalProjectMorts		19	0	0	0	19

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/22/17 11:03 AM

TO: 09/22/17

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	628,393	2,362,698	74,225	35,589	2,329,514	5,430,419	
	Sum of NumberBarged	601,027	978,688	63,247	19,699	949,358	2,612,019	
	Sum of NumberBypassed	21,922	1,381,285	10,900	15,670	1,379,888	2,809,665	
	Sum of NumberTrucked	0	0	0	0	0	0	
	Sum of SampleMorts	252	90	5	11	53	411	
	Sum of FacilityMorts	5,180	2,609	73	209	193	8,264	
	Sum of ResearchMorts	12	26	0	0	22	60	
	Sum of TotalProjectMorts	5,444	2,725	78	220	268	8,735	
LGS	Sum of NumberCollected	618,867	1,337,946	43,198	13,731	1,065,071	3,078,813	
	Sum of NumberBarged	595,712	495,706	39,956	10,029	313,270	1,454,673	
	Sum of NumberBypassed	18,449	837,161	3,201	3,321	751,541	1,613,673	
	Sum of NumberTrucked	1,814	0	0	2	6	1,822	
	Sum of SampleMorts	167	29	1	12	10	219	
	Sum of FacilityMorts	2,725	5,050	40	367	244	8,426	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	2,892	5,079	41	379	254	8,645	
LMN	Sum of NumberCollected	330,572	1,459,195	33,440	17,200	1,293,668	3,134,075	
	Sum of NumberBarged	339,179	931,886	32,959	12,568	710,514	2,027,106	
	Sum of NumberBypassed	5,667	489,563	800	4,597	560,086	1,060,713	
	Sum of NumberTrucked	288	3	0	0	3	294	
	Sum of SampleMorts	51	37	2	5	31	126	
	Sum of FacilityMorts	308	1,089	39	120	387	1,943	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	359	1,126	41	125	418	2,069	
Total Sum of NumberCollected		1,577,832	5,159,839	150,863	66,520	4,688,253	11,643,307	
Total Sum of NumberBarged		1,535,918	2,406,280	136,162	42,296	1,973,142	6,093,798	
Total Sum of NumberBypassed		46,038	2,708,009	14,901	23,588	2,691,515	5,484,051	
Total Sum of NumberTrucked		2,102	3	0	2	9	2,116	
Total Sum of SampleMorts		470	156	8	28	94	756	
Total Sum of FacilityMorts		8,213	8,748	152	696	824	18,633	
Total Sum of ResearchMorts		12	26	0	0	22	60	
Total Sum of TotalProjectMorts		8,695	8,930	160	724	940	19,449	

Cumulative Adult Passage at Mainstem Dams Through: 09/21

dam	enddate	Spring Chinook						Summer Chinook						Fall Chinook					
		2017		2016		10-Yr Avg.		2017		2016		10-Yr Avg.		2017		2016		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	09/21	83624	18110	137215	11145	150783	25708	88044	10648	119591	10834	97732	22097	253487	28637	394540	45788	429481	64222
TDA	09/21	58308	12497	105504	9999	118766	22002	69246	9277	95764	8800	81626	17772	141411	17097	264745	40296	243154	48844
JDA	09/21	46675	12475	93659	8262	103450	20515	60416	7363	90259	7715	73088	17197	97238	12273	219789	28526	179230	39558
MCN	09/21	44292	7020	87191	7374	93925	16835	56982	4616	83894	6501	69220	12937	69524	5632	179307	16726	143917	24231
IHR	09/21	28306	6949	67484	5029	68114	11248	9284	2087	13980	1538	18950	4865	16538	2507	30925	8607	29772	10423
LMN	09/21	28545	8270	66115	6266	68087	10905	8216	3388	12460	2344	19984	5812	15023	3123	27419	10198	25714	11583
LGS	09/21	26598	8335	62597	6365	63765	12007	9086	3754	12480	1919	19272	6335	12452	1942	26033	6950	23757	8218
LGR	09/21	27357	8256	62050	5480	62403	13092	8952	3627	12110	2113	17232	6836	9944	1954	25061	6703	21553	8518
PRD	09/19	7268	783	16843	1003	17901	1826	52981	1760	80288	5126	57783	3021	6714	801	20800	1775	26186	4449
WAN	09/19	6612	484	17164	919	17602	2161	49392	1355	79255	4110	55377	2415	3944	624	10492	1198	11197	2974
RIS	09/20	8080	564	18646	715	18006	2748	56265	1333	79253	3434	56857	5479	3964	582	7066	1332	7164	2885
RRH	09/20	5864	406	9449	351	7849	1209	42608	1060	58559	2827	45767	3863	3017	455	5050	919	5477	1941
WEL	09/20	6589	820	11789	833	8215	1601	30101	1102	44646	2492	36069	3814	1081	168	1777	302	2363	801
WFA	09/20	34186	2442	30317	2161	34636	1490	0	0	0	0	0	0	638	95	502	155	756	195

DAM	ENDDATE	Coho						Sockeye			Steelhead						Lamprey		
		2017		2016		10-Yr Avg.		2017	2016	10-Yr Avg.	10-Yr Unclipped		10-Yr Unclipped	10-Yr Unclipped	2017	2016	10-Yr Avg.		
		Adult	Jack	Adult	Jack	Adult	Jack				2017	2016						2017	2016
BON	09/21	33865	2119	26144	3417	63599	3894	87690	342495	315613	103149	160405	307205	31248	45658	104166	82429	52059	24090
TDA	09/21	13578	1631	14374	1450	27370	2918	64037	288394	269194	62957	96685	209973	18351	27293	70623	30557	11419	6880
JDA	09/21	8379	1697	9549	1749	19862	2534	65997	289974	260570	40492	74446	172661	13241	22060	57663	23207	9562	5561
MCN	09/21	4015	398	6273	760	11060	1808	58013	261694	226445	28644	59439	136440	8930	16750	43221	2511	1548	1394
IHR	09/21	626	81	756	86	1298	173	392	898	922	15416	39046	91918	4387	9808	23679	1380	859	348
LMN	09/21	351	62	834	176	862	176	346	1024	1091	13771	33876	86666	4232	9312	24563	413	240	93
LGS	09/21	103	31	236	103	675	153	285	961	1025	9078	28509	66517	3011	8546	19085	495	191	42
LGR	09/21	23	2	219	56	272	39	227	815	1062	12277	26493	61400	4745	8581	18731	343	107	16
PRD	09/19	98	26	631	71	1832	233	66670	311072	266837	2610	4934	15006	0	0	0	25313	7671	4621
WAN	09/19	116	58	372	35	817	133	76074	322456	235861	2353	3976	14097	0	0	0	26016	8069	3058
RIS	09/20	53	3	109	12	1024	143	73194	310326	259130	2488	4476	12968	1279	1763	5508	20402	3147	1339
RRH	09/20	10	0	7	7	133	21	46690	235909	218223	1670	3269	9578	758	1261	3825	23025	3157	1260
WEL	09/20	8	2	10	6	29	0	42289	216020	207502	1369	2260	6766	732	927	2804	247	4	0
WFA	09/20	70	181	244	714	2143	814	0	0	0	2753	27199	22599	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.