



Fish Passage Center

Weekly Report #15–23

August 21, 2015

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 7% and 148% of average at individual sub-basins over August. Precipitation above The Dalles has been 50% of average over July. Over the 2015 water year, precipitation has ranged between 72% and 92% 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 2015 August 1–20, 2015		Water Year 2015 October 1, 2014 to August 20, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.71	17	32.7	91
Snake River above Ice Harbor	0.43	71	17.4	81
Columbia above The Dalles	0.14	50	22.0	83
Kootenai	0.80	48	33.9	92
Clark Fork	0.26	25	19.0	72
Flathead	0.17	14	27.9	81
Pend Oreille River Basin above Waneta Dam	0.20	18	24.3	78
Salmon River Basin	0.51	58	21.2	77
Upper Snake Tributaries	1.32	148	21.5	82
Clearwater	0.23	23	30.7	78
Willamette River above Portland	0.25	17	48.9	78

Grand Coulee Reservoir is at 1,280 feet (8-19-15) and has drafted 3.2 feet over the last week. Outflows at Grand Coulee have ranged between 110.4 and 127.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,441.9 feet (8-19-15) and has drafted 0.5 feet over the previous week. Daily average outflows at Libby Dam have been 7.2 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,543.5 feet (8-19-15) and drafted 1.0 feet over the last week. Outflows at Hungry Horse have been 2.2 Kcfs over the last week.

Dworshak is currently at an elevation of 1,542.3 feet (8-19-15) and drafted 5 feet over the last week. Outflows have ranged from 5.7 Kcfs to 7.5 Kcfs over the last week.

The Brownlee Reservoir was at an elevation of 2,056.4 feet on August 20, 2015, and has drafted 1.0 feet over the last week. Hells Canyon outflows have ranged between 7.7 and 9.8 Kcfs over the last 4 days.

The Summer Biological Opinion flow period began on June 21st with a flow objective of 50 Kcfs. Over the Summer Flow Period, flows at Lower Granite Dam have averaged 27.4 Kcfs and, over the last week (through August 19), have averaged 20.7 Kcfs.

The Summer Biological Opinion Flow Objective (which began July 1st) is 200 Kcfs at McNary Dam. Over the summer flow period, flows at McNary have averaged 142.7 Kcfs. Flows at McNary have averaged 151.2 Kcfs over the last week (through August 19).

Spill

The 2015 summer fish spill program was initiated at the lower Snake River projects on June 21st. At the middle Columbia River projects, summer spill was initiated on June 16th rather than on July 1, as part of rolled-over court ordered operations.

At the lower Snake River projects spill is planned as described in the 2015 Fish Operations Plan (2015 FOP). With the start of summer spill on June 21st, spill

at Lower Granite Dam switched from 20 Kcfs to 18 Kcfs; Little Goose Dam continued as 30% of instantaneous flow; Lower Monumental Dam switched to 17 Kcfs; and Ice Harbor Dam continued the “test-like” conditions alternating between blocks of days with 30% spill and 45Kcfs/gas cap spill. However, low flow over this past week and changes in project operations caused changes from the planned operation spill levels at all the Snake River projects.

Lower Granite Dam continued at a reduced spill level—spilling all water in excess of that needed to operate one turbine unit. Spill ranged from 6.2 to 11.6 Kcfs. At Little Goose Dam spill operations continued at a fixed daily spill level as described in the FOP. Daily averaged spill over the past week decreased from 7.2 Kcfs to 5.5 Kcfs.

Summer spill volumes at Lower Monumental Dam were equal to all flow in excess of the amount needed to operate one turbine unit. Daily average spill ranged from 6.0 Kcfs to 9.8 Kcfs. At Ice Harbor Dam spill for the remainder of the summer is supposed to be 45 cfs/gas cap. However, flows are sufficiently low that the 45 Kcfs/gas cap spill condition is not implementable. Spill is occurring as all flow in excess of the amount needed to operate one turbine unit. Spill averaged from 7.4 Kcfs to 14.0 Kcfs at this project.

Project	Summer Spill Level (June 21–August 31) Day/Night
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	45 Kcfs/Gas Cap

All the middle Columbia River projects are currently spilling to summer spill levels as described in the 2015 FOP. At Bonneville Dam low flows at times are precluding the stated spill levels, particularly the 121 Kcfs during nighttime hours. During these times spill is equal to all flow in excess of that needed to meet minimum project operations.

Project	Summer Spill Level (June 16–August 31) Day/Night
McNary	50%/50%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	June 16–Aug 31: 85 Kcfs/121 Kcfs and 95 Kcfs/95 Kcfs

High temperatures and low fish numbers have precluded sampling for GBT this past week. All TDG measurements have been considerably below the waiver limits as a result of low flow and, therefore, low spill levels.

Smolt Monitoring

All Smolt Monitoring Program bypass facilities continued sampling this week. Sampling at all four Smolt Monitoring Program traps has been terminated for the season.

Passage of spring migrants (i.e., yearling Chinook, steelhead, coho, and sockeye) was extremely low at all of the SMP sites this week. Subyearling Chinook dominated the collections at all the SMP dam sites this week. When compared to last week, subyearling Chinook passage decreased at all SMP bypass facilities, except at Bonneville and Little Goose dams.

The Bonneville Dam (BON) Juvenile Fish Facility continued to operate under the high temperature sampling protocol this week. Under the high temperature sampling protocol, SMP sampling at BON is modified from a daily 24-hour sample to an every-other-day 24-hour sample. The first non-sample day occurred on June 29th. This high temperature protocol will remain in place until the daily average temperature in the forebay falls below 69.5°F. Samples at BON continued to be dominated by subyearling Chinook. In fact, subyearling Chinook have been the only target species encountered in the samples at BON for the last 5 weeks of sampling. This week’s daily average passage index for subyearling Chinook was approximately 425 per day, which was an increase over last week’s daily average passage index of about 200 per day.

Sampling at John Day Dam (JDA) is also under the high temperature sampling protocol. Under the high temperature sampling protocol, SMP sampling at JDA

is modified from a daily 24-hour sample to a condition only sample (for up to 6 hours) every Monday and Thursday. The first condition only sample occurred on Monday, June 29th. This high temperature protocol will remain in place until the daily average temperature in the forebay falls below 69.5°F. Because the high temperature protocol calls for a partial day sample, it is not appropriate to use the passage index as a measure of the magnitude of juvenile passage. Subyearling Chinook continued to dominate the collections at John Day Dam (JDA) this week. Besides subyearling Chinook, the only other target species that were encountered in this week's samples were one steelhead and one Pacific lamprey macrophthalmia, both of which were encountered in the August 18th sample.

Sampling at McNary Dam (MCN) is also under the high temperature sampling protocol. Under the high temperature sampling protocol, sampling at MCN continues to be a 24-hour sample every other day but with a modified target sample size of 100 instead of 300–500 fish. The high temperature protocol went into effect on the afternoon of July 1st and will remain in effect until the daily average temperature in the MCN forebay falls below 69.5°F. This week's samples at MCN were dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 90 per day, which is a decrease over last week's daily average passage index of about 230 per day. The only spring migrants that were encountered in this week's samples were steelhead, which were encountered in the sample from August 19th. Finally, Pacific lamprey macrophthalmia were encountered in all three of this week's samples, with a daily average collection of about 40 fish per day. This daily average collection is an increase over last week's daily average collection of about 25 per day. To date, MCN has not sampled any Pacific lamprey ammocoetes for 2015.

Samples at Lower Granite Dam (LGR) continued to be dominated by subyearling Chinook juveniles this week. This week's daily average passage index for subyearling Chinook at LGR was about 1,300 per day, which was a decrease over last week's daily average passage index of about 1,700 per day. The only other salmonids that were encountered in this week's samples were steelhead but in very low numbers. Finally, Pacific lamprey macrophthalmia were encountered in three of this week's samples. No

ammocoetes were encountered at LGR this week.

Sampling at Little Goose Dam (LGS) was limited to a 24-hour sample every other day from April 2nd to April 30th. Little Goose Dam began collecting fish for transportation on May 1st and, therefore, collections at LGS are every day for the rest of the season. Subyearling Chinook continued to dominate the samples at LGS this week. This week's daily average passage index for subyearling Chinook at LGS was about 480 fish per day, which is very similar to last week's daily average passage index of about 440 per day. The only spring migrants that were encountered in this week's samples were coho and steelhead. Coho were only encountered in one of this week's samples (August 16th) while steelhead encountered every day this week. This week's daily average passage index for steelhead at LGS was 13 fish per day. Finally, Pacific lamprey macrophthalmia were encountered in six of this week's samples, with daily collections ranging from 0 to 4 fish per day.

Sampling at Lower Monumental Dam (LMN) was limited to a 24-hour sample every third day from April 4th to April 13th and every other day from April 15th to May 1st. At 1500 on May 1st, LMN began collecting fish for transportation and, therefore, collections at LMN are every day for the rest of the season. As with the last several weeks, this week's samples at LMN were dominated by subyearling Chinook with a daily average passage index of about 50 per day, which is a decrease over last week's daily average passage index of about 90 fish per day. No other salmonids were encountered in this week's samples. Finally, no lamprey juveniles were encountered in this week's samples.

Juvenile salmonid passage at Rock Island Dam (RIS) has been very low this week. This week's daily average passage index for subyearling Chinook at RIS was only 5 fish per day, which is even lower than last week's daily average passage index of about 15 fish per day. The only other salmonids that were encountered in this week's samples were sockeye and steelhead, although their passage numbers were even lower than subyearling Chinook. Finally, Pacific lamprey macrophthalmia were encountered in six of the seven samples this week, with daily collections ranging from 0 to 4 fish per day. No Pacific lamprey ammocoetes were encountered in this week's samples.

Hatchery Release

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. No new releases were scheduled for this zone this week and no new releases are scheduled 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. No new releases were scheduled to begin in this zone this week. No new releases of juvenile salmonids are scheduled to begin in 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. No new releases were scheduled for this zone this week and no releases are 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 34,952 is about 1.6 times greater than the 2014 count of 22,325 and 2 times greater than the 10-year average count of 17,084. The 2015 Bonneville Dam fall Chinook jack count of 3,048 is about 65.6% of the 2014 count of 4,645 and 91.7% of the 10-year average count of 3,324. The 2015 adult fall Chinook count of 1,908 at Ice Harbor Dam in the Snake River has 1,023 more fish than the 2014 count and 1,278 more fish than the 10-year average count. The 2015 Lower Granite fall Chinook adult count of 306 has 173 more fish than the 2014 count and 239 more fish than the 10-year average count.

The 2015 Bonneville Dam adult steelhead count of 161,312 is about 85.2% of the 2014 count of 189,187 and about 74.7% of the 10-year average count of 215,592. The 2015 Bonneville Dam adult wild steelhead count of 67,564 is about 76.1% of the 2014 count of 88,722 and 83.9% of the 10-year average count of 80,478. Daily adult steelhead counts at Lower Granite Dam ranged from 0 to 16 adults per day last week. This year's Lower Granite steelhead count of 11,253 is about 74.9% of the 2014 count of 15,013 and

68.6% of the 10-year average count of 16,391. The 2015 Lower Granite Dam adult wild steelhead count of 5,608 is about 74.2% of the 2014 count of 7,555 and 88.8% of the 10-year average count of 6,315. At Willamette Falls, the 2015 count for steelhead was 7,036 as of August 19th. This year's steelhead count is 26.5% of the 2014 count of 26,517 and 30.4% of the 10-year average count of 23,172.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 14 and 46 last week. The 2015 adult sockeye count at Bonneville Dam of 510,477 is about 83.1% of the 2014 count of 614,125, while being 2.1 times greater than the 10-year average count of 241,284. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2015 McNary Dam adult sockeye count of 278,338 is about 50.9% of the 2014 count of 545,927, while being 1.5 times greater than the 10-year average count of 181,606. The Lower Granite Dam 2015 adult sockeye count of 409 has 2,318 fewer fish than the 2014 count and 532 fewer fish than the 10-year average count of 941.

Four hundred and nineteen adult coho have crossed Bonneville Dam so far this year. As of August 20th at Bonneville Dam, the adult shad count was 1,814,771. This year's shad count is about 70.7% of the 2014 count of 2,603,176 and 72.4% of the 10-year average count of 2,507,518.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 8/8/2015 to 8/21/2015

No releases

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 8/22/2015 to 9/3/2015

No releases scheduled

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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>			<u>hr</u>	<u>Avg</u>	<u>Avg</u>	
8/7	104.4	104.4	104.7	11	---	---	---	0	106.9	107.2	107.5	24	105.8	106.4	107.0	24	105.7	105.9	106.9	15
8/8	104.6	104.8	105.3	16	---	---	---	0	107.3	107.5	107.6	24	105.8	106.4	107.3	24	106.1	106.1	106.4	8
8/9	103.3	103.7	104.0	24	---	---	---	0	106.6	106.8	106.9	24	105.5	105.9	106.3	24	106.4	106.5	106.7	15
8/10	103.9	104.5	107.4	24	---	---	---	0	106.8	107.1	107.5	24	105.3	105.8	106.3	24	106.5	106.8	106.9	24
8/11	103.5	104.1	104.6	24	---	---	---	0	106.6	106.8	107.1	24	104.9	105.5	106.2	24	106.3	106.7	107.0	24
8/12	103.7	104.0	104.3	24	---	---	---	0	106.4	106.4	106.6	8	105.1	105.7	106.3	24	106.2	106.5	106.9	24
8/13	104.0	104.6	105.1	24	---	---	---	0	107.0	107.2	107.5	15	105.3	105.8	106.2	24	106.1	106.6	107.2	24
8/14	103.9	104.3	104.6	24	---	---	---	0	107.0	107.2	107.5	24	105.5	106.0	106.6	24	105.8	105.9	106.6	13
8/15	103.9	104.2	104.8	24	---	---	---	0	105.9	106.1	106.5	24	104.9	105.3	105.7	24	---	---	---	0
8/16	103.5	103.9	104.5	23	---	---	---	0	105.8	106.1	106.3	24	104.4	104.8	105.2	24	---	---	---	0
8/17	104.0	104.4	104.8	24	---	---	---	0	105.9	106.0	106.6	24	104.4	104.9	105.3	24	105.0	105.3	106.0	16
8/18	103.8	104.0	104.2	24	---	---	---	0	105.8	105.9	106.3	24	104.2	104.7	105.2	24	105.0	105.4	105.8	24
8/19	103.4	103.9	104.3	23	---	---	---	0	106.2	106.5	106.8	23	104.6	105.3	105.8	23	105.3	106.0	106.4	23
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>			<u>hr</u>	<u>Avg</u>	<u>Avg</u>	
8/7	105.5	105.6	106.4	15	105.9	106.8	107.1	24	107.3	108.5	109.2	24	106.3	106.9	107.3	24	110.7	112.0	112.5	24
8/8	106.6	107.2	107.6	24	106.3	107.0	107.5	24	107.6	108.5	109.2	24	107.3	107.5	107.8	24	107.3	108.0	110.3	24
8/9	106.3	106.6	108.2	24	106.1	106.5	106.9	24	107.3	108.1	108.4	24	106.9	107.1	107.3	24	106.1	106.4	106.6	24
8/10	105.8	106.2	106.3	24	106.6	107.0	107.4	24	108.1	108.9	109.4	24	106.7	107.1	107.2	24	107.0	108.6	111.5	24
8/11	105.8	106.1	106.6	24	106.3	106.8	107.4	24	107.6	108.7	109.3	24	107.2	107.6	108.0	24	106.2	106.5	107.0	24
8/12	106.6	108.5	109.0	24	106.5	107.1	107.7	22	107.9	109.0	109.6	22	107.8	107.9	108.1	24	106.7	107.4	108.5	24
8/13	108.5	108.8	109.1	24	106.7	107.5	108.0	24	108.3	109.3	110.0	24	107.7	108.0	108.3	24	110.1	112.6	114.6	24
8/14	107.1	108.3	108.9	24	106.7	107.5	108.4	24	108.1	108.9	109.9	24	107.8	108.1	108.2	24	107.3	107.9	108.8	24
8/15	104.1	104.6	105.3	24	104.1	104.4	104.9	24	105.5	106.0	106.4	24	106.2	106.5	107.0	24	105.5	105.8	106.3	24
8/16	104.5	105.9	107.9	24	103.9	104.4	104.7	24	105.3	106.1	106.5	24	104.9	105.2	105.5	24	104.2	104.4	104.6	24
8/17	108.1	108.4	108.6	24	104.5	104.9	105.2	24	106.2	106.8	107.2	24	105.2	105.5	105.8	24	105.7	107.1	110.0	24
8/18	106.4	107.6	108.1	24	105.4	106.1	106.4	24	109.2	112.4	121.5	24	105.9	106.3	106.6	24	105.5	105.9	106.9	24
8/19	108.2	108.6	109.0	23	106.0	106.4	107.0	23	107.9	108.5	109.2	23	107.0	107.6	109.8	23	106.8	107.9	111.6	23
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>			<u>hr</u>	<u>Avg</u>	<u>Avg</u>	
8/7	106.9	107.7	108.5	24	113.3	114.5	116.6	24	108.5	109.3	109.7	24	110.5	110.8	111.4	24	108.5	109.2	109.5	24
8/8	107.5	107.8	108.4	24	112.7	113.7	115.7	24	108.9	109.3	109.5	24	111.5	112.2	114.6	24	109.2	109.6	110.0	24
8/9	105.9	106.4	106.7	24	111.7	112.3	115.4	24	108.2	108.7	109.2	24	110.3	110.8	111.7	24	108.4	108.9	109.7	24
8/10	106.1	106.5	106.7	24	112.5	113.3	116.2	24	110.1	111.3	111.9	24	111.4	111.6	112.3	24	109.4	109.9	110.2	24
8/11	106.6	107.3	107.8	24	113.5	114.4	118.1	24	---	---	---	0	---	---	---	0	---	---	---	0
8/12	106.9	107.7	108.2	24	108.0	108.8	112.9	24	111.3	112.6	113.6	24	111.8	112.3	114.0	24	109.9	110.1	110.4	24
8/13	107.4	108.4	109.7	24	107.4	108.3	109.7	24	110.2	111.5	112.7	24	110.2	111.1	112.2	24	109.3	109.8	110.3	24
8/14	107.8	108.9	110.7	24	108.0	109.2	110.5	24	107.8	108.8	109.9	24	108.0	108.9	109.4	24	107.8	108.4	109.3	24
8/15	105.3	105.8	106.3	24	105.4	105.8	106.2	24	104.1	104.5	104.8	24	104.3	104.6	104.8	24	104.8	105.3	105.7	24
8/16	104.5	104.9	105.1	24	104.5	105.0	105.2	24	105.0	106.7	107.7	24	103.9	104.8	105.3	24	103.1	103.6	103.9	24
8/17	104.2	105.1	105.5	24	104.5	105.1	105.5	24	104.3	104.4	106.0	13	105.0	105.4	105.7	24	103.9	104.7	105.1	24
8/18	105.5	105.9	106.1	24	105.5	105.8	106.0	24	107.9	108.1	108.7	14	105.1	105.5	106.0	24	105.0	105.4	105.7	24
8/19	105.9	106.6	106.9	23	105.9	106.5	106.8	23	106.8	107.3	107.8	24	105.5	105.8	106.0	24	105.8	106.3	106.8	24
8/20	---	---	---	0	---	---	---	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 Lower Columbia and Snake River Sites

Date	Priest R. Dnst			#	Pasco			#	Dworshak			#	Clrwtr-Peck			#	Anatone			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
8/7	111.0	111.3	111.7	24	---	---	---	0	99.7	100.3	100.8	24	102.2	104.0	105.4	24	100.2	100.2	101.7	11
8/8	112.1	113.0	116.0	24	---	---	---	0	99.9	100.4	100.9	24	102.3	103.9	105.3	24	102.9	102.9	104.5	12
8/9	111.8	113.0	115.7	24	---	---	---	0	99.5	99.8	100.2	24	101.4	102.6	103.3	24	101.3	102.5	103.6	24
8/10	111.8	112.8	115.6	24	---	---	---	0	99.7	100.1	100.8	24	101.7	103.0	104.2	24	101.3	102.3	103.8	23
8/11	---	---	---	0	---	---	---	0	99.8	100.4	101.0	24	102.1	103.8	105.2	24	101.8	103.4	104.7	24
8/12	113.1	114.3	116.2	24	---	---	---	0	99.6	99.8	100.3	24	101.6	102.7	104.0	24	101.6	102.4	103.4	21
8/13	112.3	113.1	115.7	24	---	---	---	0	99.5	99.9	100.3	24	101.5	102.9	103.7	24	101.5	102.6	103.4	24
8/14	110.0	113.0	116.0	24	---	---	---	0	99.6	100.0	100.6	24	101.6	102.7	104.1	24	101.0	101.9	103.1	24
8/15	104.6	105.0	105.3	24	---	---	---	0	98.8	99.1	99.4	24	100.8	102.1	103.3	24	101.1	102.6	103.9	24
8/16	102.9	103.2	103.4	24	---	---	---	0	99.0	99.5	99.9	24	101.1	102.7	104.1	24	101.2	102.5	103.7	24
8/17	103.8	104.4	104.8	24	---	---	---	0	99.2	99.5	100.0	24	100.9	102.2	103.7	24	101.3	102.4	103.8	23
8/18	104.7	105.1	105.5	24	---	---	---	0	99.4	99.9	100.4	24	101.3	102.9	104.4	24	101.7	102.9	104.2	22
8/19	105.4	106.0	106.4	24	---	---	---	0	99.8	100.3	100.8	23	101.5	102.9	104.5	23	101.8	102.9	104.2	22
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston			#	Lower Granite			#	L. Granite Tlwr			#	Little Goose			#	L. Goose Tlwr			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
8/7	103.8	106.4	108.3	24	102.5	102.8	103.1	24	108.3	109.4	110.1	24	105.1	105.6	105.7	24	102.0	102.5	103.7	24
8/8	103.6	106.0	107.8	24	102.0	102.1	102.4	24	105.2	105.9	106.3	24	104.3	104.7	105.4	24	99.5	100.4	102.0	24
8/9	103.0	104.8	106.0	24	101.1	101.2	101.6	24	104.9	105.6	106.1	24	104.2	104.4	104.6	24	98.2	99.3	100.0	24
8/10	102.8	104.4	106.5	24	100.5	100.8	101.1	24	108.9	112.8	113.8	24	104.3	104.9	105.3	24	102.8	106.8	108.7	24
8/11	103.6	106.1	108.1	24	100.5	100.8	101.0	24	109.5	113.9	115.5	24	104.4	104.6	104.7	24	105.7	106.3	106.6	24
8/12	103.0	104.4	106.4	24	99.7	100.0	100.7	24	109.4	112.9	114.4	24	104.2	104.4	104.6	24	108.1	108.7	109.3	24
8/13	102.9	104.8	106.1	24	99.2	99.5	99.8	24	110.0	113.4	114.2	24	103.9	104.3	104.6	24	108.1	108.8	109.3	24
8/14	102.2	103.7	105.4	24	99.3	99.5	99.7	24	105.1	105.4	106.0	24	104.3	104.9	105.6	24	107.3	107.9	108.2	24
8/15	102.8	104.9	106.6	24	98.9	99.2	99.5	24	108.0	109.6	110.2	24	102.4	102.7	102.9	24	106.7	107.2	107.7	24
8/16	102.9	105.0	106.7	24	98.7	99.0	99.4	24	104.8	106.3	107.0	24	103.0	103.4	103.6	24	107.5	108.1	108.4	24
8/17	102.5	104.4	105.9	24	98.8	99.1	99.3	24	104.0	104.6	104.9	24	103.9	104.4	106.0	24	106.7	107.2	107.8	24
8/18	102.9	105.0	106.6	24	99.2	99.4	99.6	24	104.4	104.7	105.0	24	103.9	104.6	105.2	24	106.0	106.6	107.2	24
8/19	102.6	104.2	106.5	21	99.6	99.9	100.3	23	104.5	104.8	105.1	23	103.1	103.8	104.5	23	106.4	107.1	108.0	23
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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 Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
8/7	106.2	106.6	107.4	24	112.4	112.6	113.0	15	110.9	111.2	111.4	24	109.9	110.7	111.2	24	---	---	---	0
8/8	104.6	105.0	105.6	24	108.0	108.4	110.9	17	110.1	110.4	110.8	24	109.8	110.5	110.9	24	---	---	---	0
8/9	104.1	104.7	104.9	24	108.6	110.1	111.6	24	108.5	108.9	109.5	24	109.7	110.4	111.0	24	---	---	---	0
8/10	105.2	105.5	105.8	24	107.9	110.9	111.8	24	107.9	108.2	108.5	24	108.7	109.8	110.8	24	---	---	---	0
8/11	105.7	105.9	106.0	24	105.2	105.8	106.5	24	108.3	108.8	109.5	24	106.6	107.5	108.5	24	---	---	---	0
8/12	105.9	106.1	106.4	24	107.0	107.6	108.3	24	108.7	109.0	109.2	24	107.2	108.2	109.1	24	---	---	---	0
8/13	105.6	105.8	106.0	24	109.3	109.8	111.2	24	108.1	108.4	109.1	24	107.1	107.8	108.4	24	---	---	---	0
8/14	103.9	105.0	105.5	24	108.7	109.1	109.3	24	106.3	107.6	108.3	24	106.9	107.3	107.8	24	---	---	---	0
8/15	103.3	103.3	103.4	24	108.5	109.3	110.0	24	104.1	104.2	104.5	24	109.1	110.0	110.5	24	---	---	---	0
8/16	103.3	103.5	103.6	24	108.3	109.6	110.3	24	103.7	104.0	104.4	24	110.0	110.7	111.5	24	---	---	---	0
8/17	103.3	103.5	103.7	24	106.5	107.2	107.5	24	103.5	103.8	104.1	24	109.4	110.2	110.8	24	---	---	---	0
8/18	102.8	102.9	103.0	24	106.5	106.8	107.0	24	102.6	102.8	103.0	24	107.0	108.2	108.7	24	---	---	---	0
8/19	102.6	103.0	103.5	23	106.3	106.8	108.5	23	102.6	102.8	103.3	23	105.7	106.6	107.2	23	---	---	---	0
8/20	---	---	---	0	---	---	---	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 Lower Columbia River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/7	105.9	106.2	106.7	24	114.3	114.9	115.3	24	105.4	105.8	106.1	24	109.3	110.0	110.8	24	108.1	109.3	109.7	24
8/8	106.5	106.7	107.8	24	114.6	115.2	115.7	24	104.9	105.3	105.6	24	108.4	108.9	109.6	24	107.8	108.4	108.6	24
8/9	105.7	105.9	106.0	24	112.9	113.2	113.8	24	103.8	104.0	104.3	24	106.5	107.0	108.0	24	106.4	106.7	107.0	24
8/10	106.6	106.9	107.4	24	119.9	126.0	147.0	23	103.9	104.3	104.5	24	110.3	114.0	114.7	24	107.3	108.1	108.5	24
8/11	106.1	106.4	106.6	24	114.1	114.5	114.9	24	104.4	104.8	104.9	24	112.5	112.9	113.4	24	108.4	108.9	109.1	24
8/12	106.4	106.7	107.7	24	114.3	115.0	115.8	24	104.8	105.1	105.5	24	112.8	113.6	114.1	24	108.1	108.8	109.2	24
8/13	106.5	106.9	107.3	24	115.5	116.4	116.7	24	105.2	106.0	106.4	24	112.6	113.5	114.6	24	106.7	107.0	107.3	24
8/14	106.2	107.0	107.3	24	114.5	116.0	116.7	24	104.7	105.2	105.7	24	112.4	113.2	113.8	24	105.2	106.0	106.2	24
8/15	103.6	103.8	104.3	24	113.8	114.2	114.6	24	103.4	103.6	103.8	24	110.7	111.3	111.9	24	103.6	104.1	104.3	24
8/16	103.0	103.5	104.0	24	114.3	114.9	115.5	24	102.9	103.2	103.4	24	109.4	109.8	110.4	24	105.3	106.0	106.3	24
8/17	102.8	103.0	103.3	24	114.5	115.2	115.7	24	103.6	104.0	105.6	24	106.3	107.1	107.8	24	107.8	108.5	109.1	24
8/18	103.4	104.0	104.7	24	113.8	114.1	114.8	24	104.5	105.1	105.7	24	103.6	106.3	106.9	24	108.6	109.2	109.8	24
8/19	104.7	105.1	105.9	23	114.7	115.7	116.0	23	104.7	105.0	105.7	23	108.5	113.4	114.6	23	108.7	109.3	109.7	23
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
8/7	113.0	113.9	114.5	24	105.3	106.1	106.5	24	116.1	116.6	116.9	24	113.4	115.2	116.5	24	116.7	117.1	117.2	24
8/8	112.9	113.3	113.6	24	106.8	107.2	107.5	24	115.7	116.4	117.0	24	112.4	113.2	113.9	24	117.0	117.1	117.2	24
8/9	111.7	112.2	112.5	24	106.9	107.5	107.9	24	115.8	116.2	116.4	24	113.1	114.8	115.6	24	114.8	115.9	117.7	24
8/10	112.2	113.0	113.5	24	108.0	108.5	108.7	24	116.5	117.3	117.9	24	114.8	116.3	117.3	24	114.4	115.3	117.5	24
8/11	112.9	113.6	114.0	24	108.8	109.2	109.4	24	117.1	117.8	118.2	24	114.4	115.8	116.7	24	114.4	115.0	117.0	24
8/12	112.8	113.3	113.6	24	108.3	108.6	109.1	24	115.9	116.2	116.5	24	129.1	140.4	144.3	24	113.9	114.0	114.1	24
8/13	112.4	112.8	113.2	24	106.9	107.2	107.8	24	115.2	115.6	115.9	24	128.1	141.7	148.9	24	114.5	115.1	117.0	24
8/14	110.7	111.2	111.8	24	104.5	105.2	106.5	24	115.0	115.6	116.7	24	109.9	110.9	113.3	24	114.4	114.9	117.3	24
8/15	109.7	110.3	110.7	24	103.4	103.7	103.9	24	115.4	115.9	116.2	24	110.3	112.0	112.9	24	116.2	117.0	117.0	24
8/16	111.2	112.1	112.3	24	104.2	105.1	105.8	24	116.4	116.8	117.5	24	112.8	114.1	115.1	24	117.1	117.2	117.4	24
8/17	112.7	113.5	113.9	24	106.5	107.5	107.8	24	116.0	116.3	117.0	24	113.1	114.4	115.1	24	115.3	116.4	117.5	24
8/18	113.1	113.9	114.5	24	108.8	109.6	109.9	24	117.4	117.9	118.5	24	113.6	115.6	116.7	24	115.3	116.6	117.6	24
8/19	113.5	114.1	114.6	23	110.7	111.3	111.8	23	117.8	118.1	118.4	23	115.3	116.6	117.9	23	117.4	117.5	117.7	23
8/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 8/21/2015 7:04

* 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)
08/07/2015 *	---	---	---	---	0	0	0	0	0	0	0
08/08/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/09/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/10/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/11/2015 *	---	---	---	---	0	0	0	0	0	0	0
08/12/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/13/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/14/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/15/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/16/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/17/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/18/2015 *	---	---	---	---	0	0	0	0	---	0	---
08/19/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/20/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	0	0	0	0	0
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	40,054	68,276	7,458	1,081	1,769,194	1,156,885	1,126,664	16,457	1,340,101	664,378	1,712,479

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)
08/07/2015 *	---	---	---	---	2,081	404	62	31	177	138	96
08/08/2015 *	---	---	---	---	1,854	439	26	17	---	---	---
08/09/2015 *	---	---	---	---	1,434	325	31	14	270	---	496
08/10/2015 *	---	---	---	---	1,472	325	136	14	---	---	---
08/11/2015 *	---	---	---	---	1,700	214	120	9	239	98	94
08/12/2015 *	---	---	---	---	1,500	459	137	7	---	---	---
08/13/2015 *	---	---	---	---	1,711	894	107	12	249	---	177
08/14/2015 *	---	---	---	---	1,352	816	67	7	---	57	---
08/15/2015 *	---	---	---	---	1,381	743	38	9	135	---	534
08/16/2015 *	---	---	---	---	2,450	336	50	5	---	---	---
08/17/2015 *	---	---	---	---	1,098	342	33	6	83	---	522
08/18/2015 *	---	---	---	---	1,067	375	31	4	---	22	---
08/19/2015 *	---	---	---	---	857	497	51	1	62	---	218
08/20/2015 *	---	---	---	---	920	245	48	6	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	20,877	6,414	937	142	1,215	315	2,137
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	1,491	458	67	10	174	79	305
YTD	1	114	1,292	2,077	1,143,063	957,842	331,441	20,771	1,562,935	826,202	2,188,451

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/07/2015 *	---	---	---	---	0	0	0	0	0	0	0
08/08/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/09/2015 *	---	---	---	---	7	0	0	0	0	---	0
08/10/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/11/2015 *	---	---	---	---	0	0	0	0	0	0	0
08/12/2015 *	---	---	---	---	11	0	0	0	---	---	---
08/13/2015 *	---	---	---	---	0	3	0	0	0	---	0
08/14/2015 *	---	---	---	---	0	0	0	0	---	0	---
08/15/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/16/2015 *	---	---	---	---	0	1	0	0	---	---	---
08/17/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/18/2015 *	---	---	---	---	0	0	0	0	---	0	---
08/19/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/20/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	18	4	0	0	0	0	0
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	1	0	0	0	0	0	0
YTD	0	0	0	47	40,398	60,304	37,631	14,704	66,248	70,109	692,863

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/07/2015 *	---	---	---	---	20	3	0	0	0	0	0
08/08/2015 *	---	---	---	---	9	14	0	0	---	---	---
08/09/2015 *	---	---	---	---	0	11	0	0	0	---	0
08/10/2015 *	---	---	---	---	0	23	0	0	---	---	---
08/11/2015 *	---	---	---	---	0	14	0	0	0	0	0
08/12/2015 *	---	---	---	---	0	6	0	0	---	---	---
08/13/2015 *	---	---	---	---	23	10	0	0	10	---	0
08/14/2015 *	---	---	---	---	0	66	0	0	---	0	---
08/15/2015 *	---	---	---	---	9	14	0	0	0	---	0
08/16/2015 *	---	---	---	---	10	6	0	0	---	---	---
08/17/2015 *	---	---	---	---	0	1	0	0	0	---	0
08/18/2015 *	---	---	---	---	8	1	0	0	---	1	---
08/19/2015 *	---	---	---	---	0	3	0	0	10	---	0
08/20/2015 *	---	---	---	---	8	0	0	1	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	87	172	0	1	20	1	0
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	6	12	0	0	3	0	0
YTD	2,567	40,594	672	11,678	1,300,202	1,073,512	576,051	12,755	456,609	201,080	1,021,904

Two-Week Summary of Passage Indices

COMBINED SOCKEYE											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/07/2015 *	---	---	---	---	0	0	0	1	10	0	0
08/08/2015 *	---	---	---	---	0	0	0	2	---	---	---
08/09/2015 *	---	---	---	---	0	0	0	4	0	---	0
08/10/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/11/2015 *	---	---	---	---	0	0	0	3	0	0	0
08/12/2015 *	---	---	---	---	0	0	0	1	---	---	---
08/13/2015 *	---	---	---	---	0	0	0	1	0	---	0
08/14/2015 *	---	---	---	---	0	0	0	1	---	0	---
08/15/2015 *	---	---	---	---	0	0	0	1	0	---	0
08/16/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/17/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/18/2015 *	---	---	---	---	0	0	0	3	---	0	---
08/19/2015 *	---	---	---	---	0	0	0	0	0	---	0
08/20/2015 *	---	---	---	---	0	0	0	0	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	0	17	10	0	0
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	0	0	0	1	1	0	0
YTD	74	0	4	47	16,237	19,851	11,030	3,925	128,914	104,375	149,234

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
08/07/2015 *	---	---	---	---	0	4	0	1	15	0	0
08/08/2015 *	---	---	---	---	0	0	0	1	---	---	---
08/09/2015 *	---	---	---	---	0	0	0	4	30	---	0
08/10/2015 *	---	---	---	---	0	2	0	2	---	---	---
08/11/2015 *	---	---	---	---	0	0	0	3	25	0	0
08/12/2015 *	---	---	---	---	0	0	0	2	---	---	---
08/13/2015 *	---	---	---	---	0	4	0	1	25	---	0
08/14/2015 *	---	---	---	---	0	4	0	1	---	0	---
08/15/2015 *	---	---	---	---	0	2	0	3	40	---	0
08/16/2015 *	---	---	---	---	1	1	0	4	---	---	---
08/17/2015 *	---	---	---	---	1	4	0	2	25	---	0
08/18/2015 *	---	---	---	---	0	0	0	0	---	1	---
08/19/2015 *	---	---	---	---	3	1	0	1	50	---	0
08/20/2015 *	---	---	---	---	0	1	0	1	---	---	---
08/21/2015	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	5	23	0	26	210	1	0
# Days:	0	0	0	0	14	14	14	14	7	4	7
Average:	0	0	0	0	0	2	0	2	30	0	0
YTD	0	1	0	0	37	8,184	2,334	163	8,915	19,950	4,105

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:

8/21/15 7:06 AM

08/07/15 TO 08/21/15

		Species			
Site	Data	CH0	CO	ST	Grand Total
LGR	Sum of NumberCollected	11,555	10	45	11,610
	Sum of NumberBarged	6,797	10	25	6,832
	Sum of NumberBypassed	1	0	1	2
	Sum of Numbertrucked	4,695	0	18	4,713
	Sum of SampleMorts	25	0	1	26
	Sum of FacilityMorts	22	0	0	22
	Sum of ResearchMorts	15	0	0	15
	Sum of TotalProjectMorts	62	0	1	63
LGS	Sum of NumberCollected	4,179	3	113	4,295
	Sum of NumberBarged	2,471	2	95	2,568
	Sum of NumberBypassed	0	0	0	0
	Sum of Numbertrucked	1,686	1	17	1,704
	Sum of SampleMorts	14	0	1	15
	Sum of FacilityMorts	8	0	0	8
	Sum of ResearchMorts	0	0	0	0
	Sum of TotalProjectMorts	22	0	1	23
LMN	Sum of NumberCollected	579			579
	Sum of NumberBarged	428			428
	Sum of NumberBypassed	0			0
	Sum of Numbertrucked	151			151
	Sum of SampleMorts	0			0
	Sum of FacilityMorts	0			0
	Sum of ResearchMorts	0			0
	Sum of TotalProjectMorts	0			0
Total Sum of NumberCollected		16,313	13	158	16,484
Total Sum of NumberBarged		9,696	12	120	9,828
Total Sum of NumberBypassed		1	0	1	2
Total Sum of Numbertrucked		6,532	1	35	6,568
Total Sum of SampleMorts		39	0	2	41
Total Sum of FacilityMorts		30	0	0	30
Total Sum of ResearchMorts		15	0	0	15
Total Sum of TotalProjectMorts		84	0	2	86

YTD Transportation Summary

Source: Fish Passage Center

Updated:

8/21/15 7:06 AM

TO: 08/21/15

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	675,750	1,150,138	26,315	10,915	826,769	2,689,887
	Sum of NumberBarged	656,833	473,291	22,805	10,483	363,282	1,526,694
	Sum of NumberBypassed	8,363	676,470	3,499	160	463,118	1,151,610
	Sum of NumberTrucked	8,834	0	0	0	37	8,871
	Sum of SampleMorts	227	43	1	8	31	310
	Sum of FacilityMorts	1,478	318	10	257	261	2,324
	Sum of ResearchMorts	15	16	0	7	40	78
	Sum of TotalProjectMorts	1,720	377	11	272	332	2,712
LGS	Sum of NumberCollected	643,553	807,530	42,065	13,866	748,819	2,255,833
	Sum of NumberBarged	639,246	545,396	40,318	13,819	535,296	1,774,075
	Sum of NumberBypassed	136	261,966	1,720	40	213,220	477,082
	Sum of NumberTrucked	1,686	0	1	0	17	1,704
	Sum of SampleMorts	141	21	0	2	14	178
	Sum of FacilityMorts	2,344	147	26	5	272	2,794
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,485	168	26	7	286	2,972
LMN	Sum of NumberCollected	173,859	642,436	22,120	6,690	322,640	1,167,745
	Sum of NumberBarged	172,399	581,534	21,816	6,640	285,463	1,067,852
	Sum of NumberBypassed	617	60,572	300	30	36,797	98,316
	Sum of NumberTrucked	151	0	0	0	0	151
	Sum of SampleMorts	64	45	2	0	39	150
	Sum of FacilityMorts	628	315	2	20	341	1,306
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	692	360	4	20	380	1,456
Total Sum of NumberCollected		1,493,162	2,600,104	90,500	31,471	1,898,228	6,113,465
Total Sum of NumberBarged		1,468,478	1,600,221	84,939	30,942	1,184,041	4,368,621
Total Sum of NumberBypassed		9,116	999,008	5,519	230	713,135	1,727,008
Total Sum of NumberTrucked		10,671	0	1	0	54	10,726
Total Sum of SampleMorts		432	109	3	10	84	638
Total Sum of FacilityMorts		4,450	780	38	282	874	6,424
Total Sum of ResearchMorts		15	16	0	7	40	78
Total Sum of TotalProjectMorts		4,897	905	41	299	998	7,140

Cumulative Adult Passage at Mainstem Dams Through: 08/20

DAM	END DATE	Spring Chinook						Summer Chinook						Fall Chinook					
		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/20	220480	13314	188083	26094	132065	23978	161735	17730	109734	25342	87270	20126	34952	3048	22325	4645	17084	3324
TDA	08/20	194116	12307	143142	21080	101070	20309	123915	15458	96134	19525	74749	16059	17265	1777	9984	3318	9057	2041
JDA	08/20	166015	11514	123224	19103	88117	19021	108768	10988	86033	17655	66973	16286	11118	1156	5314	1921	4731	1415
MCN	08/20	156151	8767	107147	16033	79364	15788	96287	8723	87974	17022	63834	12059	8943	605	3851	1509	3459	750
IHR	08/19	116462	5745	79298	12428	55061	10384	21408	2807	17433	4474	17149	4587	1908	94	885	82	630	87
LMN	08/19	111511	8697	79942	14020	55282	9560	17764	4835	16064	8136	18788	5227	1355	173	573	76	394	82
LGS	08/20	105124	8553	77966	13649	51473	10681	15494	4464	17058	7477	17984	5853	1007	69	434	45	311	42
LGR	08/19	104873	8379	79167	13732	50576	11930	14958	4222	14668	7106	15904	6380	306	26	133	33	67	17
PRD	08/19	27716	1570	23742	2649	15720	1631	78139	3550	78434	4889	53883	2434	3631	244	1309	763	1341	652
WAN	08/19	25982	1077	0	0	15431	2202	76636	2180	0	0	49981	2003	3564	151	0	0	1141	496
RIS	08/17	31749	1092	23247	2934	15126	2669	88691	2476	77982	6494	51644	5343	0	0	0	0	0	0
RRH	08/17	15244	609	12376	2377	6372	1183	74847	1876	57978	4725	40215	3659	0	0	0	0	0	0
WEL	08/19	19971	1520	15377	2544	5959	1398	58461	3134	47507	4920	29669	3061	0	0	0	0	0	0
WFA	08/19	51046	2042	30071	1598	33725	1204	0	0	0	0	0	0	41	6	67	8	40	11

DAM	END DATE	Coho						Sockeye			Steelhead						Lamprey		
		2015		2014		10-Yr Avg.		2015	2014	10-Yr Avg.	2015	2014	Avg.	Wild 2015	Wild 2014	10-Yr Avg.	2015	2014	Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	08/20	419	107	1146	194	1016	175	510477	614125	241294	161312	189187	215592	67564	88722	80478	36537	30010	19607
TDA	08/20	13	2	22	10	108	37	429251	586075	206895	56657	80507	94170	28830	43245	40754	11098	9953	5239
JDA	08/20	23	2	4	2	21	11	365387	557472	205441	25579	46443	69040	13510	23455	28514	7088	7056	4570
MCN	08/20	19	6	0	0	3	1	278338	545927	181606	21368	42475	50616	11021	21221	19902	1374	1335	1197
IHR	08/19	0	0	0	0	0	0	1039	2387	742	10277	20614	26646	4838	7622	7956	659	529	192
LMN	08/19	0	0	0	0	0	0	882	2800	898	10387	24188	25838	5444	9882	8666	218	163	54
LGS	08/20	0	0	0	0	0	0	572	2805	879	4919	12753	13852	3012	6706	5455	113	99	28
LGR	08/19	0	0	0	0	0	0	409	2727	941	11253	15013	16391	5608	7555	6315	43	45	7
PRD	08/19	0	0	0	0	4	0	301027	608055	215732	4716	6376	6407	0	0	0	5283	4188	1934
WAN	08/19	0	0	0	0	0	0	296110	0	191323	4554	0	6661	0	0	0	3768	0	840
RIS	08/17	0	-2	0	0	0	0	263138	580751	212198	3284	3322	4413	1753	1809	2299	0	830	335
RRH	08/17	0	0	0	0	0	0	214898	492468	180989	2143	1791	3145	1122	951	1514	0	1052	194
WEL	08/19	0	0	0	0	0	0	185886	490008	174761	1619	1304	1766	833	693	839	0	1	2
WFA	08/19	1	0	9	0	8	20	0	0	0	7036	26517	23172	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.