



## Fish Passage Center

# Weekly Report #16–29

October 21, 2016

### ATTENTION:

*This is the final Weekly Report for 2016.  
The WR will return in March, 2017.*

## Summary of Events

### Water Supply

Precipitation throughout the Columbia Basin has varied between 213% and 311% of average at individual sub-basins over early October (Water Year 2017). Precipitation above The Dalles has been 248% of average over early October. Over the 2016 water year, precipitation ranged between 84% and 102% of average.

**Table 1.** Summary of October precipitation (Water Year 2017) and cumulative October through September 30<sup>th</sup> (Water Year 2016) precipitation with respect to average (1981–2010), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2017		Water Year 2016	
	October 1–19, 2016		October 1, 2015 to September 30, 2016	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	5.0	253	36.6	97
Snake River above Ice Harbor	2.2	231	20.4	90
Columbia above The Dalles	3.3	248	26.2	95
Kootenai	5.5	278	36.7	96
Clark Fork	2.6	213	23.8	84
Flathead	5.1	311	37.3	102
Pend Oreille River Basin above Waneta Dam	4.1	279	31.2	94
Salmon River Basin	2.9	240	25.9	89
Upper Snake Tributaries	3.4	274	22.8	85
Clearwater	4.5	251	38.8	94
Willamette River above Portland	12.7	410	68.4	104

Grand Coulee Reservoir is at 1,285.0 feet (10-20-16) and refilled 0.8 feet over the last week. Outflows at Grand Coulee have ranged between 64 and 80.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,449.3 feet (10-20-16) and has refilled 2.1 feet over the previous week. Daily average outflows at Libby Dam have been 4.0 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,551.2 feet (10-20-16) and has refilled 2.0 feet over the last week. Outflows at Hungry Horse have been 1.2-2.1 Kcfs over the last week.

Dworshak is currently at an elevation of 1,521.7 feet (10-20-16) and has refilled 2.5 feet over the last week. Dworshak outflows over the last week have been 1.5 Kcfs.

The Brownlee Reservoir was at an elevation of 2,048.9 feet on October 20, 2016, and has refilled 3.1 ft. over the last week. Outflows over the past four days at Hells Canyon, have been close to the minimum flow of 8.5 Kcfs.

### Smolt Monitoring

Smolt Monitoring Program (SMP) sampling this week occurred at the following SMP bypass facilities: Bonneville Dam, Little Goose Dam, and Lower Granite Dam. Sampling at these three facilities is scheduled to terminate for the 2016 season after the samples on October 31<sup>st</sup>.

Subyearling Chinook were the only salmonids encountered in this week's samples at BON. This week's daily average passage index for subyearling Chinook at BON was approximately 100 fish per day, which is an increase from the previous week's daily average passage index of about 25 fish per day. No lamprey juveniles were encountered at BON this week.

This week's samples at Lower Granite Dam (LGR) were again dominated by subyearling Chinook, with a daily average passage index of about 400 per day. This is a decrease over the previous week's daily average passage index of only about 510 subyearling Chinook per day. Other juvenile salmonids that were encountered in this week's samples included yearling Chinook, sockeye, and steelhead. However, encounters with these three species were infrequent and in very low numbers. Finally, Pacific lamprey macrophthalmia were encountered in two of this week's samples (Oct. 15<sup>th</sup> and Oct. 17<sup>th</sup>). No Pacific lamprey ammocoetes were encountered this week at LGR.

Subyearling Chinook dominated this week's collections at Little Goose Dam (LGS). This week's daily average passage index for subyearling Chinook at LGS was about 180 per day, which is higher than the previous week's daily average passage index of about 90 per day. With exception to one steelhead on October 15<sup>th</sup>, no spring migrants were encountered in this week's samples at LGS. Finally, Pacific macrophthalmia were encountered every day this week, with a daily average collection of 7 fish per day. No Pacific ammocoetes were encountered at LGS this week.

### Hatchery Release

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

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. No new releases were scheduled for this zone this week and no new releases are scheduled over the next two weeks.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. No new releases were scheduled for this zone this week and no new releases are scheduled over the next two weeks.

### Adult Passage

The adult fall Chinook count of 436,610 is about 46.5% of the 2015 count of 938,764 and about 87.5% of the 10-year average count of 498,717. The 2016 Bonneville Dam fall Chinook jack count of 53,724 is about 66.4% of the 2015 count of 80,922 and 65.2% of the 10-year average count of 82,393. The 2016 adult fall Chinook count of 36,435 at Ice Harbor Dam in the Snake River is about 58.4% of the 2015 count while having 131 fewer fish than the 10-year average count of 36,566. The 2016 Lower Granite fall Chinook adult count of 33,814 is about 58.9% of the 2015 count but 1.1 times greater than the 10-year average count of 31,730.

The 2016 Bonneville Dam adult steelhead count of 185,670 is about 70.6% of the 2015 count of 263,155 and about 54.1% of the 10-year average count of 343,411. The 2016 Bonneville Dam adult wild steelhead count of 51,448 is about 53.8% of the 2015 count of 95,588 and about 45.6% of the 10-year average count of 112,824. Daily adult steelhead counts at Lower Granite Dam ranged from 1,070 to 1,836 adults per day last week. This year's Lower Granite steelhead count of 85,956 is about 72.5% of the 2015 count of 118,504 and 57.5% of the 10-year average count of 149,516. The 2016 Lower Granite Dam adult wild steelhead count of 19,761 is 60.9% of the 2015 count of 32,435 and about 50.8% of the 10-year average count of 38,880. At Willamette Falls, the 2016 count for steelhead was 26,458 as of October 19<sup>th</sup>. This year's steelhead count is about 3.3 times greater than the 2015 count of 8,089 and about 1.2 times greater than the 10-year average count of 22,615.

As of October 20<sup>th</sup>, the cumulative adult coho count at Bonneville Dam is 39,412, which is about 1.2 times greater than the 2015 count but only 34.6% of the 10-year average count of 113,809.

# Hatchery Releases Last Two Weeks

## Hatchery Release Summary

From: 10/8/2016 to 10/21/16

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2017	84,000	10-12-16	10-12-16	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2017	161,500	10-12-16	10-12-16	Lolo Creek	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>245,500</b>				
<b>Grand Total</b>					<b>245,500</b>				

# Hatchery Releases Next Two Weeks

**Hatchery Release Summary**  
From: 10/22/2016 to 11/4/2016

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
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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
10/07/2016	59.0	0.0	55.6	0.0	58.9	0.0	56.4	0.0	58.6	0.0	65.4	1.6	65.4	2.5
10/08/2016	71.3	0.0	75.2	0.0	76.1	0.0	76.2	0.0	82.2	0.0	74.3	1.9	69.7	2.6
10/09/2016	59.6	0.0	62.9	0.0	67.7	0.0	64.7	0.0	66.5	0.0	70.1	1.9	69.9	2.0
10/10/2016	66.0	0.0	62.8	0.0	63.6	0.0	62.2	0.0	68.6	0.0	77.4	1.8	88.0	0.7
10/11/2016	75.6	0.0	76.3	0.0	75.6	0.0	76.6	0.0	80.8	0.0	82.6	2.0	66.1	1.8
10/12/2016	69.3	0.0	65.5	0.0	73.9	0.0	76.6	0.0	81.6	0.0	93.9	1.8	93.6	2.5
10/13/2016	88.4	0.0	88.9	0.0	88.3	0.0	85.0	0.1	88.5	0.0	86.3	1.5	84.0	2.6
10/14/2016	65.9	0.0	66.6	0.0	66.0	0.0	65.0	0.0	69.9	0.0	75.8	1.8	84.2	2.1
10/15/2016	79.3	0.0	80.9	0.0	84.3	1.5	83.8	0.0	90.2	0.0	90.3	9.6	84.5	13.8
10/16/2016	73.5	0.0	69.3	0.0	68.3	0.0	65.1	0.0	71.7	0.0	75.8	5.0	73.9	6.9
10/17/2016	64.0	0.0	65.4	0.0	68.8	0.0	71.7	0.0	77.8	0.0	85.4	4.3	85.3	12.6
10/18/2016	75.4	0.0	74.7	0.0	76.4	0.0	79.0	0.0	85.3	0.0	88.2	2.2	83.1	1.2
10/19/2016	80.6	0.0	86.5	0.0	91.2	0.0	87.3	0.0	90.8	3.0	95.2	2.2	95.5	2.5
10/20/2016	66.0	0.0	61.4	0.0	67.7	0.0	70.3	0.0	76.6	0.0	93.5	2.2	90.7	2.5

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

Date	Dworshak		Brownlee		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
10/07/2016	1.6	0.0	---	12.8	19.3	0.0	18.8	0.0	19.9	0.0	19.7	0.0	19.7	0.0
10/08/2016	1.6	0.0	---	13.2	19.5	0.0	18.8	0.0	19.1	0.0	19.4	0.0	19.4	0.0
10/09/2016	1.6	0.0	---	14.5	22.7	0.0	21.8	0.0	22.0	0.0	21.9	0.0	21.9	0.0
10/10/2016	1.6	0.0	---	12.3	24.1	0.0	23.3	0.0	23.7	0.0	25.1	0.0	25.1	0.0
10/11/2016	1.6	0.0	---	13.5	21.6	0.0	21.1	0.0	20.9	0.0	20.4	0.0	20.4	0.0
10/12/2016	1.6	0.0	---	15.2	21.3	0.0	21.3	0.0	20.6	0.0	21.2	0.0	21.2	0.0
10/13/2016	1.6	0.0	---	11.2	26.6	0.0	26.0	0.0	26.5	0.0	27.5	0.0	27.5	0.0
10/14/2016	1.6	0.0	---	10.4	23.6	0.0	25.7	0.0	27.4	0.0	30.0	0.0	30.0	0.0
10/15/2016	1.6	0.0	---	9.4	22.4	0.0	23.2	0.0	23.0	0.0	25.2	0.0	25.2	0.0
10/16/2016	1.6	0.0	---	10.1	20.2	0.0	22.5	0.0	25.6	0.0	26.4	0.0	26.4	0.0
10/17/2016	1.6	0.0	---	8.6	23.0	0.0	21.5	0.0	20.2	0.0	17.6	0.0	17.6	0.0
10/18/2016	1.6	0.0	---	8.5	25.5	0.0	20.5	0.0	19.8	0.0	18.3	0.0	18.3	0.0
10/19/2016	1.6	0.0	---	8.5	24.2	0.1	23.6	0.0	24.0	0.0	21.7	0.0	21.7	0.0
10/20/2016	1.6	0.0	---	8.5	18.5	0.0	12.8	0.0	13.2	0.0	12.9	0.0	12.9	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		
10/07/2016	97.5	0.0	87.0	0.6	86.4	0.0	95.4	1.2	44.5	42.4
10/08/2016	82.4	0.0	85.4	0.8	88.2	0.0	89.6	1.1	41.1	39.9
10/09/2016	85.4	0.0	86.4	1.1	85.1	0.0	91.8	1.1	42.4	40.9
10/10/2016	113.0	0.0	107.5	0.9	107.9	0.0	118.5	1.2	65.8	44.1
10/11/2016	105.1	0.0	100.1	0.8	98.9	0.0	111.3	1.2	59.7	43.0
10/12/2016	113.8	0.0	120.3	1.2	121.5	0.0	124.9	1.2	73.1	43.2
10/13/2016	117.5	0.0	93.1	0.9	84.1	24.1	113.2	1.1	62.1	42.5
10/14/2016	112.5	0.0	108.8	0.8	109.3	0.0	114.3	1.1	61.3	44.6
10/15/2016	107.9	0.0	107.9	0.8	107.6	0.0	137.7	1.1	81.8	47.3
10/16/2016	105.1	0.0	117.1	0.8	117.6	0.0	132.4	1.1	78.4	45.6
10/17/2016	105.0	0.0	102.7	0.8	104.1	0.0	126.0	1.1	72.8	44.3
10/18/2016	107.9	0.0	103.0	1.0	103.2	0.0	119.2	1.1	64.9	45.7
10/19/2016	108.2	0.0	111.7	0.8	113.6	0.0	125.5	1.1	70.4	46.3
10/20/2016	106.8	0.0	94.9	0.9	93.6	0.0	113.9	1.1	61.7	43.8

## 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>#</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>				
10/7	100.0	100.1	100.4	24	---	---	---	0	99.6	99.8	99.9	24	98.1	98.5	98.9	24	98.5	98.5	98.6	15
10/8	99.7	100.0	100.1	24	---	---	---	0	99.6	99.9	100.0	24	97.7	98.2	98.4	24	---	---	---	0
10/9	100.1	100.2	100.3	24	---	---	---	0	99.6	99.8	100.0	24	98.2	98.5	98.8	24	---	---	---	0
10/10	99.9	99.9	99.9	2	---	---	---	0	99.0	99.2	99.6	24	97.2	97.6	98.0	24	---	---	---	0
10/11	99.5	99.5	100.0	5	---	---	---	0	97.8	98.3	99.3	24	96.7	97.4	99.2	24	97.1	97.2	97.6	18
10/12	99.6	99.7	100.1	17	---	---	---	0	98.0	98.2	98.5	24	97.4	98.0	98.4	24	97.1	97.5	97.8	24
10/13	99.8	100.2	100.7	24	---	---	---	0	99.4	99.9	100.8	24	98.4	98.9	99.4	24	98.3	98.9	99.6	24
10/14	100.2	100.4	100.6	24	---	---	---	0	100.1	100.4	101.0	24	99.5	99.8	100.0	24	99.1	99.4	99.8	24
10/15	100.2	100.5	100.7	24	---	---	---	0	99.2	99.6	100.0	24	99.1	99.4	99.6	24	98.8	99.2	99.4	24
10/16	100.3	100.5	100.7	24	---	---	---	0	99.3	99.6	99.9	24	99.6	100.0	100.3	24	98.7	98.9	99.0	24
10/17	100.1	100.3	100.6	24	---	---	---	0	99.2	99.5	99.9	24	98.8	99.1	99.7	24	97.9	98.3	98.9	24
10/18	98.9	99.2	99.6	24	---	---	---	0	97.9	98.2	98.6	24	97.4	97.6	97.8	24	96.9	97.1	97.3	24
10/19	97.9	98.1	98.3	24	---	---	---	0	97.0	97.1	97.4	24	96.2	96.4	96.6	24	96.0	96.3	96.6	24
10/20	98.1	98.4	98.5	23	---	---	---	0	97.5	97.7	97.8	23	96.9	97.3	97.6	23	96.9	97.0	97.2	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>#</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>				
10/7	99.3	99.4	100.1	15	98.4	98.6	98.8	24	98.4	98.8	99.5	24	98.9	99.1	99.2	24	98.6	98.9	99.2	23
10/8	98.5	99.1	99.7	24	98.4	98.7	98.9	24	98.3	98.8	99.2	24	98.8	99.2	99.3	24	99.0	99.5	99.6	22
10/9	99.1	99.4	99.8	24	98.0	98.3	98.6	24	97.8	98.0	98.2	24	98.8	98.9	99.0	24	98.9	99.1	99.1	21
10/10	98.2	98.9	99.3	24	96.9	97.1	97.4	24	96.2	96.5	96.8	24	98.1	98.3	98.6	24	98.2	98.4	98.9	24
10/11	96.8	97.1	97.5	24	96.6	96.8	97.1	24	96.2	96.8	97.5	24	97.2	97.3	97.5	24	97.3	97.6	97.7	23
10/12	97.4	98.0	99.2	24	97.0	97.3	97.4	24	96.4	97.1	97.8	24	97.4	97.7	98.0	24	97.7	98.0	98.2	23
10/13	98.3	98.8	99.8	24	98.2	98.7	99.3	21	97.6	98.2	98.5	24	98.6	99.0	100.0	24	98.9	99.5	100.5	19
10/14	99.5	100.0	100.6	24	98.8	99.4	99.7	24	98.5	98.9	99.2	24	99.4	99.6	100.0	24	99.7	100.2	102.1	23
10/15	98.9	99.4	99.7	24	98.1	98.5	98.9	24	98.7	100.0	103.5	24	99.0	99.3	99.6	24	99.2	99.5	99.9	22
10/16	99.3	99.5	100.0	24	98.1	98.3	98.6	24	98.0	98.3	98.6	24	98.7	99.0	99.2	24	99.0	99.2	99.3	23
10/17	98.4	99.0	99.5	24	97.4	97.8	98.2	24	97.2	97.5	98.1	24	97.9	98.4	99.0	24	98.2	98.6	99.4	23
10/18	97.4	97.9	98.5	24	96.3	96.6	96.8	23	96.1	96.4	96.6	23	97.1	97.2	97.3	24	97.5	97.7	97.8	22
10/19	96.5	96.7	97.0	24	95.3	95.5	95.9	24	95.2	95.4	95.6	24	96.0	96.2	96.4	24	96.6	96.8	96.9	20
10/20	97.4	97.9	98.8	23	96.4	96.5	96.8	23	96.1	96.4	96.8	23	96.8	96.9	97.0	23	97.3	97.5	97.7	20

### 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>#</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>				
10/7	98.6	99.1	99.3	23	98.8	99.2	99.6	21	98.0	98.5	99.2	24	99.1	99.3	99.6	24	99.1	99.3	99.5	24
10/8	98.5	98.9	99.3	22	98.4	98.8	99.1	21	98.3	99.9	100.2	24	99.2	99.5	99.6	24	99.0	99.3	99.5	24
10/9	98.5	98.9	99.2	24	98.5	98.7	99.1	20	98.3	99.0	99.8	24	99.4	99.5	99.7	24	99.0	99.2	99.5	24
10/10	97.8	98.0	98.5	24	97.8	98.0	98.3	22	98.2	98.4	98.5	24	98.8	99.0	99.7	24	98.4	98.6	98.9	24
10/11	97.1	97.3	97.5	24	97.2	97.3	97.5	22	97.5	97.8	98.5	24	97.9	98.1	98.5	24	97.6	97.7	97.8	24
10/12	97.4	97.6	98.1	22	98.1	98.6	98.9	22	97.6	98.2	98.5	24	97.8	98.1	98.2	24	98.0	98.3	98.5	24
10/13	98.3	98.5	99.0	22	99.0	99.2	99.6	19	98.9	99.2	99.8	24	98.8	99.3	99.8	24	99.1	99.6	100.2	24
10/14	98.7	98.9	99.2	24	99.3	99.5	99.7	21	98.8	99.4	99.6	24	99.3	99.6	100.5	24	99.2	99.6	100.2	24
10/15	98.7	98.9	99.2	24	99.3	99.7	100.0	22	98.5	98.9	99.2	24	102.8	106.9	123.8	24	99.0	99.4	99.6	24
10/16	98.3	98.5	98.6	23	99.3	99.4	99.7	22	98.4	98.4	98.7	14	100.2	101.7	116.5	24	99.0	99.3	100.1	24
10/17	97.6	98.1	98.6	24	98.3	98.7	99.3	21	---	---	---	0	99.2	100.9	114.3	24	98.9	99.5	100.2	24
10/18	96.7	96.9	97.2	22	97.0	97.3	97.6	21	---	---	---	0	96.9	97.2	97.7	24	97.7	98.1	98.4	24
10/19	96.3	96.5	96.7	22	98.7	99.7	102.1	19	---	---	---	0	---	---	---	0	---	---	---	0
10/20	96.6	96.7	96.8	21	99.1	99.3	99.5	20	---	---	---	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>Clwrtr-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	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	Avg	High
10/7	100.1	100.4	100.7	24	---	---	---	0	103.4	103.8	104.6	24	---	---	---	0	---	---	---	0
10/8	100.4	100.7	101.4	24	---	---	---	0	103.9	104.7	105.9	24	---	---	---	0	---	---	---	0
10/9	100.1	100.3	100.6	24	---	---	---	0	103.9	104.2	104.4	24	---	---	---	0	---	---	---	0
10/10	99.0	99.3	99.5	24	---	---	---	0	104.1	104.7	105.4	24	---	---	---	0	---	---	---	0
10/11	98.6	99.0	99.6	24	---	---	---	0	103.2	103.7	104.5	24	---	---	---	0	---	---	---	0
10/12	99.0	99.4	99.8	24	---	---	---	0	103.2	104.0	105.0	24	---	---	---	0	---	---	---	0
10/13	99.8	100.4	100.8	24	---	---	---	0	103.9	104.5	104.8	24	---	---	---	0	---	---	---	0
10/14	99.8	100.3	101.0	24	---	---	---	0	104.7	105.2	105.8	24	---	---	---	0	---	---	---	0
10/15	100.9	102.8	108.7	24	---	---	---	0	104.6	105.2	105.8	24	---	---	---	0	---	---	---	0
10/16	101.7	103.1	105.3	24	---	---	---	0	104.9	105.5	106.2	24	---	---	---	0	---	---	---	0
10/17	102.5	105.9	111.7	24	---	---	---	0	103.9	104.4	104.8	24	---	---	---	0	---	---	---	0
10/18	99.2	100.3	102.2	24	---	---	---	0	103.4	103.7	104.4	24	---	---	---	0	---	---	---	0
10/19	---	---	---	0	---	---	---	0	102.6	103.1	103.8	24	---	---	---	0	---	---	---	0
10/20	---	---	---	0	---	---	---	0	102.9	103.4	103.9	23	---	---	---	0	---	---	---	0

### Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-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	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	Avg	High
10/7	---	---	---	0	---	---	---	0	97.0	97.3	97.5	24	---	---	---	0	99.5	99.9	100.1	24
10/8	---	---	---	0	---	---	---	0	96.8	97.0	97.4	24	---	---	---	0	98.9	99.6	100.0	24
10/9	---	---	---	0	---	---	---	0	95.5	96.0	97.0	24	---	---	---	0	98.7	99.0	99.2	24
10/10	---	---	---	0	---	---	---	0	94.9	95.4	95.9	24	---	---	---	0	98.7	99.0	99.3	24
10/11	---	---	---	0	---	---	---	0	95.6	95.8	96.5	24	---	---	---	0	97.7	98.0	98.3	24
10/12	---	---	---	0	---	---	---	0	96.1	96.4	97.6	24	---	---	---	0	98.0	98.6	99.2	24
10/13	---	---	---	0	---	---	---	0	97.3	97.8	98.1	24	---	---	---	0	99.2	99.7	100.0	24
10/14	---	---	---	0	---	---	---	0	97.6	97.7	98.2	24	---	---	---	0	99.2	99.6	100.1	24
10/15	---	---	---	0	---	---	---	0	97.8	98.2	98.5	24	---	---	---	0	98.4	98.9	99.1	24
10/16	---	---	---	0	---	---	---	0	98.0	98.3	98.9	24	---	---	---	0	98.0	98.2	98.4	24
10/17	---	---	---	0	---	---	---	0	97.3	97.7	98.1	24	---	---	---	0	96.8	97.2	97.8	24
10/18	---	---	---	0	---	---	---	0	96.3	96.5	96.7	24	---	---	---	0	95.2	95.6	95.9	24
10/19	---	---	---	0	---	---	---	0	95.9	96.1	96.7	24	---	---	---	0	94.1	94.3	94.5	24
10/20	---	---	---	0	---	---	---	0	96.6	96.8	97.0	23	---	---	---	0	94.5	94.8	95.1	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	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	Avg	High
10/7	---	---	---	0	98.0	98.2	98.6	24	---	---	---	0	97.7	98.0	98.8	24	---	---	---	0
10/8	---	---	---	0	97.8	98.2	98.5	24	---	---	---	0	98.0	98.6	99.1	24	---	---	---	0
10/9	---	---	---	0	97.9	98.2	98.3	24	---	---	---	0	97.7	98.0	98.7	24	---	---	---	0
10/10	---	---	---	0	97.7	97.9	98.3	24	---	---	---	0	97.4	97.9	98.2	24	---	---	---	0
10/11	---	---	---	0	96.9	97.2	97.6	24	---	---	---	0	96.9	97.2	97.8	24	---	---	---	0
10/12	---	---	---	0	97.1	97.6	98.6	24	---	---	---	0	97.6	98.2	98.8	24	---	---	---	0
10/13	---	---	---	0	98.0	98.5	99.1	24	---	---	---	0	98.8	99.3	99.8	24	---	---	---	0
10/14	---	---	---	0	98.4	98.7	99.3	24	---	---	---	0	98.9	99.2	99.8	24	---	---	---	0
10/15	---	---	---	0	98.3	98.8	98.9	24	---	---	---	0	99.1	99.4	99.8	24	---	---	---	0
10/16	---	---	---	0	98.7	99.1	99.5	24	---	---	---	0	98.8	99.2	99.9	24	---	---	---	0
10/17	---	---	---	0	98.3	98.6	99.0	24	---	---	---	0	98.1	98.7	99.2	24	---	---	---	0
10/18	---	---	---	0	97.1	97.3	97.4	24	---	---	---	0	97.1	97.6	98.4	24	---	---	---	0
10/19	---	---	---	0	96.3	96.6	97.1	24	---	---	---	0	96.4	96.5	97.1	24	---	---	---	0
10/20	---	---	---	0	97.2	97.6	98.2	23	---	---	---	0	98.4	99.6	117.9	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	McNary-Wash			McNary Tlwr			John Day			John Day Tlwr			The Dalles			#				
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg			AVG	High		
10/7	---	---	---	0	99.7	99.9	100.0	24	---	---	---	0	99.2	99.5	99.7	24	---	---	---	0
10/8	---	---	---	0	99.9	100.3	100.6	24	---	---	---	0	99.5	99.9	100.0	24	---	---	---	0
10/9	---	---	---	0	100.1	100.4	100.9	24	---	---	---	0	99.8	100.0	100.1	24	---	---	---	0
10/10	---	---	---	0	99.8	100.2	100.7	24	---	---	---	0	99.5	99.6	100.0	24	---	---	---	0
10/11	---	---	---	0	99.0	99.3	99.6	24	---	---	---	0	99.3	99.9	100.1	24	---	---	---	0
10/12	---	---	---	0	99.1	99.6	99.8	23	---	---	---	0	99.7	99.8	100.0	24	---	---	---	0
10/13	---	---	---	0	100.2	100.7	101.2	24	---	---	---	0	100.7	101.2	101.8	24	---	---	---	0
10/14	---	---	---	0	100.0	100.2	100.6	24	---	---	---	0	100.6	100.9	101.3	24	---	---	---	0
10/15	---	---	---	0	100.3	100.7	100.9	24	---	---	---	0	100.6	101.1	101.5	24	---	---	---	0
10/16	---	---	---	0	100.4	100.7	100.9	24	---	---	---	0	100.7	100.8	100.9	24	---	---	---	0
10/17	---	---	---	0	99.4	99.8	100.3	24	---	---	---	0	99.6	100.1	100.7	24	---	---	---	0
10/18	---	---	---	0	98.0	98.4	98.6	24	---	---	---	0	97.9	98.2	98.7	24	---	---	---	0
10/19	---	---	---	0	97.4	97.7	97.8	24	---	---	---	0	97.4	97.6	97.8	24	---	---	---	0
10/20	---	---	---	0	98.2	98.3	98.5	23	---	---	---	0	98.2	98.5	98.7	23	---	---	---	0

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island				#
	24 h	12 h	#	hr	24 h	12 h	#	hr	24h	12h	#	hr	24h	12h	#	hr	24h	12h	#	hr	
	Avg	Avg			High	Avg			Avg	High			Avg	Avg			High	Avg			
10/7	99.5	99.6	99.8	24	---	---	---	0	102.5	102.8	103.4	24	---	---	---	0	---	---	---	0	
10/8	99.8	100.1	100.3	24	---	---	---	0	103.3	103.8	104.2	24	---	---	---	0	---	---	---	0	
10/9	99.9	100.1	100.3	24	---	---	---	0	103.0	103.4	103.9	24	---	---	---	0	---	---	---	0	
10/10	99.2	99.4	99.5	24	---	---	---	0	102.5	102.8	103.4	24	---	---	---	0	---	---	---	0	
10/11	98.6	99.0	99.3	24	---	---	---	0	101.8	102.1	102.3	24	---	---	---	0	---	---	---	0	
10/12	98.8	99.1	99.3	24	---	---	---	0	101.6	102.0	102.4	24	---	---	---	0	---	---	---	0	
10/13	103.7	108.1	116.2	24	---	---	---	0	102.5	103.0	103.6	24	---	---	---	0	---	---	---	0	
10/14	104.1	108.3	116.3	24	---	---	---	0	102.8	103.1	103.6	24	---	---	---	0	---	---	---	0	
10/15	100.1	100.6	100.9	24	---	---	---	0	103.0	103.4	103.5	24	---	---	---	0	---	---	---	0	
10/16	99.9	100.0	100.3	24	---	---	---	0	103.4	105.0	107.1	24	---	---	---	0	---	---	---	0	
10/17	99.1	99.4	99.7	24	---	---	---	0	103.2	104.4	106.5	24	---	---	---	0	---	---	---	0	
10/18	98.2	98.6	98.9	24	---	---	---	0	101.1	101.4	101.8	24	---	---	---	0	---	---	---	0	
10/19	97.9	98.1	98.2	24	---	---	---	0	100.5	100.6	100.9	24	---	---	---	0	---	---	---	0	
10/20	98.5	98.7	98.9	23	---	---	---	0	101.1	101.3	101.4	23	---	---	---	0	---	---	---	0	



## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 10/21/2016 8:03

### Two-Week Summary of Passage Indices

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

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

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

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

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
10/07/2016	---	---	---	---	2	0	---	---	---	---	0
10/08/2016	---	---	---	---	2	0	---	---	---	---	0
10/09/2016	---	---	---	---	0	0	---	---	---	---	0
10/10/2016	---	---	---	---	3	0	---	---	---	---	0
10/11/2016	---	---	---	---	1	0	---	---	---	---	0
10/12/2016	---	---	---	---	0	0	---	---	---	---	0
10/13/2016	---	---	---	---	0	0	---	---	---	---	0
10/14/2016	---	---	---	---	2	0	---	---	---	---	0
10/15/2016	---	---	---	---	2	0	---	---	---	---	0
10/16/2016	---	---	---	---	1	0	---	---	---	---	0
10/17/2016	---	---	---	---	2	0	---	---	---	---	0
10/18/2016	---	---	---	---	0	0	---	---	---	---	0
10/19/2016	---	---	---	---	1	0	---	---	---	---	0
10/20/2016	---	---	---	---	1	0	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>27,295</b>	<b>56,779</b>	<b>16,183</b>	<b>7,757</b>	<b>5,899,093</b>	<b>3,490,956</b>	<b>4,892,142</b>	<b>44,784</b>	<b>2,181,660</b>	<b>1,456,048</b>	<b>2,660,728</b>

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)
10/07/2016	---	---	---	---	1,037	78	---	---	---	---	0
10/08/2016	---	---	---	---	596	181	---	---	---	---	0
10/09/2016	---	---	---	---	504	148	---	---	---	---	0
10/10/2016	---	---	---	---	537	98	---	---	---	---	43
10/11/2016	---	---	---	---	391	71	---	---	---	---	52
10/12/2016	---	---	---	---	272	24	---	---	---	---	24
10/13/2016	---	---	---	---	244	21	---	---	---	---	58
10/14/2016	---	---	---	---	594	362	---	---	---	---	85
10/15/2016	---	---	---	---	375	448	---	---	---	---	260
10/16/2016	---	---	---	---	319	122	---	---	---	---	169
10/17/2016	---	---	---	---	331	117	---	---	---	---	0
10/18/2016	---	---	---	---	308	67	---	---	---	---	172
10/19/2016	---	---	---	---	390	81	---	---	---	---	49
10/20/2016	---	---	---	---	500	41	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,398</b>	<b>1,859</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>912</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>457</b>	<b>133</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>
<b>YTD</b>	<b>0</b>	<b>78</b>	<b>698</b>	<b>2,869</b>	<b>1,191,149</b>	<b>886,190</b>	<b>328,334</b>	<b>20,979</b>	<b>4,329,629</b>	<b>939,671</b>	<b>3,127,246</b>

## 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)
10/07/2016	---	---	---	---	0	0	---	---	---	---	0
10/08/2016	---	---	---	---	0	0	---	---	---	---	0
10/09/2016	---	---	---	---	0	0	---	---	---	---	0
10/10/2016	---	---	---	---	1	0	---	---	---	---	0
10/11/2016	---	---	---	---	0	0	---	---	---	---	0
10/12/2016	---	---	---	---	0	0	---	---	---	---	0
10/13/2016	---	---	---	---	0	0	---	---	---	---	0
10/14/2016	---	---	---	---	0	0	---	---	---	---	0
10/15/2016	---	---	---	---	0	0	---	---	---	---	0
10/16/2016	---	---	---	---	0	0	---	---	---	---	0
10/17/2016	---	---	---	---	0	0	---	---	---	---	0
10/18/2016	---	---	---	---	0	0	---	---	---	---	0
10/19/2016	---	---	---	---	0	0	---	---	---	---	0
10/20/2016	---	---	---	---	0	0	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>316</b>	<b>198,075</b>	<b>147,678</b>	<b>60,123</b>	<b>45,366</b>	<b>154,245</b>	<b>58,662</b>	<b>802,520</b>

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)
10/07/2016	---	---	---	---	2	0	---	---	---	---	0
10/08/2016	---	---	---	---	0	0	---	---	---	---	0
10/09/2016	---	---	---	---	0	1	---	---	---	---	0
10/10/2016	---	---	---	---	0	0	---	---	---	---	0
10/11/2016	---	---	---	---	0	0	---	---	---	---	0
10/12/2016	---	---	---	---	0	0	---	---	---	---	0
10/13/2016	---	---	---	---	1	0	---	---	---	---	0
10/14/2016	---	---	---	---	0	0	---	---	---	---	0
10/15/2016	---	---	---	---	0	1	---	---	---	---	0
10/16/2016	---	---	---	---	0	0	---	---	---	---	0
10/17/2016	---	---	---	---	1	0	---	---	---	---	0
10/18/2016	---	---	---	---	0	0	---	---	---	---	0
10/19/2016	---	---	---	---	0	0	---	---	---	---	0
10/20/2016	---	---	---	---	0	0	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>755</b>	<b>26,537</b>	<b>3,377</b>	<b>9,186</b>	<b>3,957,242</b>	<b>2,295,511</b>	<b>1,838,113</b>	<b>17,664</b>	<b>735,196</b>	<b>502,821</b>	<b>622,598</b>

## Two-Week Summary of Passage Indices

COMBINED SOCKEYE											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
10/07/2016	---	---	---	---	1	0	---	---	---	---	0
10/08/2016	---	---	---	---	0	0	---	---	---	---	0
10/09/2016	---	---	---	---	1	0	---	---	---	---	0
10/10/2016	---	---	---	---	0	0	---	---	---	---	0
10/11/2016	---	---	---	---	1	0	---	---	---	---	0
10/12/2016	---	---	---	---	0	0	---	---	---	---	0
10/13/2016	---	---	---	---	0	0	---	---	---	---	0
10/14/2016	---	---	---	---	0	0	---	---	---	---	0
10/15/2016	---	---	---	---	0	0	---	---	---	---	0
10/16/2016	---	---	---	---	0	0	---	---	---	---	0
10/17/2016	---	---	---	---	0	0	---	---	---	---	0
10/18/2016	---	---	---	---	1	0	---	---	---	---	0
10/19/2016	---	---	---	---	1	0	---	---	---	---	0
10/20/2016	---	---	---	---	0	0	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>133</b>	<b>43,863</b>	<b>32,774</b>	<b>24,148</b>	<b>56,642</b>	<b>861,061</b>	<b>303,206</b>	<b>801,582</b>

COMBINED LAMPREY JUVENILES											
	WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Samp)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
10/07/2016	---	---	---	---	4	4	---	---	---	---	0
10/08/2016	---	---	---	---	2	8	---	---	---	---	0
10/09/2016	---	---	---	---	0	16	---	---	---	---	0
10/10/2016	---	---	---	---	2	15	---	---	---	---	0
10/11/2016	---	---	---	---	2	8	---	---	---	---	0
10/12/2016	---	---	---	---	1	5	---	---	---	---	0
10/13/2016	---	---	---	---	3	10	---	---	---	---	0
10/14/2016	---	---	---	---	0	20	---	---	---	---	0
10/15/2016	---	---	---	---	4	9	---	---	---	---	0
10/16/2016	---	---	---	---	0	8	---	---	---	---	0
10/17/2016	---	---	---	---	2	1	---	---	---	---	0
10/18/2016	---	---	---	---	0	3	---	---	---	---	0
10/19/2016	---	---	---	---	0	8	---	---	---	---	0
10/20/2016	---	---	---	---	0	1	---	---	---	---	0
10/21/2016	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>116</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>559</b>	<b>35,200</b>	<b>29,725</b>	<b>113</b>	<b>34,684</b>	<b>26,193</b>	<b>10,119</b>

## Two-Week Summary of Passage Indices

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, sockeye, and lamprey juveniles.

Two classes of fish counts are shown in these tables:

Sample counts (Samp) are provided for juvenile lamprey at LGR. See note below for details †.

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.

Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.

The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey 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:

10/21/16 8:04 AM

		10/07/16	TO	10/21/16			
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
<b>LGR</b>	Sum of NumberCollected	6,396	17	1	4	5	6,423
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1	0	0	3	0	4
	Sum of Numbertrucked	6,316	15	1	1	4	6,337
	Sum of SampleMorts	78	2	0	0	1	81
	Sum of FacilityMorts	1	0	0	0	0	1
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	79	2	0	0	1	82
<b>LGS</b>	Sum of NumberCollected	1,859			2		1,861
	Sum of NumberBarged	0			0		0
	Sum of NumberBypassed	1			0		1
	Sum of Numbertrucked	1,847			2		1,849
	Sum of SampleMorts	7			0		7
	Sum of FacilityMorts	4			0		4
	Sum of ResearchMorts	0			0		0
	Sum of TotalProjectMorts	11			0		11
Total Sum of NumberCollected		8,255	17	1	6	5	8,284
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		2	0	0	3	0	5
Total Sum of Numbertrucked		8,163	15	1	3	4	8,186
Total Sum of SampleMorts		85	2	0	0	1	88
Total Sum of FacilityMorts		5	0	0	0	0	5
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		90	2	0	0	1	93

**YTD Transportation Summary**

Source: Fish Passage Center

Updated:

10/21/16 8:04 AM

TO: 10/21/16

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	767,223	4,510,038	150,416	33,362	2,986,105	8,447,144
	Sum of NumberBarged	717,253	1,403,213	117,278	31,849	1,110,010	3,379,603
	Sum of NumberBypassed	31,771	3,104,914	33,069	651	1,875,885	5,046,290
	Sum of NumberTrucked	15,406	32	2	8	2	15,450
	Sum of SampleMorts	431	96	1	19	37	584
	Sum of FacilityMorts	2,160	1,361	66	830	103	4,520
	Sum of ResearchMorts	202	422	0	5	68	697
	Sum of TotalProjectMorts	2,793	1,879	67	854	208	5,801
<b>LGS</b>	Sum of NumberCollected	617,825	2,438,124	104,356	22,900	1,600,779	4,783,984
	Sum of NumberBarged	602,659	1,022,201	90,682	22,669	670,896	2,409,107
	Sum of NumberBypassed	2,875	1,415,436	13,600	7	929,747	2,361,665
	Sum of NumberTrucked	11,163	0	0	0	26	11,189
	Sum of SampleMorts	166	23	1	22	12	224
	Sum of FacilityMorts	962	464	73	202	98	1,799
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,128	487	74	224	110	2,023
<b>LMN</b>	Sum of NumberCollected	184,102	3,510,226	40,585	11,370	1,285,420	5,031,703
	Sum of NumberBarged	180,110	1,897,394	34,346	11,348	630,499	2,753,697
	Sum of NumberBypassed	2,568	1,612,351	6,238	0	654,785	2,275,942
	Sum of NumberTrucked	654	1	0	0	14	669
	Sum of SampleMorts	64	127	0	5	23	219
	Sum of FacilityMorts	144	353	1	18	99	615
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	208	480	1	23	122	834
Total Sum of NumberCollected		1,569,150	10,458,388	295,357	67,632	5,872,304	18,262,831
Total Sum of NumberBarged		1,500,022	4,322,808	242,306	65,866	2,411,405	8,542,407
Total Sum of NumberBypassed		37,214	6,132,701	52,907	658	3,460,417	9,683,897
Total Sum of NumberTrucked		27,223	33	2	8	42	27,308
Total Sum of SampleMorts		661	246	2	46	72	1,027
Total Sum of FacilityMorts		3,266	2,178	140	1,050	300	6,934
Total Sum of ResearchMorts		202	422	0	5	68	697
Total Sum of TotalProjectMorts		4,129	2,846	142	1,101	440	8,658

**Cumulative Adult Passage at Mainstem Dams Through: 10/20**

DAM	ENDDATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2016		2015		10-Yr Avg.		2016		2015		10-Yr Avg.		2016		2015		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	10/20	137215	11145	220480	13314	146704	24884	119591	10834	161735	17730	95523	21451	436610	53724	938764	80922	498717	82393
TDA	10/20	105504	9999	194116	12307	114381	21222	95764	8800	123915	15458	80170	17256	310906	50276	621194	85551	307434	68105
JDA	10/20	93659	8262	166015	11514	99110	19896	90259	7715	108768	10988	71447	16841	262008	38720	520639	58930	242742	59261
MCN	10/20	82626	7237	156151	8767	89797	16347	83894	6501	96287	8723	67089	12624	237095	24482	485286	51108	220620	42119
IHR	10/20	67484	5029	116462	5745	63912	10829	13980	1538	21408	2807	18404	4767	36435	12824	62385	9407	36566	16490
LMN	10/20	66115	6268	111511	8697	63840	10328	12460	2344	17764	4835	19733	5633	32832	14748	53843	15548	32977	18316
LGS	10/20	62597	6365	105124	8553	59587	11445	12480	1919	15494	4464	18840	6201	33442	11042	57578	10208	32778	14363
LGR	10/20	62050	5480	104873	8379	58449	12640	12075	2107	14958	4222	16726	6692	33814	11465	57370	10478	31730	16733
PRD	10/18	16843	1003	27716	1570	17080	1731	80288	5126	78139	3550	55483	2565	37686	2999	71553	5061	61577	7642
WAN	10/18	17164	919	25982	1077	16645	2069	79255	4110	76636	2180	52935	2019	22446	1969	46040	3211	27132	4691
RIS	10/19	18646	715	31748	1092	17101	2726	79253	3434	88691	2476	55112	5343	14325	1972	29426	2535	13578	4318
RRH	10/19	9449	351	15244	609	7441	1202	58559	2827	76246	1937	44031	3757	10885	1403	24824	1820	10400	3059
WEL	10/19	11789	833	19971	1520	7481	1542	44646	2492	62129	3311	34173	3761	4337	627	10499	710	4348	1684
WFA	10/19	29294	2123	51046	2042	35288	1298	0	0	0	0	0	0	1041	222	2889	1006	1646	433

DAM	ENDDATE	Coho						Sockeye			Steelhead						Lamprey		
		2016		2015		10-Yr Avg.		2016	2015	10-Yr Avg.	10-Yr		Wild	Wild	10-Yr	2016	2015	10-Yr	
		Adult	Jack	Adult	Jack	Adult	Jack				Adult	Jack							Adult
BON	10/20	39412	5268	31549	4447	113809	7037	342497	510707	285072	185670	263155	343441	51448	95588	112824	52318	38518	22886
TDA	10/20	20874	1888	23379	3140	47472	4272	288401	429796	243357	143325	213179	273720	39068	74401	88128	11556	12397	6504
JDA	10/20	16808	2564	18374	3000	40223	4218	289972	366352	235110	128280	175956	249967	36986	62922	80154	9685	8342	5668
MCN	10/20	10653	1096	16209	3350	26676	3305	261696	279729	203224	115586	172313	216929	31310	57913	64992	1603	1745	1518
IHR	10/20	1900	133	1256	170	3542	303	898	1052	840	90492	123255	162810	21345	33578	40650	874	761	290
LMN	10/20	2620	473	965	329	3551	514	1024	888	983	88868	123877	164794	20312	34601	42981	239	262	87
LGS	10/20	1695	511	1611	309	3667	573	962	586	929	83886	116882	146986	19102	30660	36092	192	60	31
LGR	10/20	2328	273	1087	155	3505	330	815	439	983	85956	118504	149516	19761	32435	38880	106	50	13
PRD	10/18	1560	193	3876	542	8787	755	311072	301272	238397	6298	13924	19061	0	0	0	8099	6702	4710
WAN	10/18	1128	89	2657	217	4954	407	322459	296339	202998	5668	13684	18194	0	0	0	9287	5290	2942
RIS	10/19	1942	113	4024	127	11481	600	310339	264669	231624	6923	13526	16883	2462	5796	7012	3854	2163	1231
RRH	10/19	322	25	1794	115	3151	162	235922	216377	197186	5506	10468	13245	1817	4227	5130	3533	2133	1044
WEL	10/19	314	21	965	42	1720	3	216035	187053	188123	4482	8652	10157	1594	3387	4062	7	0	0
WFA	10/19	2317	1862	1744	851	9829	2501	0	0	0	26458	8089	22615	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.