



Fish Passage Center

Weekly Report #14 - 22

August 15, 2014

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Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 27% and 260% of average at individual sub-basins over August. Precipitation above The Dalles has been 108% of average over August. Over the 2014 water year, precipitation has ranged between 77% and 96% of average.

Table 1. Summary of July precipitation and cumulative October through August 13, 2014, precipitation with respect to average (1971–2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2014 August 1–13, 2014		Water Year 2014 October 1, 2013 to August 13, 2014	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.33	34	31.9	90
Snow River above Ice Harbor	0.94	240	17.1	81
Columbia above The Dalles	0.63	108	21.6	83
Kootenai	0.34	31	33.5	92
Clark Fork	0.52	76	20.6	79
Flathead	0.21	27	32.5	96
Pend Oreille River Basin above Waneta Dam	0.35	47	26.9	87
Salmon River Basin	1.17	207	21.0	77
Upper Snake Tributaries	1.51	260	23.1	91
Clearwater	0.32	50	34.3	88
Willamette River above Portland	0.13	27	51.9	83

Grand Coulee Reservoir is at 1285.1 feet (8-14-14) and has drafted 2.2 feet over the last week (4.9 feet from full). Outflows at Grand Coulee have ranged between 105.9 and 127.0 Kcfs over the last week. The end of August draft limit at Grand Coulee is 1280 feet this year,

with an additional 1.0 foot of draft by the end of August as part of the Lake Roosevelt Incremental Storage Release Program.

The Libby Reservoir is currently at elevation 2453.5 feet (8-14-14) and has refilled 0.7 Kcfs (5.5 feet from full). Daily average outflows at Libby Dam have been 9.0 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3557.0 feet (8-14-14) and has drafted 1.0 feet over the previous week (3.0 feet from full). Daily average outflows at Hungry Horse have ranged between 3.05 and 3.08 Kcfs over the last week.

Dworshak is currently at an elevation of 1556.6 feet (8-14-14) and has drafted 8.6 feet over the previous week. Daily average outflows at Dworshak have ranged between 9.8 and 12.1 Kcfs over the last week.

The Brownlee Reservoir was at an elevation of 2057.8 feet on August 14, 2014, and has drafted 1 foot last week. Inflows to Brownlee Dam ranged between 8.33 and 10.18 Kcfs over the period of August 8 to August 14.

The Summer Biological Opinion flow period began on June 21st in the lower Snake River (Lower Granite). According to the June Final Water Supply Forecast (June 6, 2014), the flow objective this summer is 52 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 27.7 Kcfs over the past week and 45.6 since the beginning of the summer flow period.

The flow objective at McNary over the summer period (July 1st to August 31st) is 200 Kcfs. Flows at McNary Dam have averaged 169.8 Kcfs over the past week and 219.5 Kcfs since the beginning of the summer flow period.

Spill

The Snake River projects transitioned to the summer spill program on June 21st. At the lower Columbia projects summer spill was initiated on June 16th. Summer spill operations throughout the FCRPS will continue until August 31st.

Earlier in the week, spill at Lower Granite Dam was less than 18 Kcfs as a result of low flows and the operation of one turbine unit. Beginning on April 11th, operations at the project were modified to replace neutral bushings on Transformer 1. Between August 11 and 17, T1 units 1–4 are out of service from 6 a.m. through 5 p.m., while T2 units 5 and 6 return to service every other day for 24 hours. The result of these operations are that on some days spill exceeds the 18 Kcfs, while on others spill is less than 18 Kcfs. Spill at Little Goose Dam transitioned to a flat spill operation due to decreased river flows. A flat spill specified in the FOP as 7–11 Kcfs (dependent on flow) is necessary to achieve the prescribed spill level downstream at Lower Monumental Dam and to maintain minimum operating pool operations. At Lower Monumental Dam, daily average spill was often less than the 17 Kcfs specified in the Fish Operations Plan due to low flow and powerhouse minimum operation requirements. At Ice Harbor spill is occurring as river flow in excess of that needed for the operation of one turbine unit.

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

At the Middle Columbia River projects, McNary Dam spilled 50% of daily average flow. At John Day Dam the 30% spill level is in effect. Spill at The Dalles Dam averaged 40% of total daily flow. Bonneville Dam spilled an alternating 85 Kcfs/121 Kcfs and 95 Kcfs/95 Kcfs.

Project	Spill Level Day/Night
McNary	50%/50%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	85 Kcfs/121 Kcfs and 95 Kcfs/95 Kcfs

New in 2014 is a change in the way the U.S. Army Corps of Engineers will assess whether a project is in compliance with the total dissolved gas variances in place. The States of Oregon and Washington use different methodologies to estimate the 12-hour average TDG. For Oregon, the 12-hour average is based on the 12 highest hourly TDG measurements in a single calendar day (not necessarily consecutive). For Washington, the 12-hour average is based on 12-hour rolling averages. The highest of the rolling averages is what is reported as the 12-hour average for a given day. In 2014, the location of a TDG monitor and/or type of monitor will dictate which of these methodologies is used for compliance monitoring. The Washington methodology will apply to all the lower Snake River projects, as well as the lower Columbia River forebay monitors (since Oregon does not have a forebay TDG requirement). On any given day the compliance of the tailrace monitors at the lower Columbia River projects will be determined using either the Washington or Oregon methodology, whichever is the most restrictive, and spill may be decreased if needed.

Monitoring for signs of gas bubble trauma (GBT) occurred at Bonneville and Rock Island dams over the past week. No fish were observed with signs of GBT. The action criteria for GBT are 15% of total fish with any signs of GBT in the fins, or 5% with severe signs (Rank 3 or greater).

Smolt Monitoring

Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, LGR). Sampling at the SMP traps has been completed for the 2014 out-migration season.

Subyearling Chinook dominated the collections at all the SMP dam sites this week. When compared to last week, subyearling Chinook passage increased at BON, LGR, and LGS and decreased at RIS and MCN this week. Subyearling Chinook passage this week remained the same at LMN. Due to the high temperature protocol at JDA, comparisons in passage are not possible.

High temperature sampling protocols were in effect this week at Bonneville Dam (BON). Under these high temperature sampling protocols, index

sampling occurred every other day. All fish were bypassed on non-sample days. The high temperature protocol will remain in place until the daily average temperature in the forebay falls below 69.5°F. Subyearling Chinook passage at BON increased this week, when compared to the previous week. The daily average passage index for subyearling Chinook at BON this week was about 16,800 per day. Last week's daily average passage index was about 11,200 per day. No Pacific lamprey were encountered in this week's samples at BON.

High temperature sampling protocols were in effect this week at John Day Dam (JDA). Under these high temperature sampling protocols, the SMP crew at JDA samples only twice a week (Monday and Thursday), for condition only. It is important to note that this type of sampling 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. No Pacific lamprey juveniles were encountered in this week's samples at JDA. The high temperature sampling protocols will continue until the daily average temperature in the forebay falls below 69.5°F.

The high temperature sampling protocols were in effect this week at McNary Dam (MCN). Under the high temperature protocols, sampling at MCN remains every-other-day except the target sample size for handling is reduced (from between 300–500 to approximately 100 fish). As with BON and JDA, this high temperature protocol will remain until the daily average temperature in the forebay falls below 69.5°F. Subyearling Chinook passage decreased this week when compared to the previous week. The daily average passage index for subyearling Chinook at MCN this week was about 30,800 per day. Last week's daily average passage index for subyearling Chinook was about 63,900. Pacific lamprey macrophthalmia were encountered in two of the three samples this week. The daily average collection for Pacific lamprey macrophthalmia this week was about 100 per day, which is a decrease from last week's daily average collection of about 175 per day.

This week's daily average passage index for subyearling Chinook at Lower Granite Dam (LGR)

was nearly 2,100 per day, which is an increase from last week's daily average passage index of about 1,400 per day. Only one Pacific lamprey macrophthalmia was sampled this week, on August 11th.

Compared to last week, passage of subyearling Chinook increased at Little Goose (LGS) but did not change at Lower Monumental (LMN). This week's daily average passage index for subyearling Chinook at LGS was about 3,200 per day while that at LMN was about 400 per day. Last week's daily average passage indices for subyearling Chinook at these sites were nearly about 2,500 per day at LGS and 480 at LMN. No Pacific lamprey ammocoetes were encountered this week at either LGS or LMN. Pacific lamprey macrophthalmia were encountered in six of this week's samples at LGS but only two at LMN. This week's daily average collection for Pacific lamprey macrophthalmia at LGS was 10 per day.

Passage of subyearling Chinook at Rock Island Dam (RIS) decreased again this week, when compared to last week. This week's daily average passage index for subyearling Chinook was about 160 per day whereas that for last week was about 260 per day. So far this year, only Pacific lamprey macrophthalmia have been collected at RIS. RIS collected its first Pacific lamprey ammocoete of the 2014 season on August 14th. A total of 21 ammocoetes were in the August 14th sample. Pacific lamprey macrophthalmia were encountered in six of this week's samples, with a daily average collection of three per day.

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 scheduled for this zone this week. In addition, no new releases are scheduled for this zone over the next 2 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. There were no releases scheduled for this zone this week and no releases are scheduled for this zone over the next 2 weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were no releases scheduled for this zone this week. There are no other releases scheduled for this zone over the next 2 weeks.

Adult Passage

Fall Chinook began to pass Bonneville Dam on August 1st. The adult fall Chinook count of 8,709 is about 52% of the 2013 count of 16,714 and about 110% of the 10-year average count of 7,912. The 2014 Bonneville Dam fall Chinook jack count of 3,044 has 309 more fish than the 2013 count of 2735 and 1,556 more fish than the 10-year average count of 1488. The 2014 adult summer Chinook count of 14,567 at Lower Granite Dam in the Snake River is about 1.8 times greater than the 2013 count, while being about 96% of the 10-year average count. The 2014 Lower Granite summer Chinook jack count of 7,083 is about 94% of the 2013 count, while being about 1.2 times greater than the 10-year average count.

The 2014 Bonneville Dam adult steelhead count of 165,235 is about 1.2 times greater than the 2013 count of 139,581, while being about 91% of the 10-year average count of 181,908. The 2014 Bonneville Dam adult wild steelhead count of 79,989 is about 1.16 times greater than the 2013 count of 68,675 and about 1.1 times greater than the 10-year average count of 70,085. Daily adult steelhead counts at Lower Granite Dam ranged from 118 to 256 adults per day last week. This year's Lower Granite steelhead count of 14,186 is about 1.4 times greater than the 2013 count of 10,108, while having 753 fewer fish than the 10-year average count of 14,939. The 2014 Lower Granite Dam adult wild steelhead count of 7,050 is about 1.5 times greater than the 2013 count of 4,715 and is about 1.3 times greater than the 10-year average count of 5,541. At Willamette Falls, the 2014 count for steelhead was 26,389 as of August 13th. This year's steelhead count is about 1.5 times greater than the 2013 count of 17,378 and has 1,609 more fish than the 10-year average count of 24,780.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 8 and 70 last week.

The 2014 adult sockeye count at Bonneville Dam of 614,075 is about 3.3 times greater than the 2013 count of 185,452 and about 3.2 times greater than the 10-year average count of 192,193. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2014 McNary Dam adult sockeye count of 545,845 is about 4.1 times greater than the 2013 count of 134,123 and about 4 times greater than the 10-year average count of 135,976. The Lower Granite Dam 2014 adult sockeye count of 2,707 is about 3.7 times greater than the 2013 count of 731 and about 4 times greater than the 10-year average count of 680.

One hundred and eighty-six adult coho have crossed Bonneville Dam so far this year. As of August 14th at Bonneville Dam, the adult shad count was 2,603,116. This year's shad count is about 69.4% of the 2013 count of 3,750,807 and 93.6% of the 10-year average count of 2,782,350.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 8/1/2014 to 8/14/2014

No Releases Scheduled

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 8/15/2014 to 8/28/2014

No Releases Scheduled

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

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/01/2014	127.3	0.1	127.9	0.0	135.9	10.0	129.6	12.3	137.7	25.4	137.7	20.0	148.0	28.9
08/02/2014	114.4	0.1	118.4	0.0	120.3	8.9	114.7	12.4	123.8	25.1	123.6	20.0	128.4	28.4
08/03/2014	106.8	0.1	103.8	0.0	109.7	8.7	107.7	12.3	114.2	25.3	115.9	20.0	121.4	28.4
08/04/2014	123.9	0.1	124.2	0.0	122.5	9.1	115.4	12.4	120.7	27.0	117.1	19.8	118.3	27.9
08/05/2014	122.5	0.1	123.2	0.0	123.7	8.8	120.5	15.2	122.4	27.0	122.3	20.1	127.2	30.0
08/06/2014	130.4	0.1	131.0	0.0	133.6	10.0	128.8	13.4	135.3	26.6	132.0	20.2	141.3	26.9
08/07/2014	127.0	0.1	124.1	0.0	133.1	9.6	132.6	13.4	136.2	25.0	135.0	20.2	137.1	27.1
08/08/2014	125.2	0.1	125.4	0.0	127.4	9.6	120.8	11.1	124.4	24.1	126.4	22.7	129.6	24.3
08/09/2014	121.6	0.1	122.4	0.0	124.5	9.3	120.2	11.2	126.5	24.0	126.2	20.0	131.5	18.8
08/10/2014	107.6	0.1	110.0	0.0	120.1	12.0	115.9	10.5	120.1	21.6	122.8	22.6	126.7	22.8
08/11/2014	124.7	0.1	120.3	0.0	126.8	9.0	123.2	10.5	127.3	21.5	127.1	20.1	126.6	16.9
08/12/2014	117.2	0.1	117.8	0.0	120.3	8.5	116.1	10.0	120.0	21.8	119.6	20.1	112.9	16.4
08/13/2014	110.4	0.1	108.0	0.0	113.7	7.8	107.3	9.4	110.6	21.0	117.7	20.2	121.2	16.1
08/14/2014	106.0	0.1	108.6	0.0	112.9	8.7	111.9	10.7	115.9	24.8	115.7	20.1	116.3	19.5

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

Date	Dworshak		Brownlee Inflow	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill		Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/01/2014	9.8	0.0	---	12.1	31.2	18.4	29.2	10.1	32.9	17.0	33.5	23.4
08/02/2014	9.8	0.0	---	13.3	31.2	18.4	31.0	9.1	32.3	16.6	33.6	23.7
08/03/2014	9.9	0.0	---	11.5	31.2	18.4	31.7	9.0	31.3	17.0	33.1	22.9
08/04/2014	9.8	0.0	---	10.2	29.5	16.6	29.2	8.8	28.7	16.6	30.2	20.4
08/05/2014	9.9	0.0	---	10.3	26.5	17.8	26.2	8.8	27.1	14.5	29.5	19.6
08/06/2014	9.8	0.0	---	10.2	26.2	18.2	26.3	8.8	26.5	14.3	26.0	16.3
08/07/2014	9.8	0.0	---	10.5	28.0	18.3	28.2	8.7	29.2	17.0	29.4	18.9
08/08/2014	9.8	0.0	---	9.0	26.5	13.8	27.0	8.7	26.3	13.9	28.0	18.1
08/09/2014	11.8	1.9	---	9.8	26.3	13.6	29.2	8.7	29.8	15.9	31.7	22.0
08/10/2014	11.9	2.0	---	10.3	29.3	16.7	29.7	8.7	29.0	15.6	28.6	18.9
08/11/2014	12.0	2.0	---	10.5	28.2	21.0	28.6	8.7	27.9	17.7	30.0	19.9
08/12/2014	12.0	2.0	---	10.4	28.8	16.5	29.9	15.7	29.9	14.9	30.3	20.1
08/13/2014	10.1	0.0	---	11.8	27.0	19.3	27.7	9.0	28.9	13.9	30.4	20.3
08/14/2014	10.1	0.0	---	10.1	27.7	15.0	27.3	9.0	28.8	13.7	28.5	18.3

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/01/2014	197.6	99.1	183.4	54.8	163.3	65.3	176.8	91.5	0.3	72.7
08/02/2014	174.7	87.5	156.6	47.0	147.9	59.2	165.2	96.6	0.0	56.2
08/03/2014	151.5	76.1	145.9	43.9	133.0	53.2	153.6	100.4	0.0	40.8
08/04/2014	168.0	84.3	165.5	49.7	153.8	61.4	172.7	95.1	0.0	65.3
08/05/2014	164.0	82.1	150.1	45.1	138.2	55.2	156.6	90.3	0.0	53.9
08/06/2014	168.9	84.6	163.3	48.8	149.1	59.6	154.4	96.1	0.0	45.9
08/07/2014	177.6	88.8	167.8	50.3	157.7	63.0	177.0	100.8	1.6	62.2
08/08/2014	171.4	85.8	165.5	49.7	154.3	61.8	159.3	96.6	0.0	50.3
08/09/2014	170.7	85.4	168.8	50.5	152.5	61.0	167.5	91.4	0.0	63.7
08/10/2014	166.3	83.2	153.9	46.1	144.3	58.0	169.2	95.9	0.0	60.9
08/11/2014	177.9	88.9	170.6	51.2	157.6	62.8	166.0	100.2	0.0	53.4
08/12/2014	169.4	84.8	152.9	45.7	141.2	56.2	161.4	95.8	0.0	53.1
08/13/2014	165.8	83.0	162.9	48.9	153.3	61.0	168.5	91.0	1.4	63.7
08/14/2014	167.0	83.6	163.3	48.7	151.8	60.7	159.9	96.5	0.0	50.9

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
Lower Granite Dam											
Little Goose Dam											
Lower Monumental Dam											
McNary Dam											
	08/04/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	08/02/14	Chinook + Steelhead	86	0	0	0.00%	0.00%	0	0	0	0
	08/06/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	08/10/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/12/14	Chinook + Steelhead	96	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	08/05/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/07/14	Chinook + Steelhead	101	0	0	0.00%	0.00%	0	0	0	0
	08/13/14	Chinook + Steelhead	36	0	0	0.00%	0.00%	0	0	0	0
	08/14/14	Chinook + Steelhead	100	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	<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>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>
8/1	107.3	107.7	108.3	24	---	---	---	0	110.1	110.4	110.6	24	110.1	110.6	110.9	24	111.0	111.2	111.5	24
8/2	107.3	107.5	107.8	24	---	---	---	0	110.6	110.6	110.8	24	110.0	110.4	111.1	24	110.8	111.1	111.5	24
8/3	106.5	106.7	107.2	24	---	---	---	0	110.4	110.5	110.6	24	109.8	110.4	110.9	24	110.6	111.2	111.5	24
8/4	106.8	107.4	107.8	24	---	---	---	0	110.4	110.5	110.8	24	110.7	111.2	111.5	24	110.9	111.5	112.0	24
8/5	107.2	107.6	108.1	24	---	---	---	0	110.4	110.5	110.6	24	110.6	110.9	111.4	24	111.4	112.1	112.5	24
8/6	107.2	107.6	108.1	24	---	---	---	0	110.3	110.4	110.6	24	110.1	110.6	110.8	24	111.1	111.4	111.6	24
8/7	107.0	107.4	108.1	24	---	---	---	0	110.2	110.4	110.5	24	109.9	110.3	110.7	24	110.5	110.9	111.3	24
8/8	107.2	107.6	108.2	24	---	---	---	0	110.1	110.2	110.3	24	109.5	109.6	109.8	24	110.1	110.5	110.8	24
8/9	106.9	107.1	107.4	24	---	---	---	0	109.7	109.8	110.0	24	108.7	109.1	109.4	24	109.4	109.8	110.2	24
8/10	106.6	107.0	107.3	24	---	---	---	0	109.6	109.7	109.9	24	108.1	108.7	109.4	24	109.2	109.7	109.9	24
8/11	106.8	107.3	107.6	24	---	---	---	0	109.9	110.1	110.2	24	108.7	109.2	109.6	24	109.6	110.3	110.6	24
8/12	107.2	107.4	107.6	24	---	---	---	0	110.3	110.4	111.2	24	108.8	109.1	109.6	24	110.0	110.4	111.0	24
8/13	107.2	107.6	107.9	24	---	---	---	0	109.5	110.1	112.1	24	108.1	108.4	108.9	24	109.1	109.4	109.8	24
8/14	107.4	107.7	108.1	23	---	---	---	0	108.5	108.7	109.1	23	107.3	107.6	107.9	23	108.1	108.3	108.7	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>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>
8/1	110.6	110.8	111.3	24	111.4	111.7	112.3	18	112.5	113.0	113.5	18	112.0	112.4	112.6	24	114.8	115.5	115.8	24
8/2	110.7	111.1	111.6	24	110.7	111.0	112.2	19	111.5	112.0	113.4	19	111.6	111.9	112.2	24	114.0	114.8	115.3	24
8/3	111.1	111.7	112.1	24	110.4	110.9	111.6	19	111.1	112.0	113.0	19	111.1	111.4	111.5	24	113.6	114.4	114.6	24
8/4	110.9	111.3	111.8	24	110.9	111.4	112.2	18	111.7	112.5	113.6	18	111.3	111.6	111.8	24	114.1	114.8	115.2	24
8/5	111.5	112.1	113.2	24	111.1	111.3	111.9	18	112.1	112.6	113.7	18	111.4	111.5	111.8	24	114.8	115.8	116.8	24
8/6	110.9	111.1	111.4	24	111.0	111.3	111.7	18	112.3	112.8	113.6	18	111.2	111.3	111.5	24	115.0	115.4	116.1	24
8/7	110.6	111.2	112.0	24	110.6	111.0	111.4	22	111.9	112.5	113.5	22	111.0	111.3	111.5	24	114.7	115.0	115.6	24
8/8	110.7	111.3	111.9	24	109.9	110.0	110.8	14	111.1	111.4	112.7	14	110.9	111.1	111.2	24	113.7	114.4	115.8	24
8/9	109.3	109.6	110.0	24	110.0	110.0	110.6	6	111.2	111.2	112.1	6	109.9	110.3	110.8	24	112.7	113.5	114.3	24
8/10	109.6	110.0	110.8	24	109.7	109.9	110.9	14	110.9	111.2	112.2	14	110.0	110.4	110.7	24	112.4	113.3	114.2	24
8/11	109.8	110.3	110.9	24	110.1	110.2	111.2	13	111.1	111.3	113.0	13	110.9	111.5	112.1	24	113.3	114.6	115.4	24
8/12	110.3	110.9	111.2	24	110.3	110.3	111.4	8	111.3	111.3	112.6	8	111.2	111.4	111.6	24	113.2	113.9	114.7	24
8/13	110.6	112.6	114.1	24	109.8	110.1	110.8	19	110.4	110.8	112.2	19	110.4	110.6	111.0	24	111.8	113.1	114.2	24
8/14	111.7	115.1	118.4	23	108.9	109.1	109.5	16	109.7	109.9	110.4	16	109.6	109.8	110.1	23	111.8	112.6	113.4	23

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>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>
8/1	112.2	112.5	112.9	24	108.6	113.7	114.0	23	111.9	112.5	112.9	24	---	---	---	0	110.0	110.5	110.9	24
8/2	111.6	111.8	112.2	24	105.3	110.6	113.2	24	111.7	112.2	112.7	24	---	---	---	0	110.3	110.6	110.9	24
8/3	111.2	111.5	111.8	24	102.3	104.6	112.9	24	111.0	111.9	113.0	24	---	---	---	0	109.6	110.2	110.4	24
8/4	111.4	112.1	112.7	24	103.9	107.5	113.5	23	111.2	112.3	113.1	24	---	---	---	0	109.6	110.3	111.0	24
8/5	111.4	112.0	112.7	24	104.1	108.0	113.6	23	109.7	111.0	112.0	24	---	---	---	0	108.4	109.0	109.8	24
8/6	111.3	111.9	112.4	24	107.2	112.9	113.7	24	107.8	108.9	110.3	24	---	---	---	0	106.2	106.9	108.2	24
8/7	111.1	112.0	112.4	24	107.8	113.1	113.7	24	108.4	109.9	111.1	24	---	---	---	0	106.6	107.1	107.8	24
8/8	110.6	110.9	111.2	24	105.6	110.8	113.1	23	107.2	107.9	108.6	24	109.2	109.5	110.2	16	106.6	107.4	108.1	24
8/9	109.9	110.5	110.7	24	105.5	111.0	112.9	24	108.5	110.2	110.8	24	109.2	110.3	111.0	24	106.0	107.3	108.2	24
8/10	109.9	110.6	111.0	24	102.9	105.9	112.6	24	110.0	111.1	112.4	24	110.8	111.7	114.9	24	109.0	109.8	111.4	24
8/11	110.5	111.3	111.9	24	105.1	110.2	112.9	24	110.3	111.7	112.7	24	110.5	111.1	111.4	24	109.8	110.1	110.4	24
8/12	111.1	111.4	111.7	24	103.4	106.6	112.8	23	110.4	111.4	112.0	24	110.3	110.7	111.3	24	109.4	110.2	110.8	24
8/13	110.1	110.4	110.6	24	101.9	103.8	112.2	24	108.5	109.9	110.8	24	109.4	109.8	110.3	24	107.7	107.9	108.1	24
8/14	108.3	109.3	110.1	23	101.2	102.5	110.6	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	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
8/1	113.1	113.3	113.6	24	---	---	---	0	100.7	101.0	101.3	24	102.9	103.7	104.2	24	101.8	102.9	103.8	24
8/2	113.0	113.2	113.5	24	---	---	---	0	100.8	101.3	101.8	24	103.2	104.4	105.6	24	102.0	103.3	104.8	24
8/3	113.1	113.4	113.6	24	---	---	---	0	100.9	101.3	101.7	24	103.2	104.4	105.3	24	101.9	103.0	103.9	22
8/4	112.9	113.0	113.2	24	---	---	---	0	101.1	101.5	101.8	24	103.3	104.4	105.3	24	101.9	103.1	104.2	23
8/5	112.5	112.9	113.3	24	---	---	---	0	101.1	101.4	101.9	24	103.2	104.4	105.4	24	100.2	100.2	100.6	5
8/6	110.8	111.4	113.0	24	---	---	---	0	100.9	101.3	101.8	24	103.1	104.3	105.3	24	102.4	102.5	103.7	13
8/7	110.8	111.6	112.9	24	---	---	---	0	100.9	101.3	101.7	24	103.0	104.3	105.3	24	101.6	103.0	104.3	24
8/8	110.7	111.8	114.8	24	---	---	---	0	100.8	101.2	101.7	24	102.8	103.9	104.8	24	101.1	102.2	103.3	24
8/9	109.5	110.6	110.9	24	---	---	---	0	103.7	104.1	104.3	24	104.4	105.6	106.4	24	101.1	102.6	103.7	24
8/10	111.6	112.8	113.9	24	---	---	---	0	103.9	104.2	104.4	24	104.6	105.7	106.4	24	101.6	103.0	104.2	24
8/11	112.2	112.5	112.9	24	---	---	---	0	104.1	104.5	104.8	24	104.9	105.9	106.7	24	101.7	103.0	104.2	24
8/12	112.0	112.8	115.1	24	---	---	---	0	104.3	104.6	105.6	24	104.8	105.6	106.8	24	101.4	102.4	103.4	24
8/13	110.7	111.3	112.0	24	---	---	---	0	101.0	101.3	101.9	24	102.8	103.7	104.4	24	100.4	100.9	101.7	24
8/14	---	---	---	0	---	---	---	0	100.8	101.2	101.8	23	102.5	103.5	104.7	23	100.8	101.6	102.8	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
8/1	104.4	105.7	106.8	24	103.8	104.1	104.3	24	116.5	116.8	117.4	24	113.6	114.1	115.0	24	114.0	114.4	114.8	24
8/2	103.7	105.9	107.3	24	104.0	104.2	104.4	24	116.3	116.8	117.4	24	114.4	114.7	115.0	24	113.5	114.0	114.5	24
8/3	103.9	106.1	107.7	24	103.7	103.8	104.1	24	116.1	116.6	116.9	24	114.1	114.7	115.4	24	113.0	113.4	113.7	24
8/4	103.7	105.9	107.5	24	103.7	103.9	104.0	24	116.0	116.3	116.8	24	112.8	113.2	113.6	24	111.6	112.5	112.8	24
8/5	103.7	106.0	107.6	24	103.4	103.5	103.7	24	117.7	119.3	119.7	24	113.6	113.8	114.1	24	109.9	110.2	110.4	24
8/6	103.5	105.7	107.3	24	102.0	102.3	102.8	24	118.2	119.5	120.2	24	112.9	113.2	113.5	24	109.7	110.2	110.6	24
8/7	103.5	105.8	107.5	24	101.5	101.7	101.9	24	117.8	119.1	120.2	24	113.0	113.3	113.6	24	109.9	110.2	110.6	24
8/8	103.0	104.8	106.1	24	101.1	101.3	101.5	24	116.0	116.3	116.9	24	112.5	113.0	113.2	24	109.7	109.9	110.3	24
8/9	103.4	105.9	107.6	24	100.9	101.1	101.3	24	116.4	116.7	117.1	24	111.8	112.1	112.6	24	109.9	110.5	111.7	24
8/10	103.9	106.0	107.4	24	100.9	101.0	101.2	24	116.1	116.4	117.1	24	110.8	111.1	111.4	24	109.5	110.3	110.7	24
8/11	103.9	105.8	107.2	24	101.0	101.2	101.4	24	117.7	118.8	119.1	24	112.1	112.6	113.0	24	109.8	110.5	110.8	24
8/12	103.8	105.4	106.7	24	101.0	101.2	101.5	24	115.6	116.9	118.2	24	113.3	113.9	114.5	24	113.0	114.6	115.6	24
8/13	102.9	104.1	105.5	24	100.5	100.9	101.2	24	117.0	118.4	119.1	24	112.8	113.1	113.6	24	111.8	113.2	114.2	23
8/14	102.6	104.2	105.7	23	100.7	101.4	101.8	23	116.6	117.2	118.2	23	112.5	112.6	112.8	21	110.3	110.7	111.3	21

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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
8/1	111.4	111.9	112.4	24	113.9	115.8	116.4	24	114.2	114.4	114.7	24	113.3	113.8	114.6	24	---	---	---	0
8/2	112.3	112.5	112.7	24	115.2	115.8	116.8	24	114.0	114.2	114.3	24	113.3	113.8	114.4	24	---	---	---	0
8/3	112.5	112.8	113.2	24	115.8	116.3	116.8	24	113.7	113.9	114.4	24	113.5	114.2	114.9	24	---	---	---	0
8/4	112.8	113.2	113.5	24	115.3	115.6	116.0	24	113.6	113.8	113.9	24	113.3	113.7	114.3	24	---	---	---	0
8/5	112.3	112.6	112.9	24	114.1	115.3	115.9	24	112.7	113.0	113.2	24	112.4	113.3	113.6	24	---	---	---	0
8/6	111.6	112.1	112.4	24	114.1	115.4	116.1	24	111.8	112.0	112.3	24	111.0	112.1	113.2	24	---	---	---	0
8/7	111.7	111.9	112.1	24	115.7	116.0	116.4	24	112.1	112.4	112.6	24	113.4	114.0	114.5	24	---	---	---	0
8/8	110.1	110.7	111.0	24	113.8	114.5	115.6	24	112.0	112.5	112.8	19	112.6	113.5	114.2	24	---	---	---	0
8/9	108.8	109.1	109.5	24	114.7	115.6	116.3	24	111.8	112.0	112.4	24	113.5	114.1	114.6	24	---	---	---	0
8/10	108.4	108.7	108.8	24	114.2	114.9	115.6	24	110.7	111.0	111.5	24	113.1	113.7	114.0	24	---	---	---	0
8/11	108.5	109.1	109.6	24	116.4	117.7	118.9	24	111.7	112.1	112.6	24	113.1	113.4	113.9	24	---	---	---	0
8/12	109.5	109.8	110.3	24	114.0	115.3	116.0	24	112.2	112.4	112.6	24	113.3	113.7	114.7	24	---	---	---	0
8/13	109.5	109.6	109.9	24	114.2	115.3	116.0	24	112.4	112.6	112.8	24	113.1	113.6	114.3	24	---	---	---	0
8/14	109.4	109.6	109.7	23	113.7	114.5	115.8	23	112.4	112.5	112.6	23	113.0	113.5	114.0	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	AVG		
8/1	110.9	111.4	111.7	24	116.5	117.0	117.8	24	110.5	110.9	111.3	24	114.2	114.9	115.4	24	111.0	111.2	111.4	24
8/2	110.5	110.8	111.5	24	116.0	116.5	116.6	24	111.2	111.4	111.6	24	114.7	115.0	115.3	24	111.4	111.7	111.9	24
8/3	109.2	109.6	109.8	24	114.6	115.0	115.3	24	110.8	111.2	111.5	24	114.6	115.1	115.8	24	111.1	111.7	111.9	24
8/4	110.3	110.6	111.0	24	115.6	116.1	117.2	24	111.5	112.0	112.3	24	114.3	114.7	115.0	24	112.1	112.5	112.9	24
8/5	109.5	109.6	109.9	24	115.5	116.1	116.5	24	110.8	111.3	111.9	24	113.6	114.2	114.9	24	109.6	110.7	111.6	24
8/6	109.1	109.5	109.8	24	115.5	116.0	116.4	24	108.9	109.2	109.4	24	114.4	115.0	115.5	24	106.4	106.7	107.3	24
8/7	109.0	109.3	109.5	24	116.1	116.9	117.3	24	108.0	108.3	108.6	24	114.4	114.8	115.2	24	106.6	106.8	106.9	24
8/8	107.8	108.0	108.5	24	116.1	116.3	116.5	24	106.7	107.1	107.6	24	113.8	114.1	114.4	24	106.4	106.7	106.9	24
8/9	107.2	107.4	107.7	24	115.9	116.1	116.3	24	105.2	105.5	105.7	24	113.4	113.6	113.9	24	106.4	106.8	107.4	24
8/10	107.5	108.0	109.8	24	115.7	116.3	116.6	24	105.5	105.8	106.8	24	113.0	113.5	113.7	24	108.7	109.0	109.2	24
8/11	108.2	108.9	109.3	24	115.9	116.7	116.9	24	106.4	106.9	108.5	24	112.8	113.4	113.8	24	109.3	109.7	110.1	24
8/12	107.9	108.1	108.5	24	116.4	116.8	117.3	24	106.5	107.1	107.9	24	112.7	113.1	113.9	24	109.3	110.1	110.2	24
8/13	107.7	108.0	108.4	24	115.8	116.4	117.0	24	105.9	106.2	106.7	24	111.0	111.5	111.9	24	107.7	108.2	108.6	24
8/14	107.4	107.6	107.9	23	115.6	115.8	116.1	23	105.9	106.3	106.6	23	109.7	110.5	111.4	23	106.5	106.8	107.0	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	AVG		
8/1	115.6	116.1	116.6	24	110.6	111.1	111.5	24	115.4	116.0	116.3	24	112.6	113.9	114.9	24	115.5	116.3	118.1	24
8/2	115.5	116.0	116.6	24	110.8	110.9	111.1	24	116.4	117.0	117.5	24	113.5	115.1	116.3	24	115.2	116.1	117.9	24
8/3	115.2	115.6	116.1	24	110.1	110.8	111.0	24	117.8	118.4	118.8	24	114.6	116.6	118.1	24	116.8	117.0	117.2	24
8/4	116.0	116.8	117.4	24	110.7	111.1	111.5	24	116.2	116.5	116.9	24	115.5	116.3	116.9	24	116.9	117.2	117.6	24
8/5	114.4	114.9	115.4	24	108.5	109.1	110.2	24	114.3	114.8	115.1	24	112.1	112.9	113.5	24	115.6	116.7	118.6	24
8/6	112.7	113.2	113.6	24	106.0	106.3	107.0	24	115.3	116.1	117.1	24	111.8	113.9	115.7	24	115.7	117.1	118.8	24
8/7	112.9	114.0	114.5	24	105.4	105.6	105.9	24	114.8	116.1	117.1	24	112.4	113.9	115.2	24	117.0	117.6	118.5	24
8/8	113.0	113.6	114.1	24	105.0	105.2	105.4	24	114.6	115.8	116.6	24	109.9	111.4	112.2	24	116.8	117.1	117.3	24
8/9	113.3	113.9	114.2	24	105.5	106.5	107.1	24	114.4	115.0	115.2	24	111.8	112.6	113.5	24	115.5	116.5	118.4	24
8/10	114.7	115.5	116.0	24	107.9	109.1	109.6	24	115.7	116.4	117.4	24	112.5	114.5	116.2	24	116.0	117.3	119.2	24
8/11	115.2	116.3	116.9	24	111.2	112.0	112.2	24	117.1	117.8	118.4	24	113.8	115.6	116.9	24	117.5	118.1	119.2	24
8/12	115.0	115.3	116.0	24	112.5	113.1	113.5	24	116.5	116.8	117.2	24	113.5	114.3	116.0	24	117.4	117.6	117.8	24
8/13	114.1	114.4	114.8	24	110.0	110.5	111.2	24	115.2	115.9	116.5	24	112.9	114.0	114.6	24	115.8	116.8	119.1	24
8/14	113.3	114.1	114.7	23	108.3	108.6	108.7	23	115.7	116.5	118.0	23	112.4	114.1	116.2	23	115.9	116.9	118.9	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/15/2014 7:13

Two-Week Summary of Passage Indices

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

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

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

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

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/01/2014	*	---	---	---	0	0	0	0	0	0	0
08/02/2014	*	---	---	---	0	0	4	0	---	---	---
08/03/2014	*	---	---	---	0	3	4	0	0	---	0
08/04/2014	*	---	---	---	0	0	0	0	---	---	---
08/05/2014	*	---	---	---	0	0	0	0	0	0	0
08/06/2014	*	---	---	---	0	0	4	0	---	---	---
08/07/2014	*	---	---	---	0	0	5	0	0	---	0
08/08/2014	*	---	---	---	0	0	0	0	---	0	---
08/09/2014	*	---	---	---	0	0	0	0	0	---	0
08/10/2014	*	---	---	---	0	0	5	0	---	---	---
08/11/2014	*	---	---	---	0	0	0	0	0	---	0
08/12/2014	*	---	---	---	0	0	4	0	---	0	---
08/13/2014	*	---	---	---	0	0	---	0	0	---	0
08/14/2014	*	---	---	---	0	0	0	0	---	---	---
08/15/2014	*	---	---	---	---	---	---	---	---	---	---
<hr/>											
Total:	0	0	0	0	0	3	26	0	0	0	0
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	0	0	2	0	0	0	0
YTD	65,404	63,592	25,420	10,159	4,807,472	2,838,735	1,969,623	26,427	2,022,048	2,320,483	2,151,268

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/01/2014	*	---	---	---	894	2,100	675	352	48,995	1,580	11,800
08/02/2014	*	---	---	---	896	1,140	969	279	---	---	---
08/03/2014	*	---	---	---	1,121	1,579	601	224	73,165	---	10,542
08/04/2014	*	---	---	---	1,549	1,744	411	222	---	---	---
08/05/2014	*	---	---	---	1,741	3,761	379	212	64,856	1,602	10,072
08/06/2014	*	---	---	---	1,820	3,547	139	209	---	---	---
08/07/2014	*	---	---	---	1,599	3,362	177	291	68,466	---	12,355
08/08/2014	*	---	---	---	1,390	4,980	174	281	---	3,572	---
08/09/2014	*	---	---	---	1,156	4,140	411	223	26,801	---	26,394
08/10/2014	*	---	---	---	1,490	4,036	601	162	---	---	---
08/11/2014	*	---	---	---	2,670	4,001	358	99	38,964	---	16,407
08/12/2014	*	---	---	---	2,573	2,614	408	106	---	1,083	---
08/13/2014	*	---	---	---	1,831	1,546	---	52	26,590	---	7,535
08/14/2014	*	---	---	---	3,329	962	522	220	---	---	---
08/15/2014	*	---	---	---	---	---	---	---	---	---	---
<hr/>											
Total:	0	0	0	0	24,059	39,512	5,825	2,932	347,837	7,837	95,105
# Days:	0	0	0	0	14	14	13	14	7	4	7
Average:	0	0	0	0	1,719	2,822	448	209	49,691	1,959	13,586
YTD	0	27	4	332	929,017	1,033,522	375,971	36,204	4,850,093	2,589,881	4,190,058

Two-Week Summary of Passage Indices

		COMBINED COHO										
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	*	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/01/2014	*	---	---	---	---	0	0	0	0	0	0	0
08/02/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/03/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/04/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/05/2014	*	---	---	---	---	0	0	0	0	0	0	0
08/06/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/07/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/08/2014	*	---	---	---	---	0	0	0	0	---	0	---
08/09/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/10/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/11/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/12/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/13/2014	*	---	---	---	---	0	0	---	0	0	---	0
08/14/2014	*	---	---	---	---	0	0	0	0	---	---	---
08/15/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	0	0	0	0	0	0	0
# Days:		0	0	0	0	14	14	13	14	7	4	7
Average:		0	0	0	0	0	0	0	0	0	0	0
YTD		0	0	0	267	74,168	59,431	27,316	66,431	147,455	225,188	776,651

		COMBINED STEELHEAD										
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	*	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
08/01/2014	*	---	---	---	---	0	0	0	2	0	0	0
08/02/2014	*	---	---	---	---	0	0	4	0	---	---	---
08/03/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/04/2014	*	---	---	---	---	0	3	0	1	---	---	---
08/05/2014	*	---	---	---	---	0	12	5	0	0	0	0
08/06/2014	*	---	---	---	---	0	8	0	2	---	---	---
08/07/2014	*	---	---	---	---	7	7	0	0	0	---	0
08/08/2014	*	---	---	---	---	0	0	0	0	---	0	---
08/09/2014	*	---	---	---	---	0	0	9	2	0	---	0
08/10/2014	*	---	---	---	---	0	0	5	1	---	---	---
08/11/2014	*	---	---	---	---	0	0	0	0	0	---	0
08/12/2014	*	---	---	---	---	0	0	0	0	---	0	---
08/13/2014	*	---	---	---	---	0	0	---	0	0	---	0
08/14/2014	*	---	---	---	---	0	0	0	1	---	---	---
08/15/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	7	30	23	9	0	0	0
# Days:		0	0	0	0	14	14	13	14	7	4	7
Average:		0	0	0	0	1	2	2	1	0	0	0
YTD		2,080	43,465	4,243	12,842	3,376,170	1,975,613	1,183,197	27,460	586,885	1,032,890	459,444

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)	
08/01/2014	*	---	---	---	0	0	10	3	0	0	0	
08/02/2014	*	---	---	---	0	0	0	2	---	---	---	
08/03/2014	*	---	---	---	0	3	4	0	0	---	0	
08/04/2014	*	---	---	---	0	3	0	0	---	---	---	
08/05/2014	*	---	---	---	0	0	0	0	207	0	0	
08/06/2014	*	---	---	---	6	8	0	0	---	---	---	
08/07/2014	*	---	---	---	0	15	0	0	0	---	0	
08/08/2014	*	---	---	---	0	0	0	0	---	29	---	
08/09/2014	*	---	---	---	4	0	0	2	0	---	0	
08/10/2014	*	---	---	---	0	0	0	1	---	---	---	
08/11/2014	*	---	---	---	5	0	0	0	0	---	0	
08/12/2014	*	---	---	---	10	0	0	0	---	0	---	
08/13/2014	*	---	---	---	4	10	---	0	0	---	0	
08/14/2014	*	---	---	---	0	6	0	0	---	---	---	
08/15/2014		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	0	29	45	14	8	207	29	0
# Days:		0	0	0	0	14	14	13	14	7	4	7
Average:		0	0	0	0	2	3	1	1	30	7	0
YTD		0	0	2	0	182,014	88,431	69,795	37,922	1,495,564	577,701	590,103

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)	
08/01/2014	*	---	---	---	1	8	0	0	0	35	50	
08/02/2014	*	---	---	---	0	12	0	2	---	---	---	
08/03/2014	*	---	---	---	0	0	2	0	100	---	0	
08/04/2014	*	---	---	---	0	6	0	0	---	---	---	
08/05/2014	*	---	---	---	1	0	0	1	200	0	67	
08/06/2014	*	---	---	---	0	0	0	1	---	---	---	
08/07/2014	*	---	---	---	0	10	0	2	400	---	0	
08/08/2014	*	---	---	---	0	15	0	1	---	0	---	
08/09/2014	*	---	---	---	0	15	2	2	200	---	0	
08/10/2014	*	---	---	---	0	10	0	1	---	---	---	
08/11/2014	*	---	---	---	1	10	0	0	0	---	0	
08/12/2014	*	---	---	---	0	0	2	1	---	0	---	
08/13/2014	*	---	---	---	0	10	---	1	100	---	0	
08/14/2014	*	---	---	---	0	12	0	35	---	---	---	
08/15/2014		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	0	3	108	6	47	1,000	35	117
# Days:		0	0	0	0	14	14	13	14	7	4	7
Average:		0	0	0	0	0	8	0	3	143	9	17
YTD		1	3	0	0	127	20,817	29,477	103	58,855	98,895	19,310

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:

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:

8/15/14 7:15 AM

		08/01/14	TO	08/15/14			
		Species					
Site	Data	CH0	CH1	ST	SO	Grand Total	
LGR	Sum of NumberCollected	8,480			2	10	8,492
	Sum of NumberBarged	8,390			2	10	8,402
	Sum of NumberBypassed	1			0	0	1
	Sum of Numbertrucked	0			0	0	0
	Sum of SampleMorts	69			0	0	69
	Sum of FacilityMorts	20			0	0	20
	Sum of ResearchMorts	0			0	0	0
	Sum of TotalProjectMorts	89			0	0	89
LGS	Sum of NumberCollected	26,520		2	20	28	26,570
	Sum of NumberBarged	26,264		2	20	25	26,311
	Sum of NumberBypassed	0		0	0	0	0
	Sum of Numbertrucked	0		0	0	0	0
	Sum of SampleMorts	54		0	0	2	56
	Sum of FacilityMorts	202		0	0	1	203
	Sum of ResearchMorts	0		0	0	0	0
	Sum of TotalProjectMorts	256		0	0	3	259
LMN	Sum of NumberCollected	2,676		12	10	7	2,705
	Sum of NumberBarged	2,879		12	11	7	2,909
	Sum of NumberBypassed	0		0	0	0	0
	Sum of Numbertrucked	0		0	0	0	0
	Sum of SampleMorts	18		0	0	0	18
	Sum of FacilityMorts	44		0	1	0	45
	Sum of ResearchMorts	0		0	0	0	0
	Sum of TotalProjectMorts	62		0	1	0	63
Total Sum of NumberCollected		37,676		14	32	45	37,767
Total Sum of NumberBarged		37,533		14	33	42	37,622
Total Sum of NumberBypassed		1		0	0	0	1
Total Sum of Numbertrucked		0		0	0	0	0
Total Sum of SampleMorts		141		0	0	2	143
Total Sum of FacilityMorts		266		0	1	1	268
Total Sum of ResearchMorts		0		0	0	0	0
Total Sum of TotalProjectMorts		407		0	1	3	411

YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/15/14 7:15 AM

TO: 08/15/14

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	635,035	3,442,337	52,722	130,952	2,404,229	6,665,275
	Sum of NumberBarged	621,385	1,939,440	48,991	70,853	1,326,856	4,007,525
	Sum of NumberBypassed	11,727	1,501,375	3,722	59,638	1,077,085	2,653,547
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	369	138	1	46	60	614
	Sum of FacilityMorts	1,544	1,305	8	415	121	3,393
	Sum of ResearchMorts	10	79	0	0	107	196
	Sum of TotalProjectMorts	1,923	1,522	9	461	288	4,203
LGS	Sum of NumberCollected	729,497	1,951,717	41,832	61,228	1,369,624	4,153,898
	Sum of NumberBarged	727,708	1,768,375	40,932	54,862	1,149,468	3,741,345
	Sum of NumberBypassed	324	182,657	890	6,109	220,103	410,083
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	151	34	1	20	16	222
	Sum of FacilityMorts	1,314	651	9	237	167	2,378
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,465	685	10	257	183	2,600
LMN	Sum of NumberCollected	255,167	1,326,220	19,905	48,370	792,140	2,441,802
	Sum of NumberBarged	252,823	1,138,577	17,505	45,106	686,179	2,140,190
	Sum of NumberBypassed	616	177,066	0	2,568	89,957	270,207
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	60	25	0	1	17	103
	Sum of FacilityMorts	533	964	0	301	193	1,991
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	593	989	0	302	210	2,094
Total Sum of NumberCollected		1,619,699	6,720,274	114,459	240,550	4,565,993	13,260,975
Total Sum of NumberBarged		1,601,916	4,846,392	107,428	170,821	3,162,503	9,889,060
Total Sum of NumberBypassed		12,667	1,861,098	4,612	68,315	1,387,145	3,333,837
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		580	197	2	67	93	939
Total Sum of FacilityMorts		3,391	2,920	17	953	481	7,762
Total Sum of ResearchMorts		10	79	0	0	107	196
Total Sum of TotalProjectMorts		3,981	3,196	19	1,020	681	8,897

Cumulative Adult Passage at Mainstem Dams Through: 08/14

DAM	END DATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2014		2013		10-Yr Avg.		2014		2013		10-Yr Avg.		2014		2013		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/14	188083	26094	83345	33820	130283	22257	109734	25342	93097	26186	85511	18881	8709	3044	16714	2735	7912	1488
TDA	08/14	143142	21080	69202	32311	99813	18973	96134	19525	85639	20750	73080	14947	4792	2076	8741	1650	4265	919
JDA	08/14	123224	19103	56991	28957	87036	17743	86033	17655	75248	19714	65621	15576	2631	1094	5278	953	2254	676
MCN	08/14	107147	16033	52176	22279	79413	14950	87974	17022	75741	14808	61586	11232	1477	599	3295	703	1500	300
IHR	08/14	79298	12428	38017	18611	54814	9602	17433	4474	11912	6321	16717	4436	197	24	428	81	145	24
LMN	08/14	79942	14020	36470	19053	54458	8539	16064	8136	11765	7703	18241	4639	58	10	78	18	34	7
LGS	08/14	77966	13649	35072	19443	49920	9660	16964	7459	10064	7621	17153	5321	0	0	0	0	0	0
LGR	08/14	79167	13732	35031	19940	49728	11001	14567	7083	8233	7518	15226	5894	0	0	0	0	0	0
PRD	08/13	23742	2649	13725	1298	14700	1468	78434	4889	71083	3174	52746	2498	0	0	0	0	28	36
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	08/13	23247	2934	13345	3100	13890	2468	77122	6034	67234	3570	49150	4900	0	0	0	0	0	0
RRH	08/13	12376	2377	6841	2101	5576	1020	57214	4333	57833	3460	37573	3788	0	0	0	0	0	0
WEL	08/07	15376	2544	7133	2980	4880	1164	44074	3821	43905	3503	24885	2146	0	0	0	0	0	0
WFA	08/13	30022	1587	27856	1658	40323	1115	0	0	0	0	0	0	0	0	0	0	0	0

DAM	END DATE	Coho						Sockeye			Steelhead						Lamprey		
		2014		2013		10-Yr Avg.		2014	2013	10-Yr Avg.	2014	2013	10-Yr Avg.	Wild 2014	Wild 2013	10-Yr Avg.	2014	2013	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	08/14	186	75	95	12	163	35	614075	185452	192193	165235	139581	181908	79989	68675	70085	28799	21305	21684
TDA	08/14	3	1	5	0	8	1	586023	161837	159022	75104	58575	77407	40713	32974	34333	9467	7229	5259
JDA	08/14	0	1	3	1	4	1	557425	155444	161036	44179	34907	58123	22474	18168	24389	6718	4575	4482
MCN	08/14	0	0	0	0	1	0	545845	134123	135976	39306	28706	43448	19694	14483	16968	1248	1084	1352
IHR	08/14	0	0	0	0	0	0	2386	894	505	19038	17743	23271	7064	5550	6810	468	190	187
LMN	08/14	0	0	0	0	0	0	2800	1012	632	18815	12905	22755	8508	5328	8094	126	60	51
LGS	08/14	0	0	0	0	0	0	2802	988	607	11553	6635	15118	6134	3352	5338	82	20	30
LGR	08/14	0	0	0	0	0	0	2707	731	680	14186	10108	14939	7050	4715	5541	38	12	5
PRD	08/13	0	0	0	0	0	0	607954	163028	167373	5268	3145	5127	0	0	0	3196	2589	1198
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	08/13	0	0	0	0	0	0	580538	159037	164719	2966	2062	3856	1558	1355	2179	519	309	278
RRH	08/13	0	0	0	0	0	0	492130	131481	139789	1602	1304	2832	798	816	1503	511	184	91
WEL	08/07	0	0	0	0	0	0	486502	128585	132787	716	538	911	397	314	485	0	16	2
WFA	08/13	9	0	4	5	3	5	0	0	0	26389	17378	24780	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.