



Fish Passage Center

Weekly Report #17-27

September 8 2017

Starting September 8, the weekly reports will be published every other week; the next report will be September 22.

This Week's Highlights

Water Supply

Precipitation throughout the Columbia Basin has varied between 0% and 34% of average at individual sub-basins over September. Precipitation above The Dalles has been 3% of average over September. Over the 2017 water year, precipitation has ranged between 96% and 129% 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 1-7, 2017		Water Year 2017 October 1, 2016 to September 7, 2017	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.00	1	37.7	104
Snake River Above Ice Harbor	0.01	4	25.0	114
Columbia Above The Dalles	0.01	3	28.4	107
Kootenai	0.00	0	38.4	106
Clark Fork	0.00	0	25.8	96
Flathead	0.00	0	38.6	110
Pend Oreille River Basin above Waneta Dam	0.00	0	33.5	106
Salmon River Basin	0.00	1	33.3	118
Upper Snake Tributaries	0.00	0	29.4	114
Clearwater	0.00	0	41.1	104
Willamette River above Portland	0.17	34	82.9	129

Grand Coulee Reservoir is at 1,280.5 feet (9-7-17) and has drafted 1.2 feet over the last week. Outflows at Grand Coulee have ranged between 68.1 Kcfs and 94.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,444.4 feet (9-7-17) and has drafted 0.5 feet over the past week. Daily average outflows at Libby Dam have been reduced from 9.0 to 6.0 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,549.9 feet (9-7-17) and has drafted 0.9 feet last week. Outflows at Hungry Horse have been 2.0 Kcfs over the last week.

Dworshak is currently at an elevation of 1,530.8 feet (9-7-17) and has drafted 5.7 feet over the last week. Dworshak outflows have been 7.1-8.0 Kcfs.

The Brownlee Reservoir was at an elevation of 2,051.3 feet on September 7, 2017, and drafted 2.5 feet over the last week. Outflows at Hells Canyon have ranged between 9.7 and 21.8 Kcfs over the last four days.

The Summer Flow period began on June 21st at Lower Granite Dam, the flow objective this year is 55 Kcfs. Over the summer period, flows have averaged 49.1 Kcfs.

The Summer Flow period began on July 1st at McNary Dam, the flow objective this year is 200 Kcfs. Over the summer period, flows have averaged 166.1 Kcfs.

Spill and Temperature

Although the voluntary spill season for the Snake and Middle Columbia rivers ended after August 31st, Lower Granite Dam will continue 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. This week, the spill at Lower Granite Dam occurred in the traditional spill bays, in an effort to keep temperatures in the tailrace below the 68°F standard. Temperatures in the Lower Granite tailrace remained below 68°F this week.

Over the past week, forebay water temperatures at Bonneville, McNary, Ice Harbor and Lower Granite dams were above the 68°F temperature standard. At Lower Granite, the daily average temperature has exceeded the 68°F standard since September 2nd. The daily average temperature on September 7th was 69.2°F. The forebay temperature at Ice Harbor Dam has exceeded the 68°F standard since July 9th. The daily average temperature in the Ice Harbor forebay was 69.8°F on September 7th. The forebay temperatures at McNary and Bonneville dams have exceeded the 68°F standard since July 12th. The daily average forebay temperature at McNary and Bonneville dams on September 7th were 69.9°F and 71.0°F, respectively.

Smolt Monitoring

Sampling for the Smolt Monitoring Program (SMP) was underway at all bypass facilities this week except Lower Granite Dam and Rock Island Dam. Sampling at Lower Granite Dam ended in early August in order to accommodate construction to the juvenile bypass and juvenile fish facilities. Sampling at Rock Island Dam ended after the sample on August 31st. This week's samples at the bypass facilities were dominated by subyearling Chinook. When compared to the previous week, passage of subyearling Chinook increased 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.

The high temperature sampling protocol was in place this week at Bonneville Dam (BON). Under this protocol, sampling at BON occurs every-other-day (24-hour sample) until temperatures in the BON forebay drop below 69.5° F. Due to wild fires in the Columbia River gorge, the sample for September 7th was terminated early and the system was put into primary bypass. Therefore, the sample for September 7th is incomplete and should not be compared to previous samples. BON is expected to remain in primary bypass until at least 7:00 am Friday, September 8th, at which time the COE will decide whether conditions are safe enough to resume sampling or whether the project will remain in primary bypass. This week's complete samples at Bonneville Dam (BON) were again dominated by subyearling Chinook. The daily average passage index for subyearling Chinook from

these complete samples was approximately 400 per day, which is an increase over last 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 3rd. Finally, Pacific lamprey macrophthalmia were encountered in one of this week's samples (September 7th) while no ammocoetes were encountered this week.

Similar to last year, sampling at John Day Dam (JDA) occurs every-other-day this year. However, the SMP at JDA continued operating under the high temperature sampling protocol this week. Under this protocol, sampling at JDA occurs only twice per week for condition only. This condition only sample is processed on Tuesday's and Friday's and consists of a sample of approximately six hours. Because these are not 24-hour samples, it is not appropriate to compare this week's passage numbers to previous weeks. The high temperature sampling protocol will remain in place until temperatures in the JDA forebay drop below 69.5° F. This week's samples at JDA were again dominated by subyearling Chinook. No spring migrants were encountered at JDA this week. Finally, no pacific lamprey juveniles were encountered in this week's samples.

Sampling at McNary Dam (MCN) is also every-other-day. The MCN juvenile fish facility has been operating under the high temperature sampling protocol since about July 12th. Under this protocol, sampling at MCN remains every-other-day (24-hour sample) but the target sample size is reduced to 100 fish per day. This protocol will remain in place until temperatures in the McNary Forebay drop 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 530 per day, which is an increase over last week's daily average passage index of about 300 per day. The only spring migrants that were encountered in this week's samples were sockeye. Sockeye smolts were encountered in all three of this week samples. Finally, Pacific lamprey macrophthalmia were also encountered in all three of this week's samples, with a daily average collection of about 13 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 50 per day, which is similar to last week's daily average passage index of about 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 and steelhead. Finally, Pacific lamprey ammocoetes were encountered nearly every day this week, with a daily average collection of only two fish per day. Pacific macropthalmia were encountered in four of this week's samples at LGS.

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 every-other-day trucking 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. This week's daily average passage index for subyearling Chinook was only about 15 fish per day. The only spring migrants that were encountered in this week's samples were yearling Chinook and steelhead, which were encountered in one 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 has been temporarily suspended. These sites are bypassing all juvenile salmonids back to the river until the highways are reopened, at which time truck transportation will resume.

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. Approximately 300,000 spring Chinook pre-smolts were scheduled to be released into the Selway River this week. These spring Chinook pre-smolts are 100% unmarked and are not expected to out-migrate until the spring of 2018. No new releases were scheduled for this zone 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. However, Bonneville Hatchery conducted an emergency release of approximately 600,000 subyearling fall Chinook tules into Tanner Creek on September 4th and 5th. This release was originally scheduled to occur in October but wildfires near the hatchery facility warranted an emergency release. No new releases are scheduled for this zone over the next two weeks.

Adult Passage

Due to the Eagle Creek Fire, adult fish counts at Bonneville Dam have been suspended until further notice, fish counts at other projects are also subject to delays.

The adult fall Chinook count of 62,206 at Bonneville (through September 3rd) is about 37% of the 2016 count of 168,910 and 42% of the 10-year average count of 147,802. The 2017 Bonneville Dam fall Chinook count of 9,202 (through September 3rd) is about 44% of the 2016 count of 21,015 and 44% of the 10-year average count of 20,904. The 2017 McNary fall Chinook adult count of 11,197 (through September 6th) is about 25% of the 2016 count and 30% of the 10-year average count. The 2017 adult fall Chinook count of 2,787 at Ice Harbor Dam in the Snake River has 7,525 fewer fish than the 2016 count and has 7,538 fewer fish than the 10-year average count.

The 2017 Bonneville Dam adult steelhead count of 79,045 (through September 3rd) is about 67% of the 2016 count of 117,902 and 31% of the 10-year average count of 256,839. The 2017 Bonneville Dam adult unclipped steelhead count of 27,125 is about 72% of the 2016 count of 37,928 and 30% of the 10-year average count of 92,061. Daily adult steelhead counts at Lower Granite Dam ranged from 36 to 74 adults per day last week. This year's Lower Granite steelhead count of 8,360 has 3,815 fewer fish than the 2016 count of 12,175 and is 31% of the 10-year average count of 26,804. The 2017 Lower Granite Dam adult unclipped steelhead count of 3,657 has 2,202 fewer fish than the 2016 count of 5,859 and 6,443 fewer fish than the 10-year average count of 10,100. At Willamette Falls, the 2017 count for steelhead was 2,713 as of September 6th. This year's steelhead count is about 10% of the 2016 count of 26,967 and 12% of the 10-year average count of 22,422.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 0 and 1 last week (through September 3rd). The 2017 adult sockeye count at Bonneville Dam of 87,686 is about 26% of the 2016 count and 28% of the 10-year average count. The 2017 adult sockeye count at McNary Dam of 57,987 is about 22% of the 2016 count and 26% of the 10-year average count. The Lower Granite Dam 2017 adult sockeye count of 227 has 587 fewer fish than the 2016 count of 814 and 835 fewer fish than the 10-year average count of 1,062.

As of August 31st at Bonneville Dam, the adult shad count was 3,102,554. This year's shad count is about 1.8 times greater than the 2016 count of 1,770,303 and 1.5 times greater than the 10-year average count of 2,045,607. A total of 81,462 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 51,441 and 3.5 times greater than the 10-year average count of 23,390.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 8/26/2017 to 09/08/17

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	Zone
Nez Perce Tribe	Dworshak NFH	CH0	SP	2018	300,000	09-04-17	09-04-17	Selway River	Clearwater River M F	SNAK
Nez Perce Tribe Total					300,000					
Oregon Dept. of Fish and Wildlife	Bonneville Hatchery	CH0	FA	2017	600,000	09-04-17	09-05-17	Tanner Creek	Tanner Creek	LCOL
Oregon Dept. of Fish and Wildlife Total					600,000					
Grand Total					900,000					

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 9/9/2017 to 9/22/2017

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	Zone
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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/25/2017	78.6	0.1	77.8	0.0	74.0	0.0	70.7	6.4	74.8	1.3	90.9	17.7	86.0	25.0
08/26/2017	75.0	0.1	73.3	0.0	69.9	0.0	66.9	0.0	67.6	2.2	65.9	17.7	60.7	24.9
08/27/2017	80.8	0.1	81.4	0.0	85.6	0.0	82.4	0.0	84.9	5.0	83.8	18.8	77.0	25.2
08/28/2017	93.9	0.1	96.3	0.0	88.7	0.0	93.7	0.0	97.6	3.2	116.3	18.9	112.9	24.8
08/29/2017	108.1	0.1	102.9	0.0	105.9	4.9	100.7	0.0	104.2	1.5	108.8	18.4	103.3	23.0
08/30/2017	122.2	0.1	119.0	0.0	117.1	6.6	110.2	9.7	111.7	1.8	93.4	8.8	77.5	14.4
08/31/2017	113.4	0.1	119.7	0.0	121.8	9.7	117.6	1.8	124.9	4.9	137.4	16.5	133.0	18.2
09/01/2017	88.5	0.1	91.8	0.0	99.2	0.3	104.8	0.0	113.4	1.9	139.3	10.5	129.1	19.1
09/02/2017	94.6	0.1	91.3	0.0	83.5	1.4	82.4	0.0	83.8	0.0	94.1	1.4	93.2	2.9
09/03/2017	73.4	0.1	71.9	0.0	71.3	4.3	69.5	0.0	73.8	0.0	84.9	1.5	83.9	2.9
09/04/2017	68.0	0.1	61.5	0.0	64.3	0.0	67.5	0.0	71.2	0.0	77.7	1.4	76.8	2.7
09/05/2017	90.3	0.1	93.6	0.0	92.7	0.0	87.9	0.0	91.1	0.0	92.9	1.4	90.7	2.6
09/06/2017	91.4	0.1	94.2	0.0	102.8	0.0	100.1	0.0	105.8	0.0	106.8	1.5	101.4	22.4
09/07/2017	72.1	0.0	69.2	0.0	77.9	0.0	83.5	0.0	87.4	0.0	106.7	1.5	98.3	21.8

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
08/25/2017	9.0	4.4	---	11.8	28.2	15.3	26.5	10.7	26.0	10.7	28.6	18.9
08/26/2017	9.0	4.3	---	12.2	27.3	14.7	26.4	9.0	25.8	10.3	28.2	18.5
08/27/2017	9.0	4.4	---	12.8	30.1	16.3	29.1	9.0	27.3	12.1	30.7	21.0
08/28/2017	9.0	4.4	---	13.7	29.2	15.7	28.4	10.6	27.9	12.8	29.4	19.7
08/29/2017	9.0	4.4	---	13.0	27.8	15.4	25.9	10.7	25.3	10.1	27.9	18.2
08/30/2017	9.0	4.4	---	13.6	29.6	17.5	27.8	9.0	27.5	12.1	30.5	20.8
08/31/2017	9.0	4.3	---	15.3	30.3	18.3	30.2	9.0	27.1	13.7	29.3	19.4
09/01/2017	7.9	3.3	---	11.4	22.9	3.4	21.7	0.0	19.4	0.0	18.3	0.0
09/02/2017	7.9	3.2	---	10.8	22.4	3.4	22.1	0.0	20.1	0.0	17.0	0.0
09/03/2017	8.0	3.3	---	9.7	19.6	3.5	19.9	0.0	20.0	0.0	17.8	0.0
09/04/2017	8.0	3.3	---	12.7	23.9	3.3	19.9	0.0	20.8	0.0	21.4	0.0
09/05/2017	7.1	2.4	---	14.6	26.5	3.6	19.7	0.0	20.8	2.5	23.3	0.0
09/06/2017	7.1	2.4	---	15.7	25.6	3.5	23.7	0.0	22.5	3.0	23.1	0.0
09/07/2017	7.1	2.4	---	16.1	21.8	3.9	18.0	0.0	23.1	3.5	22.5	0.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/25/2017	114.6	57.5	114.0	34.0	105.7	42.1	121.3	77.0	0.9	31.0
08/26/2017	112.2	56.3	103.2	30.9	96.7	38.9	115.5	70.9	0.9	31.3
08/27/2017	110.6	55.5	102.9	30.9	93.2	37.2	106.5	62.3	0.9	31.0
08/28/2017	127.1	63.7	117.7	35.3	109.6	43.8	115.4	71.5	0.9	30.6
08/29/2017	144.0	72.1	142.5	42.7	133.1	53.0	143.2	90.9	0.9	39.1
08/30/2017	142.2	71.3	130.8	39.2	121.0	48.4	137.7	92.3	0.9	32.1
08/31/2017	148.3	74.4	140.8	42.5	132.3	52.7	144.4	91.6	1.6	38.7
09/01/2017	143.8	0.0	140.6	1.6	142.5	0.1	152.3	2.0	55.1	87.9
09/02/2017	128.0	0.0	127.5	0.9	123.6	0.0	124.4	1.3	37.6	78.1
09/03/2017	97.8	0.0	92.8	1.0	94.5	0.0	107.3	1.3	21.4	77.1
09/04/2017	106.5	0.0	104.2	1.0	106.3	0.0	108.8	1.3	21.2	78.9
09/05/2017	104.8	0.0	107.9	1.0	107.6	0.0	116.7	1.3	26.9	81.1
09/06/2017	125.5	0.0	119.3	1.0	118.4	0.0	118.1	0.0	25.7	85.0
09/07/2017	128.9	0.0	126.7	1.0	127.3	0.0	132.1	1.4	---	---

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	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>						
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#				
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		
8/25	---	---	---	0	---	---	0	105.0	105.2	105.4	24	105.5	106.1	106.7	24	106.0	106.6	106.9	24
8/26	---	---	---	0	---	---	0	104.6	104.8	104.9	24	104.8	105.4	106.4	24	105.3	105.9	106.4	24
8/27	---	---	---	0	---	---	0	104.5	104.7	105.1	24	104.8	105.5	106.5	24	105.6	106.2	106.5	24
8/28	---	---	---	0	---	---	0	105.0	105.3	105.7	24	104.4	105.0	106.4	24	106.3	106.7	107.0	24
8/29	---	---	---	0	---	---	0	105.6	106.1	106.4	24	104.9	105.5	105.9	24	106.1	106.6	106.7	24
8/30	---	---	---	0	---	---	0	106.1	106.2	106.4	24	105.0	105.3	105.5	24	106.0	106.3	106.5	24
8/31	---	---	---	0	---	---	0	105.5	105.7	105.9	24	104.4	104.8	105.7	24	104.5	104.9	105.2	24
9/1	---	---	---	0	---	---	0	104.9	105.2	105.6	24	104.4	105.0	106.1	24	104.0	104.4	104.8	24
9/2	---	---	---	0	---	---	0	104.9	105.3	105.5	24	104.4	104.9	105.7	24	104.1	104.5	104.8	24
9/3	---	---	---	0	---	---	0	104.8	105.0	105.2	24	104.4	105.2	106.2	24	104.3	104.6	104.8	24
9/4	---	---	---	0	---	---	0	104.1	104.4	104.8	24	103.8	104.7	106.1	24	104.2	104.9	105.2	24
9/5	---	---	---	0	---	---	0	104.4	104.6	104.8	24	103.0	103.5	103.8	24	104.3	104.6	104.9	24
9/6	---	---	---	0	---	---	0	104.5	104.7	104.8	24	103.0	103.5	104.0	24	104.3	104.9	105.2	24
9/7	---	---	---	0	---	---	0	104.8	105.0	105.1	23	102.7	103.5	104.1	23	105.0	105.5	105.8	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#					
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>			
8/25	105.8	106.3	107.0	24	106.2	106.5	106.9	24	106.3	106.7	106.9	24	106.2	106.5	107.0	24	108.0	109.4	111.1	22
8/26	105.0	105.5	105.9	24	105.6	106.2	107.0	24	105.7	106.1	106.5	24	105.4	105.6	106.1	24	103.2	104.1	106.6	22
8/27	105.0	105.5	105.8	24	106.0	106.7	107.2	24	106.1	106.7	107.1	24	105.9	106.5	106.9	24	103.4	105.1	105.9	24
8/28	105.4	105.8	106.3	24	106.1	106.6	107.0	24	106.3	106.7	107.0	24	106.5	106.8	107.2	23	105.1	105.8	106.6	22
8/29	105.7	106.1	106.4	24	106.3	106.9	107.5	24	107.9	109.9	111.9	24	106.7	107.0	107.3	24	105.4	106.3	106.8	21
8/30	105.6	105.9	106.3	24	105.8	106.3	106.8	24	108.3	110.0	111.6	24	106.5	106.7	106.8	24	107.1	108.4	126.3	23
8/31	104.1	104.5	104.9	24	104.8	105.2	105.7	24	106.6	107.5	107.9	24	106.3	106.8	107.2	24	107.5	108.5	124.9	19
9/1	103.7	104.1	105.5	24	104.2	104.9	105.7	24	105.4	106.3	106.9	24	106.6	107.5	108.1	22	105.9	106.7	107.8	20
9/2	103.6	104.0	104.4	24	104.0	104.6	105.5	21	104.5	104.7	105.1	21	106.6	107.4	108.4	24	104.9	106.2	107.7	23
9/3	104.0	104.4	105.0	24	103.9	104.3	105.0	24	104.0	104.3	104.8	24	106.8	107.4	108.7	24	104.8	105.6	106.9	23
9/4	104.2	104.7	105.2	24	103.7	104.3	104.7	21	104.6	105.4	106.2	21	104.9	105.3	105.7	23	102.6	102.8	103.6	19
9/5	103.9	104.1	104.4	24	103.6	103.8	104.1	24	103.8	103.9	104.1	24	105.0	105.8	106.2	24	103.6	105.1	105.4	24
9/6	104.2	104.8	105.3	24	104.0	104.4	104.6	24	104.0	104.5	104.8	24	106.6	107.3	107.7	23	105.4	106.1	106.5	23
9/7	104.8	105.3	105.7	23	104.1	104.6	104.9	23	104.1	104.3	104.5	23	104.8	105.0	105.3	23	103.7	104.1	104.6	22

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#					
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>			
8/25	105.9	106.3	107.1	22	104.6	105.5	107.7	21	103.8	105.7	107.0	24	107.2	107.9	108.9	24	104.1	104.6	105.4	24
8/26	106.1	106.4	107.2	23	105.1	105.8	108.7	20	104.6	106.6	108.0	24	108.4	109.2	110.3	24	106.1	106.6	107.3	24
8/27	104.8	105.3	105.6	24	105.3	107.0	110.6	23	106.2	107.9	109.3	24	108.7	109.5	111.3	24	107.0	107.8	108.3	24
8/28	105.8	106.2	106.6	23	105.2	106.1	109.4	21	106.6	107.5	108.8	24	108.1	108.9	111.1	24	107.8	108.1	108.5	24
8/29	105.9	106.4	106.8	24	105.0	105.6	106.6	21	107.2	108.2	109.8	24	108.6	108.9	110.5	24	106.6	107.1	107.5	24
8/30	105.8	106.1	106.3	24	104.6	104.8	106.6	21	105.2	106.2	106.6	24	107.4	108.7	110.9	24	106.3	107.2	107.6	24
8/31	107.2	109.1	115.3	22	106.1	107.6	110.5	18	104.1	104.5	105.2	24	107.1	110.5	126.2	24	106.0	107.6	113.5	24
9/1	105.2	105.9	107.1	22	104.5	105.5	107.2	21	104.6	105.6	106.1	24	106.0	108.1	115.1	24	105.7	106.9	109.3	24
9/2	106.6	106.9	107.1	24	104.8	105.6	106.2	23	105.3	107.1	108.2	24	104.9	105.6	106.0	24	105.4	105.9	106.6	24
9/3	105.9	106.8	107.4	23	103.5	104.8	105.6	22	107.1	109.2	110.3	24	106.1	106.9	107.4	24	105.1	105.8	106.6	24
9/4	104.7	105.0	106.0	21	102.6	103.1	104.6	18	105.1	108.7	109.7	24	105.4	106.3	106.7	24	106.0	106.8	107.4	24
9/5	103.8	104.0	105.0	24	101.7	102.4	103.1	21	106.8	108.1	108.9	24	105.3	106.3	106.7	24	106.0	106.6	107.3	24
9/6	105.5	106.3	107.4	23	104.4	105.7	107.5	22	106.7	108.0	109.8	24	105.5	106.1	106.5	24	103.2	104.4	105.5	24
9/7	105.2	105.7	107.0	22	105.5	106.1	107.3	22	106.1	107.0	108.4	24	105.5	105.9	106.3	24	103.7	104.4	105.1	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	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/25	---	---	---	0	---	---	---	0	116.1	116.4	116.8	23	111.7	112.8	113.8	23	100.2	101.7	103.1	24
8/26	---	---	---	0	---	---	---	0	115.7	116.0	116.5	24	111.4	112.5	113.9	24	100.1	101.7	103.2	24
8/27	---	---	---	0	---	---	---	0	115.8	116.2	116.6	24	111.4	112.6	113.8	24	100.7	102.4	104.1	24
8/28	---	---	---	0	---	---	---	0	116.0	116.3	116.5	24	111.5	112.5	113.5	24	100.8	102.1	103.8	23
8/29	---	---	---	0	---	---	---	0	116.2	116.6	116.9	24	111.9	113.0	114.2	24	101.1	102.7	104.1	24
8/30	---	---	---	0	---	---	---	0	116.1	116.3	116.9	24	111.4	112.3	113.2	24	100.6	101.8	103.6	24
8/31	---	---	---	0	---	---	---	0	115.7	116.0	116.4	24	111.3	112.5	113.8	24	100.7	102.2	103.9	23
9/1	---	---	---	0	---	---	---	0	112.4	112.8	113.2	24	109.3	110.4	111.7	24	101.5	103.1	104.9	24
9/2	---	---	---	0	---	---	---	0	112.6	113.0	113.4	24	108.8	110.1	111.6	24	101.5	103.1	104.8	24
9/3	---	---	---	0	---	---	---	0	112.6	113.0	113.4	24	108.8	109.9	111.3	24	101.2	102.6	104.2	24
9/4	---	---	---	0	---	---	---	0	112.4	112.7	113.1	24	108.5	109.5	110.7	24	101.0	102.4	103.8	23
9/5	---	---	---	0	---	---	---	0	108.9	109.1	109.9	24	106.2	106.8	107.9	24	100.4	101.2	102.2	24
9/6	---	---	---	0	---	---	---	0	109.2	109.6	110.0	24	105.9	106.9	108.0	24	100.9	102.1	103.4	23
9/7	---	---	---	0	---	---	---	0	109.4	109.7	110.0	23	106.0	107.0	107.9	23	100.9	101.8	102.9	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/25	105.1	107.0	108.6	22	101.5	101.7	101.9	24	110.4	111.6	113.0	24	105.6	105.9	106.0	24	109.4	110.6	113.7	24
8/26	105.0	107.1	108.9	24	101.4	101.7	102.0	24	110.0	110.8	112.2	24	104.9	105.0	105.3	24	108.3	108.7	109.1	24
8/27	105.2	107.3	109.0	24	101.6	101.7	102.0	24	110.9	112.2	112.5	24	104.2	104.4	105.5	24	108.2	108.6	109.0	24
8/28	104.7	106.2	107.6	24	101.8	102.1	102.6	24	111.2	113.3	115.3	24	105.5	105.6	105.8	24	108.6	109.2	110.1	24
8/29	105.6	107.7	109.3	24	101.6	101.9	102.4	24	110.3	111.5	112.4	24	106.0	106.1	106.3	24	108.7	109.3	110.0	24
8/30	105.2	106.9	108.7	24	102.0	102.3	102.6	24	111.5	112.6	113.2	24	105.9	106.2	106.6	24	108.5	108.8	109.1	24
8/31	105.0	107.0	108.7	24	101.5	101.7	101.8	24	112.2	112.4	112.7	24	105.0	105.8	106.4	24	108.2	108.5	108.7	24
9/1	105.0	106.8	108.6	24	101.3	101.6	102.0	24	105.7	108.8	112.0	24	106.1	106.4	106.6	24	105.5	105.9	107.6	24
9/2	104.5	106.6	108.3	24	103.7	105.3	106.3	24	104.5	107.2	108.9	24	105.9	106.2	106.5	24	105.3	106.1	106.6	24
9/3	104.1	106.0	107.7	24	104.7	105.3	106.0	24	104.8	107.9	109.4	24	105.0	105.1	105.4	24	104.9	105.5	105.9	24
9/4	104.0	105.8	107.3	24	104.0	104.4	104.9	24	104.1	106.8	108.2	24	105.8	106.1	106.4	24	105.0	105.4	105.7	24
9/5	102.9	103.8	104.8	24	104.4	105.1	105.5	24	104.2	106.9	107.8	24	106.6	106.8	107.0	24	104.5	105.0	105.4	24
9/6	103.1	104.8	106.3	24	104.6	105.0	105.4	24	104.2	106.6	107.9	24	105.5	105.7	106.0	24	104.9	105.9	106.4	24
9/7	103.0	104.4	105.6	23	103.0	103.3	104.0	23	103.7	105.7	106.8	23	105.6	105.9	106.1	23	105.8	106.2	106.5	23

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/25	107.1	108.0	112.8	24	110.1	110.8	112.1	24	108.5	108.7	108.9	24	110.3	111.5	113.2	24	---	---	---	0
8/26	105.7	106.0	106.5	24	109.8	110.3	110.7	24	108.1	108.4	108.6	24	109.7	110.4	111.1	24	---	---	---	0
8/27	105.3	105.7	106.0	24	110.9	112.3	113.0	24	107.8	108.0	108.2	24	110.5	112.4	113.7	24	---	---	---	0
8/28	105.1	105.4	106.0	24	111.2	112.2	113.8	24	108.0	108.1	108.3	24	110.1	111.1	113.3	24	---	---	---	0
8/29	105.9	106.6	107.4	24	110.7	111.3	113.7	24	108.3	108.5	109.0	24	110.3	111.4	113.3	24	---	---	---	0
8/30	105.8	106.2	106.6	24	110.8	112.2	112.8	24	108.8	108.9	109.0	24	110.9	112.5	114.4	24	---	---	---	0
8/31	104.9	105.3	105.6	24	111.7	113.7	114.0	24	107.8	108.1	108.4	24	111.0	112.8	113.5	24	---	---	---	0
9/1	104.4	104.8	105.3	24	107.0	108.4	113.4	24	107.7	108.0	108.3	24	108.8	110.2	111.8	24	---	---	---	0
9/2	105.0	105.3	105.9	24	105.4	106.5	107.9	24	108.3	108.6	108.9	24	108.2	109.1	110.5	24	---	---	---	0
9/3	105.1	105.4	105.8	24	104.9	105.4	105.7	24	108.1	108.3	108.4	24	108.0	108.7	109.5	24	---	---	---	0
9/4	104.5	104.8	105.2	24	104.5	105.6	106.3	24	107.6	107.8	108.1	24	107.6	108.3	109.1	24	---	---	---	0
9/5	105.0	105.3	105.6	24	105.8	107.2	108.4	24	107.2	107.5	107.8	24	107.4	108.1	108.7	24	---	---	---	0
9/6	104.9	105.1	105.5	24	106.6	107.7	108.3	24	107.6	108.1	108.6	24	107.9	108.7	109.4	24	---	---	---	0
9/7	104.5	104.8	105.2	23	106.6	108.0	108.5	23	108.2	108.3	108.5	23	108.4	109.0	109.5	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/25	106.7	107.0	107.4	24	113.2	113.6	114.1	24	103.5	104.0	104.9	24	111.2	111.6	111.9	24	104.5	105.1	105.4	24
8/26	106.2	106.5	106.9	24	113.1	113.5	113.9	24	104.1	104.5	104.9	24	110.8	111.1	111.3	24	106.9	108.0	108.5	24
8/27	105.6	106.0	106.4	24	113.0	113.4	113.8	24	104.9	105.2	105.8	24	111.0	111.3	111.6	24	108.8	109.5	109.9	24
8/28	106.2	106.6	106.8	24	113.2	113.8	114.7	24	105.8	106.5	107.1	24	112.7	114.2	114.9	24	110.1	110.8	111.5	24
8/29	106.8	106.9	107.0	24	113.8	114.7	115.4	24	107.1	107.4	107.9	24	114.0	114.5	115.3	24	110.4	110.9	111.3	24
8/30	107.3	107.5	107.8	24	113.8	114.3	115.0	24	105.6	105.9	106.5	24	112.8	113.2	113.8	24	107.3	108.1	108.8	24
8/31	106.9	107.3	107.7	24	113.6	114.6	115.6	24	104.2	104.5	104.8	24	113.7	114.6	115.3	24	104.8	104.9	105.2	24
9/1	106.9	107.4	107.7	24	106.9	107.5	109.6	24	104.5	105.2	106.2	24	104.7	105.5	110.9	24	106.6	107.5	107.7	24
9/2	105.5	106.1	106.2	24	105.2	105.8	106.2	24	105.7	106.3	107.1	24	105.2	105.9	106.2	24	105.3	106.0	107.4	24
9/3	104.9	105.7	106.3	24	104.6	105.3	105.9	24	106.9	107.4	109.3	24	105.9	106.3	106.9	24	104.5	105.0	105.3	24
9/4	105.4	105.9	106.4	24	105.1	105.7	106.0	24	107.6	108.5	109.7	24	105.8	106.3	106.6	24	104.6	105.2	105.7	24
9/5	105.3	105.8	106.1	24	105.0	105.4	105.8	24	107.8	108.2	109.6	24	105.6	105.9	106.2	24	105.3	105.7	106.0	24
9/6	106.0	106.5	107.0	24	105.4	105.8	105.9	24	107.0	107.3	108.0	24	105.6	105.9	106.1	24	105.5	106.0	106.4	24
9/7	105.7	106.1	107.0	23	105.1	105.4	105.7	23	106.8	107.0	107.6	23	105.7	106.0	106.5	23	105.1	105.3	105.7	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/25	108.5	108.8	109.3	24	105.3	105.7	105.9	24	115.3	116.1	117.6	24	111.1	113.1	114.1	24	113.3	113.4	113.5	24
8/26	108.5	109.3	110.0	24	105.5	106.2	106.5	24	115.0	116.0	117.4	24	113.7	115.2	115.9	24	112.7	113.1	113.4	24
8/27	109.5	110.1	110.6	24	106.5	107.0	107.5	24	113.8	114.6	115.4	24	113.9	114.5	115.5	24	111.5	111.7	111.9	24
8/28	110.6	111.3	112.3	24	108.9	109.9	110.9	24	113.9	114.8	116.0	24	114.4	115.8	116.6	24	113.0	114.5	117.2	24
8/29	111.7	112.7	113.4	24	110.9	111.3	111.7	24	116.2	116.8	117.2	24	115.8	116.7	117.2	24	115.2	116.4	117.3	24
8/30	110.5	111.0	111.4	24	108.5	109.4	111.1	24	115.3	115.9	117.5	24	121.7	131.5	151.5	24	114.8	116.1	117.3	24
8/31	109.8	110.7	111.0	24	105.7	105.9	106.3	24	114.9	115.3	115.7	24	128.5	143.5	152.2	24	114.7	115.8	116.8	24
9/1	106.2	107.1	108.8	24	106.2	107.0	107.7	24	108.9	110.7	116.6	24	112.3	113.5	115.0	24	108.2	109.1	114.2	24
9/2	104.3	105.3	105.5	24	108.6	109.5	109.9	24	108.2	109.0	109.2	24	107.5	108.8	109.2	24	107.9	108.4	110.3	24
9/3	104.2	104.8	105.3	24	108.5	109.4	109.9	24	109.5	110.1	110.8	24	108.7	110.0	110.8	24	109.3	110.5	112.2	24
9/4	104.4	104.8	105.0	24	106.0	106.2	106.4	24	107.1	107.4	107.8	24	108.9	109.4	110.4	24	109.7	111.5	112.9	24
9/5	104.9	105.4	105.8	24	103.6	104.3	105.3	24	105.0	105.5	105.9	24	105.3	105.9	107.4	24	109.3	110.8	113.2	24
9/6	105.0	105.5	106.0	24	103.2	103.8	104.2	24	104.3	105.2	105.8	24	103.7	104.0	104.6	24	112.4	114.4	115.3	24
9/7	104.7	104.9	105.3	23	103.8	103.9	104.1	23	105.2	105.3	105.7	23	104.2	104.9	105.5	23	106.8	107.3	108.4	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 9/8/2017 11:12

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.

See Sampling Comments: <http://www.fpc.org/currentDaily/smpcomments.htm>

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmptsubmitdata.asp>

COMBINED YEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/25/2017 *	---	---	---	---	---	0	2	0	0	0	0	---
08/26/2017	---	---	---	---	---	0	0	0	---	---	---	0
08/27/2017	---	---	---	---	---	0	0	0	0	---	---	---
08/28/2017	---	---	---	---	---	0	2	0	---	---	---	0
08/29/2017 *	---	---	---	---	---	0	0	0	0	0	0	---
08/30/2017	---	---	---	---	---	0	0	0	---	---	---	0
08/31/2017	---	---	---	---	---	0	0	0	0	---	---	---
09/01/2017 *	---	---	---	---	---	0	0	---	---	0	0	---
09/02/2017	---	---	---	---	---	0	0	---	0	---	---	---
09/03/2017	---	---	---	---	---	0	1	---	---	---	---	0
09/04/2017	---	---	---	---	---	0	0	---	0	---	---	---
09/05/2017 *	---	---	---	---	---	0	0	---	---	0	0	---
09/06/2017	---	---	---	---	---	0	0	---	0	---	---	---
09/07/2017 *	---	---	---	---	---	0	0	---	---	---	---	0
09/08/2017	---	---	---	---	---	0	---	---	---	---	---	---
Total:	0	0	0	0	0	0	5	0	0	0	0	0
# Days:	0	0	0	0	0	15	14	7	7	4	7	7
Average:	0	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	2,885,796	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)	
08/25/2017 *	---	---	---	---	---	85	12	53	635	124	---	---
08/26/2017	---	---	---	---	---	63	12	47	---	---	---	273
08/27/2017	---	---	---	---	---	66	22	53	218	---	---	---
08/28/2017	---	---	---	---	---	72	24	34	---	---	---	211
08/29/2017 *	---	---	---	---	---	62	15	31	100	47	---	---
08/30/2017	---	---	---	---	---	30	18	30	---	---	---	142
08/31/2017	---	---	---	---	---	47	13	30	216	---	---	---
09/01/2017 *	---	---	---	---	---	34	6	---	---	21	---	728
09/02/2017	---	---	---	---	---	48	11	---	704	---	---	---
09/03/2017	---	---	---	---	---	29	22	---	---	---	---	307
09/04/2017	---	---	---	---	---	22	21	---	538	---	---	---
09/05/2017 *	---	---	---	---	---	26	17	---	---	13	---	154
09/06/2017	---	---	---	---	---	79	8	---	344	---	---	---
09/07/2017 *	---	---	---	---	---	101	16	---	---	---	---	6
09/08/2017	---	---	---	---	---	78	---	---	---	---	---	---
Total:	0	0	0	0	0	842	217	278	2,755	205	1,821	
# Days:	0	0	0	0	0	15	14	7	7	4	7	7
Average:	0	0	0	0	0	56	16	40	394	51	260	
YTD	0	11	40	0	1,020,549	1,065,197	655,252	74,306	2,475,252	1,067,623	4,046,697	

Two-Week Summary of Passage Indices

COMBINED COHO												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/25/2017	*	---	---	---	---	0	0	0	0	0	---	
08/26/2017		---	---	---	---	0	0	0	---	---	0	
08/27/2017		---	---	---	---	0	0	0	0	---	---	
08/28/2017		---	---	---	---	0	0	0	---	---	0	
08/29/2017	*	---	---	---	---	0	0	0	0	0	---	
08/30/2017		---	---	---	---	0	0	0	---	---	0	
08/31/2017		---	---	---	---	0	0	0	0	---	---	
09/01/2017	*	---	---	---	---	0	0	---	---	0	0	
09/02/2017		---	---	---	---	0	0	---	0	---	---	
09/03/2017		---	---	---	---	0	0	---	---	---	0	
09/04/2017		---	---	---	---	0	0	---	0	---	---	
09/05/2017	*	---	---	---	---	0	0	---	---	0	0	
09/06/2017		---	---	---	---	0	0	---	0	---	---	
09/07/2017	*	---	---	---	---	0	0	---	---	---	0	
09/08/2017		---	---	---	---	0	---	---	---	---	---	
Total:		0	0	0	0	0	0	0	0	0	0	
# Days:		0	0	0	0	15	14	7	7	4	7	
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)	
08/25/2017	*	---	---	---	---	0	0	0	0	0	---	
08/26/2017		---	---	---	---	0	0	0	---	---	0	
08/27/2017		---	---	---	---	0	0	0	0	---	---	
08/28/2017		---	---	---	---	2	0	0	---	---	0	
08/29/2017	*	---	---	---	---	0	0	0	0	0	---	
08/30/2017		---	---	---	---	0	0	2	---	---	0	
08/31/2017		---	---	---	---	0	0	1	0	---	---	
09/01/2017	*	---	---	---	---	0	2	---	---	0	0	
09/02/2017		---	---	---	---	0	0	---	0	---	---	
09/03/2017		---	---	---	---	0	0	---	---	---	6	
09/04/2017		---	---	---	---	1	0	---	0	---	---	
09/05/2017	*	---	---	---	---	0	0	---	---	0	0	
09/06/2017		---	---	---	---	0	0	---	0	---	---	
09/07/2017	*	---	---	---	---	1	0	---	---	---	0	
09/08/2017		---	---	---	---	0	---	---	---	---	---	
Total:		0	0	0	0	4	2	3	0	0	6	
# Days:		0	0	0	0	15	14	7	7	4	7	
Average:		0	0	0	0	0	0	0	0	0	1	
YTD		7,117	15,916	7,614	1	4,065,200	1,853,170	2,517,519	32,136	442,841	1,317,075	264,519

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/25/2017	*	---	---	---	---	2	0	3	0	0	---	
08/26/2017		---	---	---	---	0	0	0	---	---	7	
08/27/2017		---	---	---	---	2	0	0	0	---	---	
08/28/2017		---	---	---	---	0	0	0	---	---	0	
08/29/2017	*	---	---	---	---	0	0	1	0	0	---	
08/30/2017		---	---	---	---	0	0	0	---	---	0	
08/31/2017		---	---	---	---	0	0	2	0	---	---	
09/01/2017	*	---	---	---	---	1	0	---	---	0	0	
09/02/2017		---	---	---	---	0	0	---	4	---	---	
09/03/2017		---	---	---	---	0	0	---	---	---	0	
09/04/2017		---	---	---	---	0	0	---	4	---	---	
09/05/2017	*	---	---	---	---	0	0	---	---	0	0	
09/06/2017		---	---	---	---	0	0	---	4	---	---	
09/07/2017	*	---	---	---	---	1	0	---	---	---	0	
09/08/2017		---	---	---	---	0	---	---	---	---	---	
Total:		0	0	0	0	6	0	6	12	0	7	
# Days:		0	0	0	0	15	14	7	7	4	7	
Average:		0	0	0	0	0	0	1	2	0	1	
YTD		6	0	0	0	61,191	24,474	34,028	11,197	156,392	117,049	145,288

Date	COMBINED LAMPREY JUVENILES											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
08/25/2017	*	---	---	---	---	1	0	0	40	0	---	
08/26/2017		---	---	---	---	3	0	0	---	---	2	
08/27/2017		---	---	---	---	2	0	0	24	---	---	
08/28/2017		---	---	---	---	4	0	1	---	---	0	
08/29/2017	*	---	---	---	---	1	0	0	28	0	---	
08/30/2017		---	---	---	---	0	0	0	---	---	2	
08/31/2017		---	---	---	---	0	0	0	12	---	---	
09/01/2017	*	---	---	---	---	2	0	---	---	0	0	
09/02/2017		---	---	---	---	2	0	---	8	---	---	
09/03/2017		---	---	---	---	3	0	---	---	---	0	
09/04/2017		---	---	---	---	3	0	---	20	---	---	
09/05/2017	*	---	---	---	---	6	0	---	---	0	0	
09/06/2017		---	---	---	---	18	0	---	12	---	---	
09/07/2017	*	---	---	---	---	11	0	---	---	---	4	
09/08/2017		---	---	---	---	17	---	---	---	---	---	
Total:		0	0	0	0	73	0	1	144	0	8	
# Days:		0	0	0	0	15	14	7	7	4	7	
Average:		0	0	0	0	5	0	0	21	0	1	
YTD		0	3	4	0	287	7,331	2,985	63	33,041	62,483	42,216

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:

9/8/17 11:12 AM

08/25/17 TO 09/08/17

		Species				
Site	Data	CH0	CH1	ST	SO	Grand Total
LGS	Sum of NumberCollected	679		3	4	686
	Sum of NumberBarged	0		0	0	0
	Sum of NumberBypassed	177		1	2	180
	Sum of Numbertrucked	416		2	1	419
	Sum of SampleMorts	6		0	1	7
	Sum of FacilityMorts	2		0	0	2
	Sum of ResearchMorts	0		0	0	0
	Sum of TotalProjectMorts	8		0	1	9
LMN	Sum of NumberCollected	159	3	1		163
	Sum of NumberBarged	0	0	0		0
	Sum of NumberBypassed	20	0	0		20
	Sum of Numbertrucked	113	2	1		116
	Sum of SampleMorts	0	0	0		0
	Sum of FacilityMorts	0	0	0		0
	Sum of ResearchMorts	0	0	0		0
	Sum of TotalProjectMorts	0	0	0		0
Total Sum of NumberCollected		838	3	4	4	849
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		197	0	1	2	200
Total Sum of Numbertrucked		529	2	3	1	535
Total Sum of SampleMorts		6	0	0	1	7
Total Sum of FacilityMorts		2	0	0	0	2
Total Sum of ResearchMorts		0	0	0	0	0
Total Sum of TotalProjectMorts		8	0	0	1	9

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/8/17 11:12 AM

TO: 09/08/17

		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	617,951	1,337,946	43,198	13,729	1,065,069	3,077,893
	Sum of NumberBarged	595,712	495,706	39,956	10,029	313,270	1,454,673
	Sum of NumberBypassed	17,539	837,161	3,201	3,320	751,539	1,612,760
	Sum of NumberTrucked	1,746	0	0	1	6	1,753
	Sum of SampleMorts	152	29	1	12	10	204
	Sum of FacilityMorts	2,724	5,050	40	367	244	8,425
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,876	5,079	41	379	254	8,629
LMN	Sum of NumberCollected	330,407	1,459,194	33,440	17,200	1,293,666	3,133,907
	Sum of NumberBarged	339,179	931,886	32,959	12,568	710,514	2,027,106
	Sum of NumberBypassed	5,536	489,562	800	4,597	560,085	1,060,580
	Sum of NumberTrucked	257	3	0	0	2	262
	Sum of SampleMorts	48	37	2	5	31	123
	Sum of FacilityMorts	308	1,089	39	120	387	1,943
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	356	1,126	41	125	418	2,066
Total Sum of NumberCollected		1,576,751	5,159,838	150,863	66,518	4,688,249	11,642,219
Total Sum of NumberBarged		1,535,918	2,406,280	136,162	42,296	1,973,142	6,093,798
Total Sum of NumberBypassed		44,997	2,708,008	14,901	23,587	2,691,512	5,483,005
Total Sum of NumberTrucked		2,003	3	0	1	8	2,015
Total Sum of SampleMorts		452	156	8	28	94	738
Total Sum of FacilityMorts		8,212	8,748	152	696	824	18,632
Total Sum of ResearchMorts		12	26	0	0	22	60
Total Sum of TotalProjectMorts		8,676	8,930	160	724	940	19,430

Cumulative Adult Passage at Mainstem Dams Through: 09/07

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	09/03	83624	18110	137215	11145	150783	25708	88044	10648	119591	10834	97732	22097	62206	9202	168910	21015	147802	20904
TDA	09/06	58308	12497	105504	9999	118766	22002	69246	9277	95764	8800	81626	17772	29971	4174	115381	15951	91602	17516
JDA	09/06	46675	12475	93659	8262	103450	20515	60416	7363	90259	7715	73088	17197	15233	2125	73583	9189	58347	12373
MCN	09/06	44292	7020	87191	7374	93925	16835	56982	4616	83894	6501	69220	12937	11197	1355	45137	5248	37242	6562
IHR	09/06	28306	6949	67484	5029	68114	11248	9284	2087	13980	1538	18950	4865	2787	277	10312	2328	10325	2713
LMN	09/06	28545	8270	66115	6266	68087	10905	8216	3388	12460	2344	19984	5812	2479	359	8358	2347	7833	2678
LGS	09/06	26598	8335	62597	6365	63765	12007	9086	3754	12480	1919	19272	6335	1824	273	7169	1558	6280	1565
LGR	09/06	27357	8256	62050	5480	62403	13092	8952	3627	12110	2113	17232	6836	1524	268	6396	1575	4245	1371
PRD	09/06	7268	783	16843	1003	17901	1826	52981	1760	80288	5126	57783	3021	3052	400	4739	671	6998	2515
WAN	09/06	6612	484	17164	919	17602	2161	49392	1355	79255	4110	55377	2415	2050	313	3465	714	4360	1818
RIS	09/06	8080	564	18646	715	18006	2748	56265	1333	79253	3434	56857	5479	2425	343	3116	870	3340	1888
RRH	09/06	5864	406	9449	351	7849	1209	42608	1060	58559	2827	45767	3863	1848	243	2263	646	2745	1203
WEL	09/06	6589	820	11789	833	8215	1601	30101	1102	44646	2492	36069	3814	589	73	572	115	1000	339
WFA	09/06	34186	2442	30317	2161	34636	1490	0	0	0	0	0	0	403	57	182	55	283	62

DAM	ENDDATE	Coho						Sockeye			Steelhead						Lamprey		
		2017		2016		10-Yr Avg.		2017	2016	10-Yr Avg.	10-Yr Unclipped		10-Yr Unclipped	10-Yr Avg.	2017	2016	10-Yr Avg.		
		Adult	Jack	Adult	Jack	Adult	Jack				2017	2016						2017	2016
BON	09/03	3119	482	4227	824	16044	1144	87686	342490	315610	79045	117902	256839	27125	37928	92061	81462	51441	23390
TDA	09/06	663	270	1892	447	5823	979	64007	288352	269181	23933	47104	145276	9391	17330	54893	29720	10959	6572
JDA	09/06	240	96	422	136	3199	643	65925	289929	260532	10115	25931	108653	5046	10925	40306	21728	9118	5218
MCN	09/06	37	13	205	81	840	181	57987	261658	226376	9413	20169	80279	4076	8568	28911	2338	1421	1280
IHR	09/06	4	0	12	1	43	6	392	898	922	3514	11954	46237	1687	4458	12935	1214	825	328
LMN	09/06	0	0	6	5	15	2	345	1024	1091	3829	11350	43236	1967	5091	13937	391	237	92
LGS	09/06	0	0	6	1	5	0	285	948	1024	2802	10603	28046	1427	5036	10232	495	189	41
LGR	09/06	0	0	1	0	0	0	227	814	1062	8360	12175	26804	3657	5859	10100	330	102	16
PRD	09/06	0	0	154	15	159	18	66669	311071	266837	1572	3079	11045	0	0	0	23874	7190	4009
WAN	09/06	1	0	76	5	69	13	76074	322454	235861	1321	2834	10527	0	0	0	23400	6417	2440
RIS	09/06	2	0	3	2	21	11	73177	310290	259087	1425	2817	9015	809	1233	4065	17897	2547	1057
RRH	09/06	0	0	0	0	1	0	46676	235873	218189	977	2081	6465	478	849	2740	20664	2613	992
WEL	09/06	0	0	2	0	0	0	42271	215978	207455	796	1588	4235	467	676	1853	140	3	0
WFA	09/06	17	19	18	45	142	89	0	0	0	2713	26967	22422	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.