



Fish Passage Center

Weekly Report #17-30

October 20, 2017

This is the final weekly report of 2017.

The weekly report will return in March of 2018.

This Week's Highlights

Water Supply

Precipitation throughout the Columbia Basin has varied between 45% and 126% of average at individual sub-basins over October (Water Year 2018). Precipitation above The Dalles has been 93% of average over October. Over the complete 2017 Water Year, precipitation ranged between 97% and 132% of average.

Table 1. Summary of October precipitation (WY 2018) and cumulative WY 2017 October through September precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2018		Water Year 2017 October 1, 2016 to September 30, 2017	
	October 1-19, 2017		Observed (inches)	%
	Observed (inches)	% Average		
Columbia Above Coulee	2.2	113	39.2	103
Sneke River Above Ice Harbor	0.6	64	26.7	118
Columbia Above The Dalles	1.2	93	29.8	108
Kootenai	2.4	120	39.6	104
Clark Fork	0.8	65	27.4	97
Flathead	1.6	96	39.9	109
Pend Oreille River Basin above Waneta Dam	1.3	86	35.0	105
Salmon River Basin	0.7	55	35.8	123
Upper Snake Tributaries	0.6	45	33.2	123
Clearwater	1.7	96	43.4	106
Willamette River above Portland	3.9	126	87.2	132

Grand Coulee Reservoir is at 1,284.6 feet (10-19-17) and has refilled 1.1 feet over the last week. Outflows at Grand Coulee have ranged between 43.7 Kcfs and 61.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,441.8 feet (10-19-17) and has drafted 0.3 feet over the past week. Daily average outflows at Libby Dam have been 4.2 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,543.3 feet (10-19-17) and has refilled 1.0 foot last week. Outflows at Hungry Horse have been 2.4 Kcfs over the last week.

Dworshak is currently at an elevation of 1,517.7 feet (10-19-17) and has drafted 0.3 feet over the last week. Dworshak outflows have been 1.8 Kcfs.

The Brownlee Reservoir was at an elevation of 2,035.9 feet on October 19, 2017, and refilled 5.0 feet last week. Outflows at Hells Canyon have ranged between 8.4 and 8.7 Kcfs over the last four days. Hells Canyon outflows are expected to be 8.5 Kcfs through mid-December.

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 voluntary spill during the construction activities to the juvenile bypass system. Spill at Lower Granite will be ~7.0 Kcfs during the daytime hours (0700-1800). This 7.0 Kcfs spill operation has occurred through the RSW (spillbay 1) since September 21st. However, voluntary spill at Lower Granite was not provided from the afternoon of October 9th through October 12th. This was because flows were sufficiently low that spill through the RSW was not possible. Following this event, it was determined that the operation at Lower Granite will be to spill ~7.0 Kcfs through the RSW when flows are sufficiently high. If flows are not high enough to allow for spill through the RSW, spill will be provided through spillbay 2, up to 7 Kcfs or some reduced amount after accounting for powerhouse minimum requirements.

Spill through the RSW (~7 Kcfs) resumed on October 13th and continued through October 15th. Spill on October 16th and 17th was a mix of 7 Kcfs through the RSW for some hours or ~3 Kcfs spill through spillbay 2. Spill of 7 Kcfs through the RSW was provided on October 18th, only it was provided from 0300—0800 and 1600-2000, instead of the regularly scheduled hours of 0700-1800. Finally, spill on October 19th was 7 Kcfs through the RSW during the regularly scheduled hours.

The forebay total dissolved gas (TDG) monitors at Lower Granite, Ice Harbor, McNary and Bonneville dams have all been removed for the year. However, the forebay temperature strings at Lower Granite, Ice Harbor, and McNary dams continue to collect data. The daily average temperatures at these three sites for October 19th (at the 3 m string) were 57.0°F at Lower Granite, 58.5°F at Ice Harbor, and 57.7°F at McNary.

Smolt Monitoring

Bonneville and Little Goose dams are the only two Smolt Monitoring Program (SMP) sites that are currently sampling. Sampling at these two sites is scheduled to continue through the end of October. This week's samples at Bonneville and Little Goose were dominated by subyearling Chinook. When compared to the previous week, passage of subyearling Chinook decreased at Bonneville Dam and increased at Little Goose Dam.

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 110 per day. This is a decrease over the previous week's daily average passage index of about 210. No spring migrants were encountered in this week's samples at BON. Pacific lamprey ammocoetes were encountered in only one of this week's samples (Oct. 16th) and no macrophthalmia were encountered in this week's samples.

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 200 per day, which is a slight increase from the previous week's daily average passage index of about 150 per day. Passage of spring migrants remained low this

week. The only spring migrants that were encountered this week were sockeye and steelhead. Finally, Pacific lamprey macrophthalmia were encountered in only three of this week's samples and no ammocoetes were encountered this week.

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. Approximately, 1.5 million spring Chinook pre-smolts are scheduled for release over the next two weeks. Of these, approximately 27% are scheduled to be released into the Lewis River, 33% are scheduled to be released into the Cowlitz River, and 40% are scheduled to be released into the Willamette River and its tributaries. These pre-smolts are not expected to out-migrate until the spring of 2018.

Adult Passage

The adult fall Chinook count of 311,404 is about 71.4% of the 2016 count of 436,382 and about 60.7% of the 10-year average count of 512,600. The 2017 Bonneville Dam fall Chinook jack count of 36,959 is about 68.8% of the 2016 count of 53,707 and 43.4% of the 10-year average count of 85,128. The 2017 adult fall Chinook count of 26,082 at Ice Harbor Dam in the Snake River is about 71.7% of the 2016 count and 66.6% of the 10-year average count of 39,151. The 2017 Lower Granite fall Chinook adult count of 25,244 is about 74.8% of the 2016 count and 73.7% of the 10-year average count of 34,252.

The 2017 Bonneville Dam adult steelhead count of 116,231 is about 62.6% of the 2016 count of 185,575 and 35.3% of the 10-year average count of 328,849. The 2017 Bonneville Dam adult unclipped steelhead count of 33,768 is about 65.7% of the 2016 count of 51,419 and 30.8% of the 10-year average count of 109,653. Daily adult steelhead counts at Lower Granite Dam ranged from 528 to 1,240 adults per day last week. This year's Lower Granite steelhead count of 66,513 is about 78.4% of the 2016 count of 84,886 and about 45.9% of the 10-year average count of 144,937. The 2017 Lower Granite Dam adult unclipped steelhead count of 12,964 is about 66.4% of the 2016 count of 19,519 and 34% of the 10-year average count of 38,069. At Willamette Falls, the 2017 count for steelhead was 2,807 as of October 18th. This year's steelhead count is about 10.3% of the 2016 count of 27,387 and 12.3% of the 10-year average count of 22,813.

As of October 19th, the cumulative adult coho count at Bonneville Dam is 60,305, which is about 1.5 times greater than the 2016 count but only 56.1% of the 10-year average count of 107,482. A total of 82,559 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 52,319 and 3.4 times greater than the 10-year average count of 24,228.

Hatchery Releases Last Two Weeks

From:		Hatchery Release Summary								
		10/7/2017	to	10/20/17						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	Zone
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2018	90,000	10-10-17	10-12-17	Newsome Creek	S Fk Clearwater River	SNAK
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2018	160,000	10-10-17	10-12-17	Lolo Creek	Clearwater River M F	SNAK
Nez Perce Tribe										
Total					250,000					
Grand Total					250,000					

Hatchery Releases Next Two Weeks

From:		Hatchery Release Summary								
		10/21/2017	to	11/3/2017						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	Zone
Oregon Dept. of Fish and Wildlife	South Santiam Hatchery	CH0	SP	2018	300,000	10-31-17	10-31-17	South Santiam Hatchery	Santiam River	LCOL
Oregon Dept. of Fish and Wildlife	Willamette Hatchery	CH0	SP	2018	300,000	10-31-17	10-31-17	Dexter Pond	Willamette River	LCOL
Oregon Dept. of Fish and Wildlife Total					600,000					
Washington Dept. of Fish and Wildlife	Cowlitz Salmon	CH0	SP	2018	500,000	11-01-17	11-01-17	Cowlitz Salmon	Cowlitz River	LCOL
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					900,000					
Grand Total					1,500,000					

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

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

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
10/06/2017	55.6	0.0	54.7	0.0	60.8	0.0	60.2	0.0	68.3	0.0	68.5	1.9	66.6	2.3
10/07/2017	53.5	0.0	51.8	0.0	51.3	0.0	49.5	0.0	51.9	0.0	42.3	1.9	46.9	2.1
10/08/2017	57.9	0.0	55.2	0.0	50.2	0.0	48.7	0.0	48.6	0.0	61.2	1.9	53.7	2.1
10/09/2017	78.2	0.0	77.9	0.0	85.3	0.0	78.8	0.0	84.3	0.0	80.0	1.9	70.8	2.2
10/10/2017	68.9	0.0	68.5	0.0	72.4	0.0	68.8	0.0	75.6	0.0	80.2	1.9	82.4	3.2
10/11/2017	62.5	0.0	62.4	0.0	64.4	0.0	67.6	0.0	74.0	0.0	90.3	1.9	85.2	2.3
10/12/2017	64.3	0.0	68.8	0.0	63.7	0.0	59.4	0.0	64.9	0.0	77.8	1.9	77.4	1.8
10/13/2017	58.7	0.0	54.4	0.0	60.5	0.0	61.7	0.0	65.8	0.0	65.9	1.9	61.9	2.3
10/14/2017	53.6	0.0	51.0	0.0	46.9	0.0	50.8	0.0	52.7	0.0	69.3	1.9	73.3	2.5
10/15/2017	50.9	0.0	48.7	0.0	54.4	0.0	53.3	0.0	55.3	0.0	61.7	1.9	56.7	1.7
10/16/2017	52.1	0.0	54.3	0.0	53.5	0.0	58.2	0.0	61.9	0.0	72.7	1.9	66.2	2.3
10/17/2017	47.6	0.0	45.7	0.0	53.3	0.0	56.1	0.0	56.6	0.0	59.3	1.9	61.7	1.7
10/18/2017	61.9	0.0	60.3	0.0	51.6	0.0	50.5	0.0	53.4	0.0	60.8	1.9	58.2	1.6
10/19/2017	43.7	0.0	48.5	0.0	52.5	0.0	52.6	0.3	54.3	0.0	51.3	1.9	51.2	9.7

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
10/06/2017	1.8	0.0	---	19.6	28.3	3.5	32.6	0.0	31.7	0.0	32.3	0.0
10/07/2017	1.8	0.0	---	15.1	22.7	3.5	20.7	0.0	20.5	0.0	18.2	0.0
10/08/2017	1.8	0.0	---	13.5	24.7	3.5	26.9	0.0	26.7	0.0	28.9	0.0
10/09/2017	1.8	0.0	---	12.4	23.6	3.5	24.8	0.0	26.1	0.0	23.9	0.0
10/10/2017	1.8	0.0	---	8.6	20.1	2.2	21.0	0.0	19.9	0.0	22.0	0.0
10/11/2017	1.8	0.0	---	8.6	17.6	0.0	22.2	0.0	24.6	0.0	23.9	0.0
10/12/2017	1.8	0.0	---	8.5	17.6	0.0	13.9	0.0	12.4	0.0	12.2	0.0
10/13/2017	1.8	0.0	---	8.6	18.0	3.5	20.8	0.0	22.2	0.0	20.9	0.0
10/14/2017	1.8	0.0	---	8.6	17.5	3.5	18.8	0.0	18.8	0.0	20.1	0.0
10/15/2017	1.8	0.0	---	8.6	17.6	3.5	17.9	0.0	17.1	0.0	15.4	0.0
10/16/2017	1.8	0.0	---	8.5	16.8	2.2	19.2	0.0	21.2	0.0	24.0	0.0
10/17/2017	1.8	0.0	---	8.5	17.3	3.1	17.1	0.0	16.9	0.0	17.1	0.0
10/18/2017	1.8	0.0	---	8.5	17.7	3.5	20.5	0.0	21.3	0.0	19.0	0.0
10/19/2017	1.8	0.0	---	8.5	17.7	3.5	18.7	0.0	18.6	0.0	18.6	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
10/06/2017	113.2	0.0	92.4	0.8	92.8	0.0	100.3	1.1	38.2	53.6
10/07/2017	81.7	0.0	76.5	0.9	77.1	0.0	84.5	1.1	24.4	51.6
10/08/2017	81.3	0.0	81.8	0.8	79.4	0.0	85.6	1.1	25.0	52.1
10/09/2017	102.3	0.0	102.6	0.8	102.5	0.0	117.2	1.1	50.7	58.0
10/10/2017	97.6	0.0	98.1	0.8	98.4	0.0	103.5	1.1	38.7	56.3
10/11/2017	94.5	0.0	92.9	0.7	92.7	0.0	96.1	1.1	36.2	51.3
10/12/2017	108.3	0.0	108.5	0.8	107.8	0.0	113.1	1.2	51.8	52.7
10/13/2017	87.8	0.0	89.6	0.8	90.3	0.0	99.4	1.2	37.7	53.1
10/14/2017	82.7	0.0	85.6	0.8	86.3	0.0	95.5	1.1	35.7	51.2
10/15/2017	85.6	0.0	82.5	0.8	83.2	0.0	85.3	1.1	22.6	54.1
10/16/2017	82.4	0.0	83.5	0.8	84.7	0.0	93.1	1.2	41.3	43.2
10/17/2017	84.6	0.0	73.3	0.8	75.8	0.0	84.9	1.1	20.1	56.3
10/18/2017	94.4	0.0	91.9	0.8	91.7	0.0	96.3	1.1	21.9	66.0
10/19/2017	73.3	0.0	79.1	0.8	81.8	7.5	91.3	1.1	10.6	72.1

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>			
10/6	---	---	---	0	---	---	---	0	101.2	101.6	101.8	24	100.5	101.2	101.6	24	100.6	101.0	101.4	24
10/7	---	---	---	0	---	---	---	0	101.4	101.6	101.8	24	100.7	101.0	101.2	24	100.7	100.9	101.4	24
10/8	---	---	---	0	---	---	---	0	100.0	100.4	100.8	24	99.3	99.8	100.3	24	99.7	99.9	100.4	24
10/9	---	---	---	0	---	---	---	0	99.7	100.0	100.3	24	98.4	99.1	99.3	24	99.1	99.5	99.9	24
10/10	---	---	---	0	---	---	---	0	100.7	100.9	101.0	24	99.7	100.2	100.4	24	100.0	100.3	100.6	24
10/11	---	---	---	0	---	---	---	0	100.2	100.4	100.8	24	99.2	99.4	99.7	24	99.6	99.8	100.0	24
10/12	---	---	---	0	---	---	---	0	99.7	99.8	100.0	24	98.4	98.8	99.2	24	98.9	99.0	99.3	24
10/13	---	---	---	0	---	---	---	0	99.2	99.6	99.7	24	98.3	98.6	98.9	24	98.1	98.4	98.6	24
10/14	---	---	---	0	---	---	---	0	98.0	98.1	98.4	24	96.9	97.4	97.9	24	96.9	97.1	97.2	24
10/15	---	---	---	0	---	---	---	0	98.1	98.4	98.8	24	97.6	98.4	98.9	24	97.2	97.8	98.0	24
10/16	---	---	---	0	---	---	---	0	98.6	98.9	99.2	24	97.6	98.0	98.4	24	97.9	98.3	98.7	24
10/17	---	---	---	0	---	---	---	0	99.3	99.6	99.9	24	98.3	98.7	99.2	24	98.6	99.1	99.6	24
10/18	---	---	---	0	---	---	---	0	99.5	100.1	100.4	24	98.0	98.7	101.6	24	98.7	99.4	99.6	24
10/19	---	---	---	0	---	---	---	0	100.4	100.5	100.6	23	99.2	99.5	99.7	23	99.7	100.0	100.1	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>			
10/6	---	---	---	0	99.6	100.0	100.3	24	100.3	100.9	101.6	24	100.8	101.0	101.2	21	100.2	100.3	100.5	14
10/7	---	---	---	0	100.0	100.5	101.0	24	100.3	100.8	101.5	24	101.0	101.1	101.2	24	99.2	99.5	100.0	21
10/8	---	---	---	0	98.9	99.4	100.0	24	99.2	99.6	100.1	24	99.8	100.1	100.8	24	97.9	98.3	98.8	22
10/9	---	---	---	0	98.4	98.9	99.1	24	98.7	99.3	99.6	24	99.3	99.5	99.7	24	99.2	99.5	99.9	21
10/10	---	---	---	0	99.5	99.7	100.1	24	99.6	100.0	100.3	24	100.3	100.5	100.5	23	100.2	100.4	100.7	21
10/11	---	---	---	0	98.2	98.4	98.9	23	98.8	99.1	99.5	23	99.8	100.0	100.3	24	99.7	100.0	100.7	21
10/12	---	---	---	0	97.7	97.8	98.0	24	98.0	98.7	99.5	24	99.1	99.2	99.5	23	98.9	99.1	99.3	20
10/13	---	---	---	0	97.2	97.6	97.7	24	97.9	98.6	99.2	24	98.5	98.8	98.9	24	97.7	98.2	98.4	23
10/14	---	---	---	0	96.0	96.2	96.3	24	96.0	96.3	96.7	24	97.5	97.6	97.7	23	95.8	96.1	96.4	19
10/15	---	---	---	0	96.4	97.1	97.5	24	96.3	97.0	97.6	24	97.6	98.1	98.3	24	95.5	96.3	97.5	23
10/16	---	---	---	0	96.6	97.3	97.6	24	97.3	98.4	98.9	24	98.7	99.3	99.7	24	97.2	98.1	98.8	21
10/17	---	---	---	0	98.0	98.5	98.8	24	98.4	98.9	99.3	24	99.5	99.8	100.1	23	98.0	98.3	99.1	18
10/18	---	---	---	0	98.3	98.9	99.3	24	99.1	99.6	100.0	24	99.3	99.8	100.1	24	98.0	98.8	99.5	22
10/19	---	---	---	0	99.2	99.6	100.1	23	99.2	99.7	100.7	23	100.1	100.3	100.7	22	98.5	99.2	100.3	19

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>			
10/6	100.3	100.5	100.8	21	100.6	100.6	101.1	11	98.6	100.0	100.9	24	99.1	100.3	100.8	24	101.0	101.6	102.3	24
10/7	100.4	100.6	100.8	23	100.5	100.8	101.2	20	96.5	98.6	99.4	24	98.4	99.1	99.4	24	100.6	100.9	101.2	24
10/8	98.9	99.1	99.9	23	99.0	99.4	99.9	21	97.6	98.8	99.6	24	97.7	98.5	99.2	24	99.3	99.7	100.4	24
10/9	98.7	99.1	99.9	21	98.9	99.4	100.1	20	97.3	98.5	99.5	24	97.4	98.5	99.2	24	99.2	100.0	100.7	24
10/10	99.6	100.0	100.1	23	100.1	100.1	100.3	21	99.1	99.6	100.0	24	98.9	99.6	99.8	24	100.4	100.8	101.2	24
10/11	99.3	99.4	99.7	22	99.3	99.4	99.6	19	98.3	98.8	99.4	24	98.7	99.0	99.1	24	99.5	99.9	100.2	24
10/12	98.7	98.9	99.2	21	98.7	99.0	99.2	19	97.3	98.1	98.6	24	98.0	98.3	98.4	24	98.7	98.9	99.2	24
10/13	98.7	99.0	99.2	23	98.8	99.2	99.3	22	96.5	97.7	98.0	24	96.1	97.1	97.5	24	98.2	98.3	98.5	24
10/14	97.3	97.5	97.9	20	97.6	97.7	97.9	19	96.5	96.9	97.4	24	96.3	96.8	97.3	24	97.3	97.6	98.0	24
10/15	97.4	97.7	98.3	23	97.5	97.9	98.7	21	96.9	98.1	99.2	24	96.2	97.4	98.1	24	98.0	98.7	99.2	24
10/16	97.9	98.3	98.4	22	98.0	98.4	98.5	20	97.4	97.4	97.9	10	97.0	97.0	97.8	10	98.3	98.3	98.9	10
10/17	98.9	99.3	99.7	23	99.0	99.1	99.7	15	---	---	---	0	---	---	---	0	---	---	---	0
10/18	99.1	99.5	99.7	23	99.2	99.7	100.0	20	---	---	---	0	---	---	---	0	---	---	---	0
10/19	99.6	99.8	100.1	20	99.8	100.0	100.4	19	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwrtr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
10/6	---	---	---	0	---	---	---	0	103.1	103.9	104.9	24	---	---	---	0	---	---	---	0
10/7	---	---	---	0	---	---	---	0	103.3	103.6	104.0	24	---	---	---	0	---	---	---	0
10/8	---	---	---	0	---	---	---	0	102.5	103.1	103.8	24	---	---	---	0	---	---	---	0
10/9	---	---	---	0	---	---	---	0	102.0	102.8	103.7	24	---	---	---	0	---	---	---	0
10/10	---	---	---	0	---	---	---	0	102.9	103.6	104.5	24	---	---	---	0	---	---	---	0
10/11	---	---	---	0	---	---	---	0	103.1	103.7	104.7	24	---	---	---	0	---	---	---	0
10/12	---	---	---	0	---	---	---	0	102.7	103.2	104.0	24	---	---	---	0	---	---	---	0
10/13	---	---	---	0	---	---	---	0	102.5	103.2	104.1	24	---	---	---	0	---	---	---	0
10/14	---	---	---	0	---	---	---	0	101.5	102.1	102.9	24	---	---	---	0	---	---	---	0
10/15	---	---	---	0	---	---	---	0	101.6	102.3	103.3	24	---	---	---	0	---	---	---	0
10/16	---	---	---	0	---	---	---	0	101.9	102.6	103.6	24	---	---	---	0	---	---	---	0
10/17	---	---	---	0	---	---	---	0	102.3	103.0	103.9	24	---	---	---	0	---	---	---	0
10/18	---	---	---	0	---	---	---	0	102.7	103.4	104.0	24	---	---	---	0	---	---	---	0
10/19	---	---	---	0	---	---	---	0	103.7	104.4	105.5	23	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwrtr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
10/6	---	---	---	0	---	---	---	0	103.7	108.6	110.8	24	---	---	---	0	100.3	100.9	101.2	24
10/7	---	---	---	0	---	---	---	0	105.1	110.7	111.9	24	---	---	---	0	100.4	100.6	100.9	24
10/8	---	---	---	0	---	---	---	0	104.4	109.4	110.9	24	---	---	---	0	99.4	99.6	99.9	24
10/9	---	---	---	0	---	---	---	0	104.1	109.4	111.4	24	---	---	---	0	99.0	99.4	99.6	24
10/10	---	---	---	0	---	---	---	0	102.5	106.0	111.1	24	---	---	---	0	100.2	100.5	100.7	24
10/11	---	---	---	0	---	---	---	0	98.6	98.8	99.0	24	---	---	---	0	99.4	99.7	100.0	24
10/12	---	---	---	0	---	---	---	0	98.3	98.5	99.5	24	---	---	---	0	98.7	98.8	98.9	24
10/13	---	---	---	0	---	---	---	0	104.0	109.1	110.9	24	---	---	---	0	98.4	98.7	98.8	24
10/14	---	---	---	0	---	---	---	0	104.3	109.9	110.7	24	---	---	---	0	97.1	97.3	97.6	24
10/15	---	---	---	0	---	---	---	0	104.4	109.8	110.9	24	---	---	---	0	97.2	97.6	97.9	24
10/16	---	---	---	0	---	---	---	0	102.4	105.8	110.6	24	---	---	---	0	97.8	98.2	98.4	24
10/17	---	---	---	0	---	---	---	0	104.4	109.3	112.2	24	---	---	---	0	98.4	98.8	99.2	24
10/18	---	---	---	0	---	---	---	0	106.0	110.3	111.6	24	---	---	---	0	98.6	99.1	99.5	24
10/19	---	---	---	0	---	---	---	0	107.1	111.2	112.1	23	---	---	---	0	99.8	100.1	100.4	23

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
10/6	---	---	---	0	99.5	99.9	100.2	24	---	---	---	0	97.6	98.1	98.5	24	---	---	---	0
10/7	---	---	---	0	99.5	99.8	100.1	24	---	---	---	0	98.3	99.0	100.1	24	---	---	---	0
10/8	---	---	---	0	98.4	98.6	99.2	24	---	---	---	0	97.6	98.0	98.6	24	---	---	---	0
10/9	---	---	---	0	98.1	98.4	98.6	24	---	---	---	0	97.8	98.6	99.1	24	---	---	---	0
10/10	---	---	---	0	98.9	99.3	99.4	24	---	---	---	0	99.0	99.6	99.9	24	---	---	---	0
10/11	---	---	---	0	98.7	98.9	99.2	24	---	---	---	0	98.7	99.3	99.6	24	---	---	---	0
10/12	---	---	---	0	97.8	98.2	98.4	24	---	---	---	0	98.7	99.2	99.5	24	---	---	---	0
10/13	---	---	---	0	97.7	98.0	98.1	24	---	---	---	0	98.3	98.7	99.3	24	---	---	---	0
10/14	---	---	---	0	96.4	96.6	96.8	24	---	---	---	0	97.3	97.8	98.8	24	---	---	---	0
10/15	---	---	---	0	96.8	97.2	97.4	24	---	---	---	0	98.1	98.9	99.7	24	---	---	---	0
10/16	---	---	---	0	97.5	97.9	98.1	24	---	---	---	0	98.0	98.6	99.2	24	---	---	---	0
10/17	---	---	---	0	98.3	98.8	100.1	24	---	---	---	0	98.9	99.7	100.4	24	---	---	---	0
10/18	---	---	---	0	98.5	98.8	99.1	24	---	---	---	0	99.1	99.5	99.8	24	---	---	---	0
10/19	---	---	---	0	99.4	99.7	100.0	23	---	---	---	0	100.1	100.4	100.8	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

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	hr		Avg	Avg		High	hr		Avg	Avg			High	hr	Avg	AVG
10/6	---	---	---	0	98.9	99.5	100.3	24	---	---	---	0	99.2	99.5	99.6	24	---	---	---	0
10/7	---	---	---	0	98.6	99.0	99.4	24	---	---	---	0	99.2	99.3	99.5	24	---	---	---	0
10/8	---	---	---	0	97.4	97.7	98.2	24	---	---	---	0	98.4	98.6	98.9	24	---	---	---	0
10/9	---	---	---	0	97.7	98.3	98.6	24	---	---	---	0	98.2	98.6	98.9	24	---	---	---	0
10/10	---	---	---	0	98.7	99.2	99.7	24	---	---	---	0	99.2	99.2	99.3	24	---	---	---	0
10/11	---	---	---	0	98.2	98.8	99.3	24	---	---	---	0	98.4	98.6	98.9	24	---	---	---	0
10/12	---	---	---	0	98.3	98.5	98.8	24	---	---	---	0	98.3	98.6	98.7	24	---	---	---	0
10/13	---	---	---	0	97.9	98.2	98.6	24	---	---	---	0	97.9	98.1	98.3	24	---	---	---	0
10/14	---	---	---	0	97.0	97.3	97.6	24	---	---	---	0	96.8	97.0	97.1	24	---	---	---	0
10/15	---	---	---	0	97.4	97.8	98.1	24	---	---	---	0	97.1	97.4	97.5	24	---	---	---	0
10/16	---	---	---	0	98.2	98.7	99.0	24	---	---	---	0	97.5	97.8	97.9	24	---	---	---	0
10/17	---	---	---	0	98.7	99.0	99.5	24	---	---	---	0	97.7	97.8	97.9	24	---	---	---	0
10/18	---	---	---	0	99.3	99.9	100.2	24	---	---	---	0	98.1	98.7	99.2	24	---	---	---	0
10/19	---	---	---	0	100.4	100.6	101.1	23	---	---	---	0	99.4	99.6	99.7	23	---	---	---	0

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>	#	hr	<u>24 h</u>	<u>12 h</u>	#	hr	<u>24h</u>	<u>12h</u>	#	hr	<u>24h</u>	<u>12h</u>	#	hr	<u>24h</u>	<u>12h</u>	#	hr	
	Avg	Avg			High	Avg			Avg	High			Avg	Avg			High	Avg			
10/6	99.7	100.3	100.6	24	---	---	---	0	102.8	103.3	103.8	24	---	---	---	0	---	---	---	0	
10/7	100.0	100.2	100.4	24	---	---	---	0	103.3	103.5	103.8	24	---	---	---	0	---	---	---	0	
10/8	99.5	99.7	100.0	24	---	---	---	0	102.9	103.3	103.6	24	---	---	---	0	---	---	---	0	
10/9	99.2	99.6	99.8	24	---	---	---	0	102.8	103.3	104.2	24	---	---	---	0	---	---	---	0	
10/10	99.7	100.1	100.3	24	---	---	---	0	102.9	103.2	104.2	24	---	---	---	0	---	---	---	0	
10/11	99.0	99.2	99.4	24	---	---	---	0	102.9	103.4	104.2	24	---	---	---	0	---	---	---	0	
10/12	98.6	99.0	99.1	24	---	---	---	0	102.6	103.0	103.4	24	---	---	---	0	---	---	---	0	
10/13	98.3	98.8	99.1	24	---	---	---	0	101.9	102.5	103.4	24	---	---	---	0	---	---	---	0	
10/14	97.7	98.1	98.2	24	---	---	---	0	101.4	102.0	102.5	24	---	---	---	0	---	---	---	0	
10/15	98.7	99.1	99.4	24	---	---	---	0	102.3	103.0	103.5	24	---	---	---	0	---	---	---	0	
10/16	99.2	99.6	99.8	24	---	---	---	0	102.8	103.4	104.0	24	---	---	---	0	---	---	---	0	
10/17	99.7	100.1	100.4	24	---	---	---	0	103.0	103.3	103.9	24	---	---	---	0	---	---	---	0	
10/18	100.0	100.5	100.7	21	---	---	---	0	103.5	104.2	104.8	24	---	---	---	0	---	---	---	0	
10/19	102.4	103.8	104.7	23	---	---	---	0	104.0	104.4	105.1	23	---	---	---	0	---	---	---	0	

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 10/20/2017 10:39

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)
10/05/2017	---	---	---	---	---	0	---	---	---	---	0
10/06/2017	---	---	---	---	---	0	---	---	---	---	0
10/07/2017	---	---	---	---	---	0	---	---	---	---	0
10/08/2017	---	---	---	---	---	0	---	---	---	---	0
10/09/2017	---	---	---	---	---	0	---	---	---	---	0
10/10/2017	---	---	---	---	---	0	---	---	---	---	0
10/11/2017	---	---	---	---	---	0	---	---	---	---	0
10/12/2017	*	---	---	---	---	0	---	---	---	---	0
10/13/2017	---	---	---	---	---	0	---	---	---	---	0
10/14/2017	---	---	---	---	---	0	---	---	---	---	0
10/15/2017	---	---	---	---	---	0	---	---	---	---	0
10/16/2017	---	---	---	---	---	0	---	---	---	---	0
10/17/2017	---	---	---	---	---	0	---	---	---	---	0
10/18/2017	---	---	---	---	---	0	---	---	---	---	0
10/19/2017	---	---	---	---	---	0	---	---	---	---	0
<hr/>											
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	0	0	0	0	0	15	0	0	0	0	15
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)
10/05/2017	---	---	---	---	---	62	---	---	---	---	148
10/06/2017	---	---	---	---	---	39	---	---	---	---	244
10/07/2017	---	---	---	---	---	79	---	---	---	---	188
10/08/2017	---	---	---	---	---	158	---	---	---	---	302
10/09/2017	---	---	---	---	---	198	---	---	---	---	273
10/10/2017	---	---	---	---	---	157	---	---	---	---	297
10/11/2017	---	---	---	---	---	228	---	---	---	---	52
10/12/2017	*	---	---	---	---	210	---	---	---	---	85
10/13/2017	---	---	---	---	---	226	---	---	---	---	125
10/14/2017	---	---	---	---	---	300	---	---	---	---	134
10/15/2017	---	---	---	---	---	168	---	---	---	---	124
10/16/2017	---	---	---	---	---	158	---	---	---	---	117
10/17/2017	---	---	---	---	---	117	---	---	---	---	96
10/18/2017	---	---	---	---	---	175	---	---	---	---	68
10/19/2017	---	---	---	---	---	235	---	---	---	---	86
<hr/>											
Total:	0	0	0	0	0	2,510	0	0	0	0	2,339
# Days:	0	0	0	0	0	15	0	0	0	0	15
Average:	0	0	0	0	0	167	0	0	0	0	156
YTD	0	11	40	0	1,020,549	1,069,713	655,490	74,306	2,476,636	1,067,668	4,051,513

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)
10/05/2017	---	---	---	---	---	0	---	---	---	---	0
10/06/2017	---	---	---	---	---	0	---	---	---	---	0
10/07/2017	---	---	---	---	---	0	---	---	---	---	0
10/08/2017	---	---	---	---	---	0	---	---	---	---	0
10/09/2017	---	---	---	---	---	0	---	---	---	---	0
10/10/2017	---	---	---	---	---	0	---	---	---	---	0
10/11/2017	---	---	---	---	---	0	---	---	---	---	0
10/12/2017	*	---	---	---	---	0	---	---	---	---	0
10/13/2017	---	---	---	---	---	0	---	---	---	---	0
10/14/2017	---	---	---	---	---	0	---	---	---	---	0
10/15/2017	---	---	---	---	---	0	---	---	---	---	0
10/16/2017	---	---	---	---	---	0	---	---	---	---	0
10/17/2017	---	---	---	---	---	0	---	---	---	---	0
10/18/2017	---	---	---	---	---	0	---	---	---	---	0
10/19/2017	---	---	---	---	---	0	---	---	---	---	0
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	0	0	0	0	0	15	0	0	0	0	15
Average:	0	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)
10/05/2017	---	---	---	---	---	0	---	---	---	---	0
10/06/2017	---	---	---	---	---	0	---	---	---	---	0
10/07/2017	---	---	---	---	---	0	---	---	---	---	0
10/08/2017	---	---	---	---	---	0	---	---	---	---	0
10/09/2017	---	---	---	---	---	0	---	---	---	---	0
10/10/2017	---	---	---	---	---	1	---	---	---	---	0
10/11/2017	*	---	---	---	---	0	---	---	---	---	0
10/12/2017	*	---	---	---	---	0	---	---	---	---	0
10/13/2017	---	---	---	---	---	0	---	---	---	---	0
10/14/2017	---	---	---	---	---	0	---	---	---	---	0
10/15/2017	---	---	---	---	---	0	---	---	---	---	0
10/16/2017	---	---	---	---	---	0	---	---	---	---	0
10/17/2017	---	---	---	---	---	0	---	---	---	---	0
10/18/2017	---	---	---	---	---	1	---	---	---	---	0
10/19/2017	---	---	---	---	---	0	---	---	---	---	0
Total:	0	0	0	0	0	2	0	0	0	0	0
# Days:	0	0	0	0	0	15	0	0	0	0	15
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	7,117	15,916	7,614	1	4,065,200	1,853,175	2,517,521	32,136	442,841	1,317,075	264,534

Two-Week Summary of Passage Indices

COMBINED SOCKEYE											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
10/05/2017	---	---	---	---	---	2	---	---	---	---	0
10/06/2017	---	---	---	---	---	2	---	---	---	---	0
10/07/2017	---	---	---	---	---	2	---	---	---	---	0
10/08/2017	---	---	---	---	---	5	---	---	---	---	0
10/09/2017	---	---	---	---	---	1	---	---	---	---	0
10/10/2017	---	---	---	---	---	3	---	---	---	---	0
10/11/2017 *	---	---	---	---	---	2	---	---	---	---	0
10/12/2017 *	---	---	---	---	---	1	---	---	---	---	0
10/13/2017	---	---	---	---	---	2	---	---	---	---	0
10/14/2017	---	---	---	---	---	6	---	---	---	---	0
10/15/2017	---	---	---	---	---	2	---	---	---	---	0
10/16/2017	---	---	---	---	---	2	---	---	---	---	0
10/17/2017	---	---	---	---	---	0	---	---	---	---	0
10/18/2017	---	---	---	---	---	1	---	---	---	---	0
10/19/2017	---	---	---	---	---	2	---	---	---	---	0
Total:	0	0	0	0	0	33	0	0	0	0	0
# Days:	0	0	0	0	0	15	0	0	0	0	15
Average:	0	0	0	0	0	2	0	0	0	0	0
YTD	6	0	0	0	61,191	24,521	34,028	11,197	156,404	117,049	145,288

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
10/05/2017	---	---	---	---	---	4	---	---	---	---	0
10/06/2017	---	---	---	---	---	2	---	---	---	---	0
10/07/2017	---	---	---	---	---	3	---	---	---	---	4
10/08/2017	---	---	---	---	---	1	---	---	---	---	4
10/09/2017	---	---	---	---	---	0	---	---	---	---	4
10/10/2017	---	---	---	---	---	0	---	---	---	---	0
10/11/2017 *	---	---	---	---	---	0	---	---	---	---	0
10/12/2017 *	---	---	---	---	---	3	---	---	---	---	0
10/13/2017	---	---	---	---	---	0	---	---	---	---	0
10/14/2017	---	---	---	---	---	0	---	---	---	---	0
10/15/2017	---	---	---	---	---	1	---	---	---	---	0
10/16/2017	---	---	---	---	---	1	---	---	---	---	4
10/17/2017	---	---	---	---	---	0	---	---	---	---	0
10/18/2017	---	---	---	---	---	0	---	---	---	---	0
10/19/2017	---	---	---	---	---	4	---	---	---	---	0
Total:	0	0	0	0	0	19	0	0	0	0	16
# Days:	0	0	0	0	0	15	0	0	0	0	15
Average:	0	0	0	0	0	1	0	0	0	0	1
YTD	0	3	4	0	287	7,536	2,985	63	33,257	62,484	42,240

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:

10/20/17 10:39 AM

10/06/17 TO 10/20/17

		Species			
Site	Data	CH0	ST	SO	Grand Total
LGS	Sum of NumberCollected	2,510	2	33	2,545
	Sum of NumberBarged	0	0	0	0
	Sum of NumberBypassed	0	1	0	1
	Sum of Numbertrucked	2,550	1	30	2,581
	Sum of SampleMorts	11	0	3	14
	Sum of FacilityMorts	4	0	1	5
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	15	0	4	19
Total Sum of NumberCollected		2,510	2	33	2,545
Total Sum of NumberBarged		0	0	0	0
Total Sum of NumberBypassed		0	1	0	1
Total Sum of Numbertrucked		2,550	1	30	2,581
Total Sum of SampleMorts		11	0	3	14
Total Sum of FacilityMorts		4	0	1	5
Total Sum of ResearchMorts		0	0	0	0
Total Sum of TotalProjectMorts		15	0	4	19

YTD Transportation Summary

Source: Fish Passage Center

Updated:

10/20/17 10:39 AM

TO: 10/20/17

		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	622,466	1,337,946	43,198	13,776	1,065,074	3,082,460
	Sum of NumberBarged	595,712	495,706	39,956	10,029	313,270	1,454,673
	Sum of NumberBypassed	18,450	837,161	3,201	3,321	751,542	1,613,675
	Sum of NumberTrucked	5,386	0	0	41	8	5,435
	Sum of SampleMorts	187	29	1	15	10	242
	Sum of FacilityMorts	2,731	5,050	40	370	244	8,435
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,918	5,079	41	385	254	8,677
LMN	Sum of NumberCollected	330,616	1,459,195	33,440	17,200	1,293,668	3,134,119
	Sum of NumberBarged	339,158	931,886	32,959	12,568	710,514	2,027,085
	Sum of NumberBypassed	5,667	489,563	800	4,597	560,086	1,060,713
	Sum of NumberTrucked	376	4	0	0	3	383
	Sum of SampleMorts	53	37	2	5	31	128
	Sum of FacilityMorts	309	1,089	39	120	387	1,944
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	362	1,126	41	125	418	2,072
Total Sum of NumberCollected		1,581,475	5,159,839	150,863	66,565	4,688,256	11,646,998
Total Sum of NumberBarged		1,535,897	2,406,280	136,162	42,296	1,973,142	6,093,777
Total Sum of NumberBypassed		46,039	2,708,009	14,901	23,588	2,691,516	5,484,053
Total Sum of NumberTrucked		5,762	4	0	41	11	5,818
Total Sum of SampleMorts		492	156	8	31	94	781
Total Sum of FacilityMorts		8,220	8,748	152	699	824	18,643
Total Sum of ResearchMorts		12	26	0	0	22	60
Total Sum of TotalProjectMorts		8,724	8,930	160	730	940	19,484

Cumulative Adult Passage at Mainstem Dams Through: 10/19

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	10/19	83624	18110	137215	11145	150783	25708	88044	10648	119591	10834	97732	22097	311404	36959	436382	53707	512600	85128
TDA	10/19	58308	12497	105504	9999	118766	22002	69246	9277	95764	8800	81626	17772	208886	27269	310664	50255	321194	70890
JDA	10/19	46675	12475	93659	8262	103450	20515	60416	7363	90259	7715	73088	17197	161998	20857	264359	39153	255240	60854
MCN	10/19	44292	7020	87191	7374	93925	16835	56982	4616	83894	6501	69220	12937	147424	11666	236581	24408	234835	43086
IHR	10/19	28306	6949	67484	5029	68114	11248	9284	2087	13980	1538	18950	4865	26082	4925	36391	12780	39151	17063
LMN	10/19	28545	8270	66115	6266	68087	10905	8216	3388	12460	2344	19984	5812	25026	6300	32796	14714	35122	18885
LGS	10/19	26598	8335	62597	6365	63765	12007	9086	3754	12480	1919	19272	6335	24498	4061	33406	11023	35139	14935
LGR	10/19	27357	8256	62050	5480	62403	13092	8952	3627	12110	2113	17232	6836	25244	6148	33731	11415	34252	17189
PRD	10/17	7268	783	16843	1003	17901	1826	52981	1760	80288	5126	57783	3021	26740	2092	37604	2988	63156	7733
WAN	10/17	6612	484	17164	919	17602	2161	49392	1355	79255	4110	55377	2415	15781	1418	22274	1963	27402	4675
RIS	10/18	8080	564	18646	715	18006	2748	56265	1333	79253	3434	56857	5479	11128	1238	14220	1962	14333	4336
RRH	10/18	5864	406	9449	351	7849	1209	42608	1060	58559	2827	45767	3863	8583	1053	10719	1395	10920	3073
WEL	10/18	6589	820	11789	833	8215	1601	30101	1102	44646	2492	36069	3814	2839	455	4229	615	4457	1422
WFA	10/17	34186	2442	30317	2161	34636	1490	0	0	0	0	0	0	2315	441	1033	220	1539	422

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	Avg.		
		Adult	Jack	Adult	Jack	Adult	Jack				2017	2016						2017	2016
BON	10/19	60305	3956	39226	5249	107482	6788	87693	342497	315613	116231	185575	328849	33768	51419	109653	82559	52319	24228
TDA	10/19	32424	3009	20868	1888	46366	4193	64059	288401	269194	94196	143116	264592	24961	39004	86388	30697	11556	6957
JDA	10/19	28120	4919	16760	2562	38743	3967	66041	289976	260571	79544	128350	241528	23184	36982	78824	23397	9758	5677
MCN	10/19	20608	1435	10597	1094	26391	3282	58022	261696	226467	76854	114785	211049	20889	30998	64060	2551	1602	1435
IHR	10/19	5116	392	1882	133	3611	310	392	898	922	58816	89737	159985	12346	21131	40051	1433	874	355
LMN	10/19	6104	995	2591	468	3676	551	346	1024	1091	62118	88140	160141	12720	20137	42219	410	239	93
LGS	10/19	6361	1006	1667	507	3714	611	288	962	1025	55271	83127	144683	11121	18911	36391	474	192	42
LGR	10/19	6908	519	2272	271	3575	326	228	815	1062	66513	84886	144937	12964	19519	38069	346	106	16
PRD	10/17	7525	553	1549	193	8554	715	66670	311072	266838	5678	6282	18631	0	0	0	25975	8098	5074
WAN	10/17	5483	351	1106	88	4637	353	76075	322459	235861	4779	5644	17614	0	0	0	28318	9282	3497
RIS	10/18	11637	94	1890	111	10931	601	73218	310339	259143	5046	6908	16618	2296	2455	6848	21129	3848	1484
RRH	10/18	4555	42	312	25	2956	163	46699	235922	218242	3797	5483	12975	1549	1808	5009	23974	3532	1359
WEL	10/18	2731	39	304	21	1639	4	42298	216035	207521	3385	4439	9942	1557	1585	3967	287	7	0
WFA	10/17	1038	1727	2288	1846	9287	2513	0	0	0	2807	27357	22813	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.