



## Fish Passage Center

# Weekly Report #13 - 21

August 9, 2013

1827 NE 44th Ave., Suite 240  
Portland, OR 97213  
phone: 503/230-4099  
fax: 503/230-7559

### *Update on Lower Granite Dam Fishway and Adult Passage (see page 5)*

#### **Summary of Events:**

**Water Supply:** Precipitation throughout the Columbia Basin has varied over the first week of August, ranging between 8% and 217% of average at individual sub-basins. Precipitation above The Dalles has been 124% of average over August. Over the 2013 water year, precipitation has ranged between 67% and 105% of average.

**Table 1. Summary of August precipitation and cumulative October through August precipitation with respect to average (1971–2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2013 August 1–7, 2013		Water Year 2013 October 1, 2012 to August 7, 2013	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.88	166	33.6	96
Snake River above Ice Harbor	0.15	69	15.1	72
Columbia above The Dalles	0.39	124	21.4	83
Kootenai	1.27	217	37.7	105
Clark Fork	0.52	142	19.1	75
Flathead	0.91	213	32.4	96
Pend Oreille Basin	0.74	188	26.5	86
Snake Basin above Hells Canyon	0.03	19	11.9	69
Salmon River Basin	0.22	71	18.1	67
Clearwater	0.59	170	32.3	83
Willamette River above Portland	0.02	8	55.2	89

Grand Coulee Reservoir is at 1283.9 feet (8-8-13) and has drafted 2.2 feet over the last week. Outflows at Grand Coulee have ranged between 120.8 and 128.8 Kcfs over the last week. The end of August draft elevation at Grand Coulee is 1278 feet, with an additional 0.3 ft draft as part of the Lake Roosevelt Incremental Storage Release Program.

The Libby Reservoir is currently at elevation 2453.5 feet (8-8-13) and has drafted 0.7 feet last week. Outflows at Libby Dam have been 14.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3556.5 feet (8-8-13) and has drafted 0.8 feet over the last week. Outflows at Hungry Horse have been 2.5 Kcfs last week.

Dworshak is currently at an elevation of 1558.5 feet (8-8-13) and has drafted 6.9 feet last week. The end of August target elevation at Dworshak is 1535 feet. Outflows from Dworshak have been 9.9–10.0 over the last week.

The Brownlee Reservoir was at an elevation of 2058.1 feet on August 8<sup>th</sup>, 2013, drafting 0.8 feet over the last week. Inflows at Brownlee have ranged between 7.7 and 8.3 Kcfs last week.

The flow objective at Lower Granite over the summer period (June 21<sup>st</sup> to August 31<sup>st</sup>) is 50 Kcfs; over the summer period flows at Lower Granite have averaged 34.1 Kcfs, and 24.5 Kcfs over the last week.

The flow objective at McNary over the summer period (July 1<sup>st</sup> to August 31<sup>st</sup>) is 200 Kcfs. Over the summer period flows at McNary have averaged 204.4 Kcfs, and over the last week have averaged 169.7 Kcfs.

**Spill:** Summer Spill began on June 20<sup>th</sup> at the lower Snake River projects and will extend through August 31<sup>st</sup>.

Project	Spill Level Day/Night
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	30%/30% vs. 45 Kcfs/Gas Cap

Flow in the Snake River has ranged from 24 to 26 Kcfs over the past week. This means that at times spill levels are likely going to be below the Court ordered amounts due to low flows and required powerhouse minimum flows at the Snake River projects.

At Lower Granite Dam spill was based on an experimental operation. Because of concern over adult sockeye passage at the project, consideration was given to decreasing juvenile passage protection and operating Unit 1. The operation of Unit 1 requires a higher flow (16.9 Kcfs) to operate at the 1% efficiency range due to its fixed blade configuration. The 24-hour operation of Unit 1 was implemented until the evening of August 5<sup>th</sup> when mounting concern regarding decreased juvenile protection, and limited adult passage improvement, resulted in a change in operations. The revised operation was for the daytime (0500 to 1700 hours) operation of Unit 1, and the provision of spill in excess of that required for station service during nighttime hours (1700 to 0500 hours). At Little Goose Dam the low flows initiated a change in spill from the 30% of instantaneous flow to a constant spill level in the 7–11 Kcfs range. This change was initiated on the afternoon of July 18<sup>th</sup>. The project spilled an instantaneous amount of approximately 7 Kcfs over the past week. At Lower Monumental and Ice Harbor dams the Court-ordered summer spill levels were not met due to low flows and powerhouse minimum requirements precluding spill at the amounts described in the table.

Summer spill for fish passage at the Lower Columbia projects began on July 1<sup>st</sup>, except at McNary Dam where summer spill began on June 20<sup>th</sup>

and Bonneville Dam where summer spill began on June 16<sup>th</sup>. Spill will continue through August 31<sup>st</sup>.

Project	Summer Spill Level Day/Night
McNary	50%/50%
John Day	July 20–August 31: 30%/30%
The Dalles	40%/40%
Bonneville	July 21–August 31: 75 Kcfs/Gas Cap

All the middle Columbia River dams met the court-ordered summer spill levels described in the table.

There were no TDG exceedences observed in the system over the past week. Based on historic data collected since 1995 from the gas bubble trauma (GBT) monitoring program, we would not expect to see fish exhibit signs of GBT at the present TDG levels. Consistent with historic data, one fish at McNary Dam (August 8<sup>th</sup>) was detected with minor signs of GBT.

**Smolt Monitoring:** Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, and LGR). There are currently no SMP traps under operation.

Subyearling Chinook were the dominant species of salmonid at all SMP dams over the past week. Passage of subyearlings decreased this week at most SMP sites. The exceptions to this were Little Goose and Lower Monumental dams. Although subyearling Chinook dominated the collections, all of the SMP sites continue to collect a few spring migrants.

High temperature sampling protocols were in effect this week at BON. Under these high temperature sampling protocols, daily index sampling occurred every other day. All fish were bypassed on non-sample days. Passage of subyearling Chinook decreased this week when compared to last week. This week's daily average passage index for subyearling Chinook was about 8,300 per day. Last week's daily average passage index for subyearling Chinook was just over 15,000 per day. Yearling Chinook, coho, and sockeye were all collected this week, although in very low numbers. No steelhead juveniles were collected at BON this week.

Pacific lamprey macrophthalmia were the only lamprey juveniles that were collected this week. The high temperature sampling protocols will remain in effect until temperatures decrease to safer levels.

High temperature sampling protocols were in effect this week at JDA. Under these high temperature sampling protocols, the SMP crew at JDA samples only twice a week, for condition only. It is important to note that sampling under the higher temperature protocols at JDA results in bias collection estimates, as sampling is not 24-hours. Therefore, it is not appropriate to compare passage index estimates during this period to those from previous weeks. Subyearling Chinook dominated the bypass samples at JDA this week. The only other species of salmonid that was collected in this week's samples was sockeye. Finally, no lamprey juveniles were collected in this week's samples. The high temperature sampling protocols will continue until temperatures decrease to safer levels.

Sampling at MCN for the 2013 season is every-other-day. Subyearling Chinook continued to dominate the bypass sample at MCN this week. This week's daily average passage index for subyearling Chinook at MCN was just over 24,000 per day. This represents a decrease over last week's daily average passage index, which was nearly 35,000 per day. The only spring migrants that were collected at MCN this week were sockeye. This week's daily average passage index for sockeye was about 290 per day, which is a decrease from last week's daily average passage index of about 380 per day. Pacific lamprey macrophthalmia continue to be the only species and life-stage of lamprey collected at MCN this season. This week's daily average collection for Pacific lamprey macrophthalmia was about 93, which is very similar to last week's daily average collection of only 100 per day.

Passage of subyearling Chinook at LGR continued to decrease this week when compared to last week. This week's daily average passage index for subyearling Chinook was about 1,400 per day. Last week's daily average passage index was about 1,900 per day. A very small number of spring migrants were collected this week. Finally, no lamprey juveniles

were collected at LGR this week. Due to the possible resampling of PIT-tagged research fish that were released into the gatewells, the estimated year-to-date collection and passage index totals for yearling Chinook, steelhead, subyearling Chinook, and Pacific lamprey macrophthalmia are likely inflated. The FPC is aware of this possible bias and is investigating ways to correct these inflated estimates after the season has ended. However, the magnitude of this bias is relatively low and is unlikely to skew estimates of timing for this species.

Subyearling Chinook passage at LGS increased slightly this week when compared to last week. This week's daily average passage index for subyearling Chinook at LGS was about 2,200 per day. Last week's daily average passage index was nearly 2,100 per day. Yearling Chinook and steelhead were the only spring migrants that were collected in this week's samples. However, collections of yearling Chinook and steelhead were extremely low this week. Finally, both Pacific lamprey ammocoetes and macrophthalmia were collected at LGS this week. The ammocoetes were collected on August 6<sup>th</sup> while macrophthalmia were collected nearly every day this week. The daily average collection for Pacific macrophthalmia this week was 22 per day.

Subyearling Chinook passage at LMN increased this week when compared to last week. This week's daily average passage index for subyearling Chinook at LMN was about 1,100 per day. Last week's daily average passage index was about 400 per day. This increase is mostly due to high passage numbers on August 3<sup>rd</sup> and 4<sup>th</sup>, which coincided with heavy rains and increased flows in this section of the Snake River. The only spring migrants that were collected this week were yearling Chinook, coho, and steelhead. Finally, only Pacific lamprey macrophthalmia were collected at LMN this week. These Pacific lamprey macrophthalmia were collected on only one day (Aug. 4<sup>th</sup>), with an estimated collection of 40. Sample mortalities for subyearling Chinook at LMN increased this week. As in past years, most of these mortalities are due to high levels of the disease Columnaris, which tends to increase as temperatures rise this time of year.

SMP collections at RIS were suspended from the morning of July 29<sup>th</sup> to the afternoon of August 1<sup>st</sup> in order to make repairs to the adult ladder. Passage of subyearling Chinook decreased this week when compared to the previous week. The daily average passage index for subyearling Chinook at RIS this week was about 125 per day. Over the four sample days from the previous week, the daily average passage index for subyearling Chinook was about 450 per day. Passage of yearling Chinook, coho, sockeye, and steelhead continued to be extremely low this week. Finally, Pacific lamprey macrophthalmia were collected on four days this week, although in low numbers.

### Hatchery Release

**Snake River Zone:** The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. There were no new releases of juvenile salmonids scheduled for this zone this week. In addition, there are no new releases 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 of juvenile salmonids were scheduled to begin in this zone this week. There are also no releases of juvenile salmonids in this zone 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 of juvenile salmonids were scheduled for this zone this week. Furthermore, there are no new releases to this zone scheduled over the next two weeks.

### Adult Fish Passage

Fall Chinook began to pass Bonneville Dam on August 1<sup>st</sup>. The adult fall Chinook count of 8,021 is about 1.9 times greater than the 2012 count of 4,208 and about 2.4 times greater than the 10-year average count of 3,348. The 2013 Bonneville Dam fall Chinook jack count of 1,498 is about 1.2 times greater than the 2012 count of 1,261 and about 2.3 times greater than the 10-year average count of 661. The 2013 adult summer

Chinook count of 8,026 at Lower Granite Dam in the Snake River is about 63.2% of the 2012 count and 50.1% of the 10-year average count. The 2013 Lower Granite summer Chinook jack count of 7,381 is about 4.5 times greater than the 2012 count and 1.3 times greater than the 10-year average count.

The 2013 Bonneville Dam adult steelhead count of 113,097 is about 96% of the 2012 count of 117,891 and 75.7% of the 10-year average count of 149,387. The 2013 Bonneville Dam adult wild steelhead count of 58,813 is about 1.2 times greater than the 2012 count of 49,491, while having 881 fewer fish than the 10-year average count of 59,712. In the Snake River, this year's Lower Granite steelhead count of 9,432 is about 90.2% of the 2012 count of 10,451 and 65.1% of the 10-year average count of 14,487. The 2013 Lower Granite Dam adult wild steelhead count of 4,294 is about 92.7% of the 2012 count of 4,634 and about 85.7% of the 10-year average count of 5,007. At Willamette Falls, the 2013 count for steelhead was 16,935 as of July 20<sup>th</sup>. This year's steelhead count is about 55.5% of the 2012 count of 30,495 and about 68% of the 10-year average count of 24,909.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 18 and 84 last week. The 2013 adult sockeye count at Bonneville Dam of 185,365 is about 35.9% of the 2012 count of 515,624, while being 1.04 times greater than the 10-year average count of 177,561. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2013 McNary Dam adult sockeye count of 134,030 is about 36.8% of the 2012 count of 364,076, while being 1.06 times greater than the 10-year average count of 125,746. The Lower Granite Dam 2013 adult sockeye count of 721 is about 1.6 times greater than the 2012 count of 441 and about 1.2 times greater than the 10-year average count of 608.

Thirteen adult coho have crossed Bonneville Dam so far this year. As of August 8<sup>th</sup> at Bonneville Dam, the adult shad count was 3,749,999. This year's shad count is about 1.5 times greater than the 2012 count of 2,431,186 and 1.3 times greater than the 10-year average count of 2,862,311.

## Lower Granite Dam Update

Over the last week, adult passage concerns have continued at Lower Granite Dam. Of particular importance have been the very low daily passage numbers of sockeye and the discrepancy between the counts of sockeye reported at Little Goose Dam as compared to those reported at Lower Granite Dam.

The COE continues to utilize the emergency pumping system to moderate temperature in the Lower Granite ladder. The emergency pumps draw water from deeper in the forebay (where there is cooler water) as compared to the other sources of water contributing to the upper ladder. The use of these pumps has cooled ladder temperatures near the fishway exit to a range of 69°–72° F, which prior to using these pumps had been ranging between 72° and 76° F.

On Wednesday morning (7-31-13) the action agencies resorted back to an operation that prioritized Unit #1, effectively moving more water through the powerhouse and less water over the spillway, with all spilled water moving over the RSW. Adult fish counts on August 1<sup>st</sup>, 2013, did show a slight increase relative to counts over the previous several days. However, over the August 3-4 weekend and into Monday, fish counts did not display appreciable increases. The Technical Management team (TMT) convened a call on Monday, August 5, 2013, to discuss this operation. During the TMT meeting, a decision was made to continue the Unit #1 operation (approximately 17 Kcfs) while spilling the remainder of water passing the project during the daytime (5 AM–5 PM), but switching the nighttime operation to one unit at station service (5 Kcfs) with the remainder of water passing the project being spilled up the TDG gas cap. The implementation of this operation over the remainder of the week has shown a moderate benefit for Chinook and steelhead; however, sockeye daily counts have continued to be at, or below, five fish per day.

This operation will remain in place through the beginning of the powerhouse roof repair on August 10<sup>th</sup>.

### Hatchery Releases Last Two Weeks

#### Hatchery Release Summary

From: 7/26/2013 to 08/08/13

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Dworshak NFH	CH0	SP	2014	300,000	07-01-13	08-01-13	Selway River	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>300,000</b>				
<b>Grand Total</b>					<b>300,000</b>				

### Hatchery Releases Next Two Weeks

#### Hatchery Release Summary

From: 8/9/2013 to 8/22/2013

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

**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
07/26/2013	133.5	0.2	127.2	0.0	131.9	10.0	130.4	12.2	132.5	28.6	158.5	19.3	156.0	26.3
07/27/2013	115.5	0.2	117.5	0.0	117.9	9.8	118.7	10.8	122.4	26.0	123.9	19.1	119.6	26.7
07/28/2013	115.8	0.2	113.5	0.0	116.8	9.6	114.0	11.4	115.9	25.5	120.0	19.3	116.2	27.2
07/29/2013	128.4	0.2	127.0	0.0	128.1	9.9	128.1	11.8	131.1	28.8	128.1	23.2	123.8	27.2
07/30/2013	137.1	0.2	139.7	0.0	141.2	9.4	141.6	12.0	145.2	28.5	150.5	43.6	146.8	29.9
07/31/2013	137.6	0.0	140.7	0.0	143.4	10.0	142.5	12.4	144.3	28.6	153.2	43.2	150.8	28.0
08/01/2013	118.9	0.0	116.4	0.0	122.7	10.0	123.2	11.7	124.0	27.6	134.3	26.4	139.0	26.9
08/02/2013	128.8	0.2	128.9	0.0	129.3	10.0	131.4	11.1	135.8	24.6	136.0	27.5	127.0	26.1
08/03/2013	127.2	0.2	129.3	0.0	131.6	10.0	130.1	9.2	134.6	21.2	144.4	22.7	139.7	28.2
08/04/2013	127.8	0.2	125.2	0.0	130.2	10.3	130.1	9.9	134.7	21.3	145.4	20.8	143.7	28.5
08/05/2013	121.7	0.2	119.8	0.0	129.9	9.0	131.7	10.8	135.1	24.2	139.8	30.3	141.2	26.2
08/06/2013	120.8	0.2	124.8	0.0	126.2	9.5	125.2	11.0	126.1	24.1	131.5	29.2	127.1	27.2
08/07/2013	124.6	0.2	123.3	0.0	125.5	9.4	124.3	11.6	125.0	25.6	133.4	27.5	129.9	27.4
08/08/2013	126.4	0.2	124.9	0.0	132.5	9.5	131.8	11.2	132.7	25.9	139.5	34.6	138.4	27.5

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/26/2013	9.9	0.0	---	---	27.0	14.6	26.4	9.0	28.8	16.3	30.1	19.4
07/27/2013	9.8	0.0	---	---	25.0	9.5	23.9	9.1	23.0	10.5	22.1	11.3
07/28/2013	9.8	0.0	---	---	25.5	8.1	26.5	9.1	27.2	15.0	28.1	17.8
07/29/2013	9.8	0.0	---	---	22.4	7.6	24.1	9.1	26.1	13.7	27.4	17.0
07/30/2013	9.9	0.0	---	---	25.3	13.2	25.6	9.0	25.5	13.1	25.2	15.0
07/31/2013	9.9	0.0	---	---	24.9	9.9	25.1	9.1	26.0	13.6	26.3	16.1
08/01/2013	9.8	0.0	---	---	24.1	6.9	25.4	9.2	26.4	14.0	27.4	17.1
08/02/2013	9.9	0.0	---	---	24.2	6.9	27.9	8.5	27.4	14.3	27.1	16.6
08/03/2013	9.9	0.0	---	---	26.0	8.7	28.1	7.4	31.7	16.0	31.1	21.0
08/04/2013	9.9	0.0	---	---	24.5	7.1	25.8	7.5	25.8	13.3	25.7	15.2
08/05/2013	9.9	0.0	---	---	24.2	10.2	27.8	7.5	26.7	14.2	27.1	16.6
08/06/2013	9.9	0.0	---	---	24.0	12.9	26.4	7.4	27.5	15.1	29.8	19.3
08/07/2013	10.0	0.0	---	---	24.4	12.9	25.1	7.4	24.5	12.0	24.4	14.0
08/08/2013	10.0	0.0	---	---	24.2	12.8	25.2	7.4	25.9	13.4	25.7	15.2

**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
07/26/2013	197.7	99.0	190.5	57.1	174.5	69.8	186.7	87.0	11.8	75.5
07/27/2013	168.6	84.7	146.8	44.1	135.3	54.1	153.8	87.4	-0.4	54.4
07/28/2013	149.3	74.7	143.9	43.2	131.7	52.8	148.3	87.9	0.0	48.0
07/29/2013	159.0	79.3	156.9	47.0	147.5	59.0	155.9	87.7	0.0	55.7
07/30/2013	166.4	83.2	161.9	48.3	152.2	60.8	167.4	87.2	4.3	63.5
07/31/2013	194.1	97.3	183.6	54.8	164.5	65.7	175.2	86.7	5.9	70.2
08/01/2013	188.8	94.8	179.6	53.8	163.4	65.6	179.4	89.2	8.7	69.1
08/02/2013	162.1	81.2	159.6	47.8	147.4	58.8	167.6	89.6	0.0	65.6
08/03/2013	175.5	88.1	167.8	50.3	152.9	61.3	172.4	89.4	3.8	66.8
08/04/2013	172.0	86.4	170.9	51.1	157.5	62.6	161.7	89.3	0.6	59.4
08/05/2013	173.5	87.1	152.2	45.5	142.7	56.9	160.7	89.3	0.0	59.1
08/06/2013	180.5	90.6	180.7	54.0	165.1	65.9	170.9	89.2	0.0	69.3
08/07/2013	166.1	83.4	153.0	46.1	143.7	57.2	171.9	88.7	6.8	64.0
08/08/2013	158.2	79.3	157.2	46.8	142.7	56.8	153.6	88.5	0.0	52.7

## Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>Lower Granite Dam</b>											
<b>Little Goose Dam</b>											
	07/29/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/05/13	Chinook + Steelhead	51	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	07/31/13	Chinook + Steelhead	59	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	07/29/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/02/13	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	08/04/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/08/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
<b>Bonneville Dam</b>											
	07/28/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/30/13	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	08/04/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/06/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	08/06/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/08/13	Chinook + Steelhead	58	0	0	0.00%	0.00%	0	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 Upper Columbia River Sites

Date	Hungry H. Dnst			#	Boundary			#	Grand Coulee			#	Grand C. Tlwr			#	Chief Joseph			#			
	24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
7/26	106.5	106.9	107.3	24	---	---	---	0	113.4	113.6	113.8	24	110.5	110.7	111.1	24	111.9	112.3	112.6	24			
7/27	106.6	106.9	107.2	24	---	---	---	0	113.5	113.8	114.0	24	109.1	109.8	110.1	24	111.8	112.3	112.5	24			
7/28	106.7	107.1	107.5	24	---	---	---	0	113.8	114.0	114.3	24	110.0	110.9	111.4	24	111.8	112.2	112.5	24			
7/29	106.5	106.7	106.9	24	---	---	---	0	113.4	113.6	113.7	24	110.4	110.7	110.9	24	111.8	112.2	112.6	24			
7/30	106.7	107.2	107.9	24	---	---	---	0	113.0	113.2	114.8	24	110.5	110.8	111.5	21	111.7	111.9	112.1	24			
7/31	106.4	106.9	107.2	24	---	---	---	0	113.1	113.4	113.8	24	110.3	110.6	111.1	22	111.5	111.7	111.9	24			
8/1	106.5	107.0	107.2	24	---	---	---	0	113.5	113.7	114.0	24	110.4	110.7	110.8	24	111.4	111.8	112.1	24			
8/2	105.8	106.2	106.3	24	---	---	---	0	113.0	113.3	113.7	24	110.3	110.5	110.6	24	110.6	110.8	111.1	24			
8/3	104.3	104.7	105.0	24	---	---	---	0	112.3	112.5	112.8	24	109.5	109.6	109.9	24	110.3	110.8	111.2	24			
8/4	105.1	105.5	106.0	24	---	---	---	0	112.8	112.9	113.1	24	109.8	110.2	110.5	24	110.5	110.8	111.1	24			
8/5	105.4	106.0	106.5	24	---	---	---	0	112.8	113.1	113.3	24	109.5	110.0	110.3	24	110.4	110.9	111.2	24			
8/6	---	---	---	0	---	---	---	0	112.3	112.4	112.8	24	109.4	109.8	110.0	24	110.6	111.1	111.3	24			
8/7	106.5	106.9	107.5	21	---	---	---	0	112.0	112.3	112.6	24	109.3	109.6	109.9	24	110.5	110.9	111.1	24			
8/8	106.0	106.4	106.7	23	---	---	---	0	111.2	111.5	111.9	23	108.9	109.5	109.7	23	110.2	110.5	110.8	23			

### Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			#	Wells			#	Wells Dwnstrm			#	Rocky Reach			#	Rocky R. Tlwr			#			
	24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
7/26	111.4	111.8	112.2	24	111.5	111.9	112.7	22	112.9	113.5	114.5	22	112.2	112.6	112.7	24	114.2	115.2	116.0	24			
7/27	111.4	111.6	112.4	24	112.0	112.5	113.3	21	113.1	113.8	114.5	21	111.7	112.0	112.3	24	113.4	113.9	114.6	24			
7/28	111.6	112.0	112.4	24	112.1	113.0	113.6	22	113.4	114.4	115.0	22	111.6	111.9	112.5	24	113.4	114.2	115.2	24			
7/29	111.4	111.7	112.0	24	111.2	111.8	112.3	23	112.9	113.6	114.4	23	111.8	111.9	112.1	24	113.8	114.6	115.9	24			
7/30	111.3	111.8	112.3	24	110.9	111.5	112.0	23	112.4	113.3	113.9	23	111.5	111.8	112.0	24	113.8	114.7	115.8	24			
7/31	111.0	111.3	112.0	24	111.5	111.9	112.6	21	113.2	113.8	114.5	21	110.9	111.3	111.5	24	113.6	114.5	114.8	24			
8/1	111.7	112.4	113.3	24	110.8	111.3	112.3	22	112.7	113.2	114.1	22	111.4	111.8	112.2	24	113.3	114.3	115.2	24			
8/2	110.0	110.3	110.7	24	110.0	110.5	110.9	22	112.0	112.4	113.0	22	111.0	111.3	111.6	24	113.2	114.0	114.9	24			
8/3	109.9	110.2	110.6	24	109.7	110.0	110.6	20	111.6	112.0	112.6	20	110.3	110.6	110.8	24	112.3	113.0	113.6	24			
8/4	110.0	110.5	111.9	24	110.4	110.9	111.9	21	112.2	112.8	113.8	21	110.7	111.1	111.2	24	112.7	113.3	114.1	24			
8/5	110.3	110.8	112.0	24	110.5	111.2	111.5	22	112.0	113.1	113.9	22	111.3	111.8	112.1	24	113.5	114.6	115.7	24			
8/6	110.6	111.3	112.0	24	110.6	111.2	111.8	22	112.3	112.9	113.7	22	111.6	111.8	111.9	24	113.4	114.4	115.0	24			
8/7	110.5	111.0	111.8	24	110.5	111.1	112.0	21	112.1	112.9	114.1	21	111.3	111.6	111.7	24	113.3	114.8	116.1	24			
8/8	110.0	110.3	110.8	23	110.6	111.1	111.6	21	112.5	113.1	113.7	21	111.1	111.3	111.7	23	113.6	114.5	115.3	23			

### Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			#	Rock I. Tlwr			#	Wanapum			#	Wanapum Tlwr			#	Priest Rapids			#			
	24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
7/26	111.6	112.1	112.6	24	116.1	116.9	117.7	24	111.8	112.6	114.4	24	112.7	113.1	113.4	24	111.0	111.4	112.2	24			
7/27	111.1	111.5	111.9	24	115.8	116.4	117.4	24	110.5	111.3	112.2	24	112.7	113.2	113.4	24	110.4	111.0	112.5	24			
7/28	110.6	111.3	111.9	24	115.6	116.2	116.6	24	110.2	111.1	112.3	24	112.6	113.1	113.9	24	109.8	110.5	111.1	24			
7/29	110.8	111.7	112.3	24	116.4	117.4	118.3	24	112.1	113.4	114.2	24	113.2	113.5	113.8	24	110.9	111.6	112.2	24			
7/30	110.9	111.6	112.1	24	116.2	117.0	118.0	24	111.4	112.1	113.8	24	114.8	116.7	120.1	24	111.9	112.8	113.7	24			
7/31	110.5	110.8	111.2	24	115.8	116.7	117.4	24	112.4	113.5	114.3	24	114.4	115.5	117.2	24	114.0	115.1	116.7	24			
8/1	110.4	110.8	111.0	24	115.9	116.9	117.3	24	112.3	112.7	113.1	24	113.8	114.1	114.5	24	113.0	114.2	115.3	24			
8/2	110.3	110.6	110.9	24	115.3	116.1	116.6	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/3	109.9	110.2	110.7	24	114.0	115.0	115.6	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/4	110.2	110.8	111.3	24	114.4	115.4	115.8	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/5	110.7	111.5	112.1	24	115.3	116.7	117.8	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/6	111.1	111.8	112.6	24	115.6	116.7	118.0	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/7	109.7	111.5	112.1	24	116.0	116.8	117.6	24	---	---	---	0	---	---	---	0	---	---	---	0			
8/8	110.6	111.2	111.5	23	115.7	116.6	118.0	23	---	---	---	0	---	---	---	0	---	---	---	0			

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

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

Date	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/26	113.8	114.1	114.4	24	---	---	---	0	99.8	100.2	100.6	24	101.1	102.3	103.2	24	102.1	103.7	105.2	24
7/27	113.1	113.6	114.1	24	---	---	---	0	100.1	100.6	100.9	24	101.1	102.3	103.1	24	102.1	103.5	104.9	23
7/28	112.7	113.1	113.4	24	---	---	---	0	100.4	100.8	101.2	24	103.4	106.6	126.2	24	101.9	103.4	105.0	24
7/29	113.0	113.6	113.9	24	---	---	---	0	100.3	100.7	101.1	24	115.8	126.2	126.5	24	101.3	102.1	104.8	18
7/30	114.2	114.8	115.1	24	---	---	---	0	100.0	100.3	100.6	24	101.8	102.8	103.5	24	101.8	103.3	104.9	24
7/31	116.0	116.8	117.7	24	---	---	---	0	100.1	100.6	100.9	24	101.9	103.0	103.9	24	101.9	103.2	104.3	24
8/1	115.0	115.7	116.1	24	---	---	---	0	100.2	100.5	101.0	24	101.7	102.4	103.7	24	101.1	101.9	103.3	24
8/2	---	---	---	0	---	---	---	0	99.8	100.0	100.2	24	101.4	102.1	102.9	24	101.4	102.6	103.8	24
8/3	---	---	---	0	---	---	---	0	99.6	99.8	100.0	24	101.7	102.7	103.3	24	101.6	102.9	104.3	24
8/4	---	---	---	0	---	---	---	0	100.0	100.4	100.7	24	102.0	103.2	104.1	24	101.6	102.8	104.0	24
8/5	---	---	---	0	---	---	---	0	100.3	100.6	101.0	24	102.0	102.9	104.2	22	102.0	103.3	104.7	24
8/6	---	---	---	0	---	---	---	0	100.2	100.5	100.8	24	102.2	103.4	104.4	24	102.0	103.5	104.8	24
8/7	---	---	---	0	---	---	---	0	100.4	100.7	101.0	24	102.3	103.5	104.4	24	102.1	103.5	104.8	24
8/8	---	---	---	0	---	---	---	0	100.4	100.7	101.0	23	102.3	103.4	104.3	23	101.0	101.8	102.7	23

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

Date	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/26	103.8	106.3	108.1	24	101.4	101.7	102.0	24	115.6	116.4	116.8	24	111.7	111.9	112.0	24	110.9	112.4	113.4	24
7/27	103.9	106.3	108.0	24	101.7	102.0	102.5	24	113.2	113.9	114.5	24	112.1	112.3	112.5	24	112.9	113.4	113.9	24
7/28	103.7	105.9	107.6	24	102.3	102.5	102.8	24	112.3	112.6	113.2	24	112.4	112.6	112.7	24	113.3	113.7	114.2	24
7/29	103.7	105.9	107.6	24	102.0	102.2	102.4	24	112.2	112.7	113.2	24	111.8	112.2	112.4	24	113.0	113.5	113.9	24
7/30	103.3	105.3	106.7	24	101.9	102.0	102.2	24	116.3	117.8	118.4	24	110.3	110.5	110.7	24	112.9	113.3	113.7	24
7/31	103.3	105.2	106.7	24	102.0	102.2	102.3	24	114.6	115.9	116.1	24	110.6	111.0	111.1	24	112.9	113.2	113.5	24
8/1	102.4	103.7	105.2	24	101.8	101.9	102.1	24	111.6	111.9	112.3	24	110.9	111.1	111.4	24	110.9	112.6	112.9	24
8/2	102.3	103.6	104.7	24	101.4	101.5	101.7	24	111.7	112.0	112.2	24	109.4	110.0	110.8	24	108.6	108.9	109.4	24
8/3	102.5	104.3	105.8	24	101.3	101.5	101.7	24	113.5	115.0	115.7	24	108.2	108.5	109.3	24	108.6	109.1	109.7	24
8/4	103.2	105.5	107.1	24	101.5	101.6	101.8	24	112.2	112.7	114.7	24	107.6	108.0	108.5	24	108.8	109.4	109.7	24
8/5	103.3	105.5	107.2	24	101.1	101.3	101.4	24	113.8	115.9	119.8	24	109.2	109.5	109.7	24	109.1	109.6	110.2	24
8/6	103.4	105.6	107.3	24	100.5	100.7	100.9	24	115.7	119.2	120.3	24	108.7	108.8	109.2	24	108.6	109.1	109.4	24
8/7	103.4	105.5	107.2	24	100.4	100.6	100.7	24	115.2	118.2	118.9	24	108.4	108.6	108.7	24	108.7	109.3	109.7	24
8/8	103.2	105.3	106.8	23	100.9	101.2	101.5	23	115.2	118.0	119.1	23	108.6	108.7	109.0	23	108.9	109.3	109.8	23

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

Date	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/26	109.7	110.9	112.1	24	116.0	116.5	116.8	24	111.3	111.5	111.7	24	113.1	113.7	114.4	24	---	---	---	0
7/27	111.2	111.4	111.5	24	113.7	114.3	114.9	24	111.6	112.0	112.3	24	111.3	112.2	113.0	24	---	---	---	0
7/28	111.2	111.4	111.7	24	115.0	115.1	115.4	24	111.8	112.0	112.5	24	112.8	113.8	114.3	24	---	---	---	0
7/29	111.0	111.1	111.5	24	114.9	115.7	116.8	24	111.9	112.1	112.5	24	112.9	113.6	114.1	24	---	---	---	0
7/30	110.0	110.2	110.6	24	114.0	114.3	114.6	24	111.6	111.9	112.1	24	110.5	111.2	111.7	24	---	---	---	0
7/31	109.7	110.0	110.2	24	113.6	114.0	114.2	24	111.3	111.4	111.6	24	110.4	110.8	111.1	24	---	---	---	0
8/1	109.7	109.9	110.5	24	113.8	114.0	114.2	24	110.3	110.6	111.0	24	110.8	111.8	112.8	24	---	---	---	0
8/2	109.2	109.6	109.9	24	112.6	113.6	113.9	24	109.3	109.5	109.8	24	110.1	110.6	110.9	24	---	---	---	0
8/3	107.3	107.8	108.2	24	113.8	115.8	116.5	24	108.3	108.7	109.2	24	112.2	113.5	114.5	24	---	---	---	0
8/4	108.3	108.4	108.6	24	113.9	114.3	115.9	24	108.4	108.5	108.6	24	110.2	110.9	111.6	24	---	---	---	0
8/5	108.2	108.3	108.4	24	114.3	115.2	116.3	24	108.2	108.4	108.5	24	110.7	111.7	112.6	24	---	---	---	0
8/6	108.0	108.1	108.3	24	115.0	116.1	116.4	24	108.5	108.9	109.2	24	111.6	112.5	113.2	24	---	---	---	0
8/7	107.7	107.9	108.0	24	113.0	113.3	113.7	24	109.2	109.4	109.7	24	109.7	110.5	111.0	24	---	---	---	0
8/8	107.1	107.3	107.6	23	113.8	114.6	115.8	23	110.0	110.4	110.6	23	110.3	111.2	112.1	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	High		24 h	12 h	High		24h	12h	High		24h	12h	High		24h	12h	High		24h	12h	High
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	AVG	High
7/26	109.5	109.8	110.2	24	116.6	116.8	117.1	24	107.9	108.2	108.7	24	113.8	114.3	114.7	24	108.2	108.4	108.6	24			
7/27	109.6	110.0	110.2	24	116.3	116.5	116.8	24	107.0	107.2	107.5	24	114.0	114.3	114.7	24	106.9	107.7	108.5	24			
7/28	110.0	110.2	110.5	24	115.4	116.0	116.6	24	106.6	106.9	107.3	24	113.9	114.3	114.7	24	105.2	105.4	105.6	24			
7/29	109.2	109.5	109.8	24	115.8	116.6	117.0	24	106.2	106.8	107.1	24	113.7	114.3	114.6	24	105.4	105.9	106.5	24			
7/30	107.7	108.2	108.7	24	115.8	116.4	116.7	24	105.5	105.8	106.0	24	113.2	113.9	114.4	24	106.7	106.9	107.1	24			
7/31	107.2	107.5	108.1	24	116.3	116.4	116.6	24	105.6	106.1	106.5	24	113.0	113.6	114.6	24	107.5	107.6	108.2	24			
8/1	107.2	107.4	107.6	24	116.1	116.4	116.7	24	105.4	105.6	105.7	24	113.2	113.7	114.1	24	106.9	107.9	108.5	24			
8/2	106.3	106.6	106.7	24	115.4	116.2	116.5	24	104.1	104.4	104.8	24	112.6	113.2	113.5	24	104.9	105.2	105.3	24			
8/3	106.1	106.4	107.0	24	116.1	116.3	116.5	24	104.0	104.6	105.4	24	112.8	113.6	113.9	24	105.9	106.5	107.5	24			
8/4	106.9	108.1	108.8	24	116.1	116.3	116.6	24	105.3	105.6	106.4	24	113.2	114.0	114.4	24	108.5	108.7	108.9	24			
8/5	107.7	108.2	108.8	24	116.2	116.5	116.8	24	105.8	106.0	106.3	24	112.8	113.5	113.7	24	108.6	108.9	109.2	24			
8/6	109.8	110.2	110.3	24	116.5	117.0	117.3	24	105.7	106.2	106.5	24	112.8	113.3	113.7	24	108.2	108.5	108.8	24			
8/7	110.3	110.7	111.0	24	116.1	116.7	117.4	24	105.9	106.3	106.8	24	112.8	113.5	114.5	24	107.8	108.3	108.5	24			
8/8	110.4	110.6	111.0	23	115.5	115.8	116.1	23	106.4	107.4	107.9	23	112.7	113.2	113.6	23	106.8	106.8	106.9	23			

### Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			#	Bonneville			#	Warrendale			#	Camas\Washougal			#	Cascade Island			#			
	24 h	12 h	High		24 h	12 h	High		24h	12h	High		24h	12h	High		24h	12h	High		24h	12h	High
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	High
7/26	114.4	114.8	115.3	24	107.4	107.8	108.3	24	114.9	116.4	117.8	24	112.7	114.2	115.7	24	116.6	117.5	119.3	24			
7/27	113.6	113.9	114.2	24	106.4	106.6	107.5	24	114.9	115.6	116.3	24	110.2	112.3	113.8	24	116.0	117.2	119.1	24			
7/28	112.4	112.8	113.1	24	104.9	105.2	106.1	24	115.2	116.1	117.5	24	111.1	112.7	114.3	24	115.7	117.0	119.2	24			
7/29	112.2	113.2	113.5	24	104.4	104.7	105.2	24	114.9	116.0	117.2	24	112.0	113.8	115.5	24	116.0	117.1	119.2	24			
7/30	113.0	113.9	114.5	24	104.4	105.0	105.5	24	114.3	115.7	117.2	24	111.1	112.9	114.6	24	115.7	116.9	119.2	24			
7/31	113.9	114.6	115.1	24	106.1	106.6	107.0	24	114.1	115.4	117.4	24	110.2	111.9	113.1	24	116.2	117.2	119.2	24			
8/1	113.5	114.0	114.3	24	105.8	106.0	106.2	24	113.9	115.4	116.9	24	109.1	110.4	111.4	24	116.5	117.7	119.1	24			
8/2	112.1	112.6	112.9	24	105.0	105.1	105.2	24	114.6	115.7	117.1	24	109.6	111.3	112.6	24	116.6	118.1	120.1	24			
8/3	112.9	114.0	114.5	24	105.7	106.4	106.9	24	115.1	116.7	118.1	24	111.5	113.5	115.4	24	116.9	118.5	120.2	24			
8/4	114.4	115.4	116.0	24	108.5	109.8	110.3	24	116.3	117.2	118.3	24	112.2	114.7	117.0	24	116.8	118.5	120.4	24			
8/5	114.4	115.0	115.6	24	110.9	111.5	111.9	24	116.8	117.5	118.5	24	113.6	115.6	117.0	24	116.9	118.7	120.6	24			
8/6	114.5	114.9	115.3	24	109.9	110.2	110.4	24	116.0	117.0	118.0	24	113.7	115.1	116.4	24	116.9	118.3	120.4	24			
8/7	113.8	114.4	115.1	24	108.8	109.1	109.4	24	115.5	116.8	117.5	24	112.3	113.8	115.0	24	116.6	117.8	119.1	24			
8/8	113.0	113.8	114.1	23	106.7	106.9	107.4	23	114.8	115.4	116.5	23	111.0	112.5	114.4	23	116.1	117.2	118.8	23			

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/9/2013 7:27

### 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/currentsmppsubmitdata.asp>

<b>COMBINED YEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>††</sup> (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/26/2013 *	---	---	---	---	0	0	0	0	0	0	---
07/27/2013 *	---	---	---	---	0	0	0	0	---	---	0
07/28/2013 *	---	---	---	---	0	0	0	0	0	---	---
07/29/2013 *	---	---	---	---	6	0	0	0	---	---	0
07/30/2013 *	---	---	---	---	0	2	0	---	0	0	---
07/31/2013 *	---	---	---	---	0	0	4	---	---	---	0
08/01/2013 *	---	---	---	---	0	0	0	---	0	---	0
08/02/2013 *	---	---	---	---	0	0	13	0	---	0	---
08/03/2013 *	---	---	---	---	11	0	8	0	0	---	0
08/04/2013 *	---	---	---	---	0	0	22	1	---	---	---
08/05/2013 *	---	---	---	---	0	0	0	0	0	---	10
08/06/2013 *	---	---	---	---	0	0	0	0	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	0	---	0
08/08/2013 *	---	---	---	---	0	6	0	0	---	---	---
08/09/2013	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>8</b>	<b>47</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>YTD</b>	<b>50,632</b>	<b>55,650</b>	<b>26,301</b>	<b>2,797</b>	<b>2,607,081</b>	<b>1,498,294</b>	<b>614,254</b>	<b>28,315</b>	<b>2,123,325</b>	<b>2,056,882</b>	<b>1,881,678</b>

<b>COMBINED SUBYEARLING CHINOOK</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>††</sup> (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/26/2013 *	---	---	---	---	2,722	2,374	716	479	42,813	2,665	---
07/27/2013 *	---	---	---	---	2,358	3,144	686	512	---	---	22,545
07/28/2013 *	---	---	---	---	1,493	1,516	294	511	38,269	---	---
07/29/2013 *	---	---	---	---	1,197	2,010	170	323	---	---	10,516
07/30/2013 *	---	---	---	---	2,365	1,516	304	---	27,709	2,643	---
07/31/2013 *	---	---	---	---	1,778	2,364	287	---	---	---	11,890
08/01/2013 *	---	---	---	---	1,452	1,637	291	---	30,331	---	15,261
08/02/2013 *	---	---	---	---	1,559	2,266	455	115	---	1,919	---
08/03/2013 *	---	---	---	---	2,221	2,476	4,576	133	22,725	---	10,053
08/04/2013 *	---	---	---	---	2,255	3,621	1,779	124	---	---	---
08/05/2013 *	---	---	---	---	1,366	2,855	492	87	19,016	---	7,842
08/06/2013 *	---	---	---	---	1,509	2,053	108	170	---	1,659	---
08/07/2013 *	---	---	---	---	544	1,150	163	142	31,075	---	7,131
08/08/2013 *	---	---	---	---	326	947	107	107	---	---	---
08/09/2013	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23,145</b>	<b>29,929</b>	<b>10,428</b>	<b>2,703</b>	<b>211,938</b>	<b>8,886</b>	<b>85,238</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,653</b>	<b>2,138</b>	<b>745</b>	<b>246</b>	<b>30,277</b>	<b>2,222</b>	<b>12,177</b>
<b>YTD</b>	<b>2</b>	<b>61</b>	<b>195</b>	<b>2,668</b>	<b>694,335</b>	<b>609,918</b>	<b>267,262</b>	<b>17,558</b>	<b>3,624,645</b>	<b>2,423,237</b>	<b>4,834,539</b>

## Two-Week Summary of Passage Indices

<b>COMBINED COHO</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/26/2013 *	---	---	---	---	0	0	0	5	0	0	---
07/27/2013 *	---	---	---	---	0	0	0	0	---	---	0
07/28/2013 *	---	---	---	---	0	0	0	0	0	---	---
07/29/2013 *	---	---	---	---	0	0	0	0	---	---	0
07/30/2013 *	---	---	---	---	0	0	0	---	41	0	---
07/31/2013 *	---	---	---	---	0	0	0	---	---	---	0
08/01/2013 *	---	---	---	---	0	0	0	---	0	---	0
08/02/2013 *	---	---	---	---	0	0	4	0	---	0	---
08/03/2013 *	---	---	---	---	0	0	0	1	0	---	0
08/04/2013 *	---	---	---	---	0	0	0	0	---	---	---
08/05/2013 *	---	---	---	---	6	0	0	0	0	---	0
08/06/2013 *	---	---	---	---	0	0	0	0	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	0	---	10
08/08/2013 *	---	---	---	---	0	0	0	0	0	---	---
08/09/2013	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>6</b>	<b>41</b>	<b>0</b>	<b>10</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</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>1</b>	<b>6</b>	<b>0</b>	<b>1</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>61,816</b>	<b>54,077</b>	<b>10,584</b>	<b>49,971</b>	<b>85,380</b>	<b>188,509</b>	<b>770,828</b>

<b>COMBINED STEELHEAD</b>											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>††</sup> (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/26/2013 *	---	---	---	---	0	0	0	0	0	29	---
07/27/2013 *	---	---	---	---	0	6	4	0	---	---	0
07/28/2013 *	---	---	---	---	6	0	0	3	0	---	---
07/29/2013 *	---	---	---	---	0	0	0	1	---	---	0
07/30/2013 *	---	---	---	---	0	0	0	---	0	0	---
07/31/2013 *	---	---	---	---	0	9	0	---	---	---	0
08/01/2013 *	---	---	---	---	6	0	2	---	0	---	0
08/02/2013 *	---	---	---	---	6	0	0	2	---	0	---
08/03/2013 *	---	---	---	---	0	0	4	0	0	---	0
08/04/2013 *	---	---	---	---	6	0	0	1	---	---	---
08/05/2013 *	---	---	---	---	6	0	0	1	0	---	0
08/06/2013 *	---	---	---	---	0	20	0	0	---	0	---
08/07/2013 *	---	---	---	---	0	0	0	0	0	---	0
08/08/2013 *	---	---	---	---	0	6	0	0	---	---	---
08/09/2013	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>41</b>	<b>10</b>	<b>8</b>	<b>0</b>	<b>29</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>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>
<b>YTD</b>	<b>3,789</b>	<b>40,841</b>	<b>3,547</b>	<b>9,925</b>	<b>2,037,011</b>	<b>1,713,492</b>	<b>610,901</b>	<b>14,968</b>	<b>471,593</b>	<b>732,388</b>	<b>470,274</b>

Two-Week Summary of Passage Indices

<b>COMBINED SOCKEYE</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/26/2013	*	---	---	---	7	0	0	10	785	0	---	
07/27/2013	*	---	---	---	0	0	0	8	---	---	234	
07/28/2013	*	---	---	---	0	0	0	3	166	---	---	
07/29/2013	*	---	---	---	6	0	0	3	---	---	12	
07/30/2013	*	---	---	---	0	0	0	---	247	40	---	
07/31/2013	*	---	---	---	0	0	0	---	---	---	134	
08/01/2013	*	---	---	---	0	0	0	---	329	---	61	
08/02/2013	*	---	---	---	0	0	0	2	---	57	---	
08/03/2013	*	---	---	---	6	0	0	4	330	---	187	
08/04/2013	*	---	---	---	0	0	0	1	---	---	---	
08/05/2013	*	---	---	---	0	0	0	0	165	---	10	
08/06/2013	*	---	---	---	0	0	0	3	---	64	---	
08/07/2013	*	---	---	---	0	0	0	5	371	---	0	
08/08/2013	*	---	---	---	0	0	0	2	---	---	---	
08/09/2013	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>41</b>	<b>2,393</b>	<b>161</b>	<b>638</b>	
<b># Days:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</b>	
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>342</b>	<b>40</b>	<b>91</b>	
<b>YTD</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>326</b>	<b>54,671</b>	<b>32,998</b>	<b>11,379</b>	<b>25,056</b>	<b>633,422</b>	<b>414,247</b>	<b>396,004</b>

<b>COMBINED LAMPREY JUVENILES</b>												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>†</sup> (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
07/26/2013	*	---	---	---	0	16	4	5	40	0	---	
07/27/2013	*	---	---	---	0	16	4	4	---	---	50	
07/28/2013	*	---	---	---	0	32	4	0	40	---	---	
07/29/2013	*	---	---	---	0	12	2	1	---	---	0	
07/30/2013	*	---	---	---	4	16	0	---	140	0	---	
07/31/2013	*	---	---	---	0	8	4	---	---	---	0	
08/01/2013	*	---	---	---	0	8	4	---	180	---	25	
08/02/2013	*	---	---	---	0	40	0	0	---	0	---	
08/03/2013	*	---	---	---	0	4	0	6	120	---	25	
08/04/2013	*	---	---	---	0	84	40	2	---	---	---	
08/05/2013	*	---	---	---	0	10	0	1	80	---	4	
08/06/2013	*	---	---	---	0	15	0	3	---	0	---	
08/07/2013	*	---	---	---	0	0	0	0	80	---	4	
08/08/2013	*	---	---	---	0	4	0	0	---	---	---	
08/09/2013	*	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>265</b>	<b>62</b>	<b>22</b>	<b>680</b>	<b>0</b>	<b>108</b>	
<b># Days:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>7</b>	
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>2</b>	<b>97</b>	<b>0</b>	<b>15</b>	
<b>YTD</b>		<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>4,960</b>	<b>55,121</b>	<b>63,676</b>	<b>153</b>	<b>74,790</b>	<b>173,687</b>	<b>6,157</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:

Two classes of fish counts are shown in these tables:

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.

†† Passage index for yearling Chinook, steelhead, and subyearling Chinook at LGR may be inflated in 2013 due to possible resampling of PIT-tagged research fish

† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

### 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 =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index =  $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

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:

8/9/13 7:23 AM

07/26/13 TO 08/09/13

Site	Data	Species					Grand Total
		CH0	CH1	CO	ST	SO	
<b>LGR</b>	Sum of NumberCollected	13,872	12	4	20	12	13,920
	Sum of NumberBarged	13,820	12	4	19	11	13,866
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	30	0	0	0	1	31
	Sum of FacilityMorts	22	0	0	1	0	23
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	52	0	0	1	1	54
<b>LGS</b>	Sum of NumberCollected	20,156	5		29		20,190
	Sum of NumberBarged	20,040	5		29		20,074
	Sum of NumberBypassed	0	0		0		0
	Sum of Numbertrucked	0	0		0		0
	Sum of SampleMorts	34	0		0		34
	Sum of FacilityMorts	82	0		0		82
	Sum of ResearchMorts	0	0		0		0
	Sum of TotalProjectMorts	116	0		0		116
<b>LMN</b>	Sum of NumberCollected	4,962	22	2	5		4,991
	Sum of NumberBarged	4,824	21	2	4		4,851
	Sum of NumberBypassed	60	0	0	1		61
	Sum of Numbertrucked	0	0	0	0		0
	Sum of SampleMorts	18	1	0	0		19
	Sum of FacilityMorts	57	0	0	0		57
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	75	1	0	0		76
<b>MCN</b>	Sum of NumberCollected	102,762		20		1,161	103,943
	Sum of NumberBarged	0		0		0	0
	Sum of NumberBypassed	102,623		20		1,160	103,803
	Sum of Numbertrucked	0		0		0	0
	Sum of SampleMorts	104		0		1	105
	Sum of FacilityMorts	35		0		0	35
	Sum of ResearchMorts	0		0		0	0
	Sum of TotalProjectMorts	139		0		1	140
Total Sum of NumberCollected		141,752	39	26	54	1,173	143,044
Total Sum of NumberBarged		38,684	38	6	52	11	38,791
Total Sum of NumberBypassed		102,683	0	20	1	1,160	103,864
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		186	1	0	0	2	189
Total Sum of FacilityMorts		196	0	0	1	0	197
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		382	1	0	1	2	386



### YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/9/13 7:23 AM

TO: 08/09/13

		Species						
Site	Data	CH0	CH1	CO	SO	ST	LU	Grand Total
<b>LGR</b>	Sum of NumberCollected	450,737	1,865,127	48,074	42,642	1,444,850		3,851,430
	Sum of NumberBarged	436,171	1,554,580	47,805	42,572	1,087,929		3,169,057
	Sum of NumberBypassed	13,693	308,258	210	52	356,574		678,787
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	497	173	2	3	40		715
	Sum of FacilityMorts	338	2,066	57	15	259		2,735
	Sum of ResearchMorts	38	52	0	0	47		137
	Sum of TotalProjectMorts	873	2,291	59	18	346		3,587
<b>LGS</b>	Sum of NumberCollected	422,903	1,026,511	36,885	22,611	1,174,664		2,683,574
	Sum of NumberBarged	422,194	979,239	36,685	22,607	1,108,331		2,569,056
	Sum of NumberBypassed	251	46,698	200	1	66,201		113,351
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	108	14	0	0	9		131
	Sum of FacilityMorts	350	560	0	3	123		1,036
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	458	574	0	3	132		1,167
<b>LMN</b>	Sum of NumberCollected	166,072	470,897	8,000	8,064	459,574	1	1,112,608
	Sum of NumberBarged	151,728	469,284	7,999	8,058	458,179	0	1,095,248
	Sum of NumberBypassed	13,372	1,079	0	2	1,142	113	15,708
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	103	16	0	0	18	0	137
	Sum of FacilityMorts	349	518	1	4	235	0	1,107
	Sum of ResearchMorts	0	0	0	0	0	0	0
	Sum of TotalProjectMorts	452	534	1	4	253	0	1,244
<b>MCN</b>	Sum of NumberCollected	1,742,122	1,098,880	43,803	314,397	255,352		3,454,554
	Sum of NumberBarged	0	0	0	0	0	0	0
	Sum of NumberBypassed	1,741,630	1,098,057	43,799	314,148	255,297		3,452,931
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	344	62	1	34	8		449
	Sum of FacilityMorts	148	761	3	215	47		1,174
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	492	823	4	249	55		1,623
<b>Total Sum of NumberCollected</b>		<b>2,781,834</b>	<b>4,461,415</b>	<b>136,762</b>	<b>387,714</b>	<b>3,334,440</b>	<b>1</b>	<b>11,102,166</b>
<b>Total Sum of NumberBarged</b>		<b>1,010,093</b>	<b>3,003,103</b>	<b>92,489</b>	<b>73,237</b>	<b>2,654,439</b>	<b>0</b>	<b>6,833,361</b>
<b>Total Sum of NumberBypassed</b>		<b>1,768,946</b>	<b>1,454,092</b>	<b>44,209</b>	<b>314,203</b>	<b>679,214</b>	<b>113</b>	<b>4,260,777</b>
<b>Total Sum of NumberTrucked</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Sum of SampleMorts</b>		<b>1,052</b>	<b>265</b>	<b>3</b>	<b>37</b>	<b>75</b>	<b>0</b>	<b>1,432</b>
<b>Total Sum of FacilityMorts</b>		<b>1,185</b>	<b>3,905</b>	<b>61</b>	<b>237</b>	<b>664</b>	<b>0</b>	<b>6,052</b>
<b>Total Sum of ResearchMorts</b>		<b>38</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>0</b>	<b>137</b>
<b>Total Sum of TotalProjectMorts</b>		<b>2,275</b>	<b>4,222</b>	<b>64</b>	<b>274</b>	<b>786</b>	<b>0</b>	<b>7,621</b>

Cumulative Adult Passage at Mainstem Dams Through: 08/09

DAM	ENDDATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/08	83345	33820	158089	7592	141713	20323	93097	26186	81663	12235	87543	17586	8021	1498	4208	1261	3348	661
TDA	08/08	69202	32311	117087	7175	107368	16911	85639	20750	69222	10392	74538	13909	3061	626	2299	726	1604	377
JDA	08/08	56991	28957	107655	6755	92410	15875	74764	19636	60814	10415	67514	14608	1193	242	952	324	639	223
MCN	08/08	52176	22279	102763	4787	83990	13854	75741	14808	64428	5104	63266	10833	0	0	0	0	0	0
IHR	08/07	38017	18611	71957	2905	58986	8558	11587	6297	13944	1419	17315	4228	0	0	0	0	0	0
LMN	08/08	36470	19053	68608	2891	58025	7379	11448	7632	14893	1547	18634	4170	0	0	0	0	0	0
LGS	08/08	35072	19443	68247	3449	53406	8429	9633	7562	14346	1572	17294	4868	0	0	0	0	0	0
LGR	08/08	35031	19940	66366	3525	53382	9851	8026	7381	12705	1636	15756	5503	0	0	0	0	0	0
PRD	08/06	13725	1298	19495	1015	15225	1406	68526	2586	48325	1200	51858	2121	0	0	0	0	0	0
WAN	08/06	13715	1661	19804	973	15699	2278	67659	1626	48187	1013	45097	1524	0	0	0	0	0	0
RIS	08/03	13345	3100	19881	800	14248	2237	63082	2382	46256	1742	47037	4495	0	0	0	0	0	0
RRH	08/03	6841	2101	6641	459	5306	853	53803	2712	38776	1651	34259	3468	0	0	0	0	0	0
WEL	07/22	7133	2980	5311	700	4618	880	33681	2822	15920	1075	16433	987	0	0	0	0	0	0
WFA	07/20	27273	1567	34963	1224	45613	1065	0	0	0	0	0	0	0	0	0	0	0	0

DAM	ENDDATE	Coho						Sockeye			Steelhead					Lamprey			
		2013		2012		10-Yr Avg.		2013	2012	10-Yr Avg.	2013	2012	10-Yr Avg.	Wild 2013	Wild 2012	10-Yr Avg.	2013	2012	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	08/08	13	0	51	17	19	3	185365	515624	177561	113097	117891	149387	58813	49491	59712	20720	22118	29094
TDA	08/08	0	0	11	0	0	0	161758	409998	146234	49211	76948	68051	28474	34611	30296	6833	3458	6349
JDA	08/08	2	1	9	0	3	0	155252	394038	149000	28366	46460	53612	15009	21866	22174	4148	2586	5129
MCN	08/08	1	0	2	0	0	0	134030	364076	125746	22569	36007	37981	11502	14933	14600	958	340	1752
IHR	08/07	0	0	0	0	0	0	892	451	425	13938	7075	20339	4326	2381	5864	159	165	223
LMN	08/08	0	0	0	0	0	0	1012	476	530	10591	7875	22730	4414	3331	7163	48	44	64
LGS	08/08	0	0	0	0	0	0	974	444	508	5379	5878	16166	2700	3197	5380	16	23	61
LGR	08/08	0	0	0	0	0	0	721	441	608	9432	10451	14487	4294	4634	5007	11	12	17
PRD	08/06	0	0	2	0	0	0	162787	407947	154581	2011	3159	4019	0	0	0	1716	253	744
WAN	08/06	0	0	1	0	0	0	155527	449828	196207	1679	3063	4171	0	0	0	494	154	287
RIS	08/03	0	0	0	0	0	0	157575	408801	151753	1137	2059	2346	749	1128	1389	59	13	138
RRH	08/03	0	0	0	0	0	0	130138	361477	128961	716	1989	1805	477	1227	1026	45	5	47
WEL	07/22	0	0	0	0	0	0	106773	268984	107370	222	367	337	151	217	194	2	0	0
WFA	07/20	2	0	0	0	0	0	0	0	0	16935	30495	24909	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.