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847 NE 19th Ave., Suite 250
Portland, OR 97232
(503) 833-3900

Fish Passage Center

Weekly Report #15–22

August 14, 2015

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 5% and 209% of average at individual sub-basins over August. Precipitation above The Dalles has been 52% of average over July. Over the 2015 water year, precipitation has ranged between 73% 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 1–13, 2015		Water Year 2015 October 1, 2014 to August 13, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.35	36	32.3	91
Snake River above Ice Harbor	0.39	101	17.3	82
Columbia above The Dalles	0.30	52	21.8	84
Kootenai	0.34	31	33.4	92
Clark Fork	0.14	21	18.9	73
Flathead	0.06	8	27.8	82
Pend Oreille River Basin above Waneta Dam	0.11	15	24.2	78
Salmon River Basin	0.49	86	21.2	78
Upper Snake Tributaries	1.21	209	21.4	82
Clearwater	0.22	34	30.7	79
Willamette River above Portland	0.02	15	48.9	79

Grand Coulee Reservoir is at 1,283.2 feet (8-13-15) and has drafted 2.1 feet over the last week. Outflows at Grand Coulee have ranged between 94.3 and 129.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,442.4 feet (8-13-15) and has drafted 0.5 feet over the previous week. Daily average outflows at Libby Dam have been 7.1 to 7.2 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,544.5 feet (8-13-15) 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 1,547.2 feet (8-13-15) and drafted 5 feet over the last week. Outflows have been 5.7 Kcfs for most of the last week.

The Brownlee Reservoir was at an elevation of 2,057.4 feet on August 13, 2015, and has drafted 1.1 feet over the last week. Hells Canyon outflows have ranged between 7.15 and 16.1 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 28.1 Kcfs and, over the last week, have averaged 20.4 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 141.6 Kcfs. Flows at McNary have averaged 142.3 Kcfs over the last week.

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—spill all water in excess of that needed to operate one turbine unit. Spill ranged from 7.1 to 13.2 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 ranged from 4.2 Kcfs to 9.3 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 4.2 Kcfs to 10.1 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 4.9 Kcfs to 13.3 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 Little Goose and Lower Monumental 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 4 weeks of sampling. This week's daily average passage index for subyearling Chinook was just over 200 per day which is a slight decrease over last week's daily average passage index of just over 250 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. In fact, subyearling Chinook were the only salmonids encountered in this week's samples. No juvenile lamprey were encountered in this week's samples.

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 230 per day, which is a decrease over last week's daily average passage index of about 450 per day. The only spring migrants that were encountered in this week's samples were sockeye (on August 7th) and steelhead (on August 13th). Finally, Pacific lamprey macropthalmia were encountered in all four of this week's samples, with a 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 1,700 per day, which was a decrease over last week's daily average passage index of about 4,250 per day. The only other salmonids that were encountered in this week's samples were coho and steelhead. No lamprey juveniles were encountered in this week's samples.

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 440 fish per day, which is the same as last week's daily average passage index. The only spring migrants that were encountered in this week's samples were coho and steelhead. Coho were encountered only in one of this week's samples (August 13th), while steelhead were encountered every day this week. Finally, Pacific lamprey ammocoetes were encountered in one of this week's samples (August 13th) while Pacific macropthalmia were encountered in three of this week's samples.

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 90 per day. Although passage was low this week, this week's daily average passage index was a slight increase over last week's daily average passage index of about 60 per day. No other salmonids were encountered in this week's samples. Finally, no lamprey juveniles were encountered in this week's samples.

Although passage has been low, SMP samples at Rock Island Dam (RIS) continued to be dominated by subyearling Chinook juveniles this week. This week's daily average passage index was about 15 fish per day, which is lower than last week's daily average passage index of about 30 per day. The only other salmonids that were encountered in this week's samples were sockeye, although their numbers were extremely low. Finally, Pacific lamprey macropthalmia were encountered in all seven of this week's samples. Daily collections this week ranged from one to four 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 15,320 is about 2 times greater than the 2014 count of 7,524 and 2.2 times greater than the 10-year average count of 6,893. The 2015 Bonneville Dam fall Chinook jack count of 1,300 is about 46.6% of the 2014 count of 2,791 and 86% of the 10-year average count of 1,512. The 2015 adult summer Chinook count of 14,363 at Lower Granite Dam in the Snake River has 168 fewer fish than the 2014 count and 1,407 fewer fish than the 10-year average count. The 2015 Lower Granite summer Chinook jack count of 4,126 is about 58.3% of the 2014 count and about 65% of the 10-year average count.

The 2015 Bonneville Dam adult steelhead count of 137,509 is about 87.2% of the 2014 count of 157,762 and about 78.3% of the 10-year average count of 175,520. The 2015 Bonneville Dam adult wild steelhead count of 59,345 is about 77% of the 2014 count of 77,118 and 84.7% of the 10-year average count of 70,029. Daily adult steelhead counts at Lower Granite Dam ranged from 24 to 59 adults per day last week. This year's Lower Granite steelhead count of 10,558 is about 75.1% of the 2014 count of 14,050 and 70.7% of the 10-year average count of 14,962. The 2015 Lower Granite Dam adult wild steelhead count of 5,238 is about 75% of the 2014 count of 6,978 and 91.3% of the 10-year average count of 5,737. At Willamette Falls, the 2015 count for steelhead was 7,009 as of August 10th. This year's steelhead count is 26.6% of the 2014 count of 26,342 and 30.4% of the 10-year average count of 23,025.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 28 and 116 last week. The 2015 adult sockeye count at Bonneville Dam of 510,327 is about 83.1% of the 2014 count of 614,067, while being 2.1 times greater than the 10-year average count of 241,276. 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 277,979 is about 50.9% of the 2014 count of 545,805, while being 1.5 times greater than the 10-year average count of 181,582. The Lower Granite Dam 2015 adult sockeye count of 403 has 2,299 fewer fish than the 2014 count and 534 fewer fish than the 10-year average count of 937.

Forty-seven adult coho have crossed Bonneville Dam so far this year. As of August 13th at Bonneville Dam, the adult shad count was 1,814,469. This year's shad count is about 69.7% of the 2014 count of 2,603,099 and 72.4% of the 10-year average count of 2,507,180.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From 8/1/2015 to 8/14/2015

No Releases

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From 8/15/2015 to 8/27/2015

No Releases Scheduled

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/31/2015	101.5	0.0	105.1	0.0	109.0	8.7	105.1	8.8	106.7	21.2	109.0	17.8	109.4	26.5
08/01/2015	93.9	0.0	92.9	0.0	96.8	7.3	92.3	9.2	94.2	20.5	107.3	17.4	107.1	26.2
08/02/2015	91.0	0.0	97.8	0.0	95.6	7.3	88.8	8.2	90.9	17.8	75.1	17.4	69.7	27.6
08/03/2015	100.8	0.0	92.6	0.0	98.0	7.2	94.6	9.9	93.7	22.8	113.0	19.4	113.0	28.2
08/04/2015	112.2	0.0	108.0	0.0	108.2	8.1	102.8	10.1	103.1	22.7	105.2	19.3	106.7	23.6
08/05/2015	104.6	0.0	114.8	0.0	117.5	9.1	111.9	9.8	113.5	21.1	116.6	19.4	113.2	29.0
08/06/2015	109.7	0.0	106.1	0.0	124.1	8.9	122.7	8.7	125.4	20.6	122.6	20.1	126.5	25.8
08/07/2015	106.7	0.0	102.1	0.0	105.0	8.2	101.0	9.8	104.1	20.9	133.7	18.6	130.9	25.5
08/08/2015	95.4	0.0	95.9	0.0	103.7	7.2	94.4	0.0	95.6	18.4	106.2	18.3	107.6	25.6
08/09/2015	102.3	0.0	97.6	0.0	99.9	7.4	95.2	0.0	99.4	19.5	104.2	16.6	101.6	25.0
08/10/2015	108.2	0.0	107.9	0.0	117.2	9.0	111.9	4.8	113.6	22.7	113.2	17.4	112.0	23.5
08/11/2015	116.9	0.0	108.4	0.0	107.2	8.0	101.6	0.0	104.1	22.7	110.9	17.5	109.8	25.5
08/12/2015	117.5	0.0	117.4	11.4	116.1	8.3	104.5	0.9	107.2	3.2	111.8	17.8	106.2	23.9
08/13/2015	129.3	0.0	127.7	20.2	126.1	9.1	121.7	11.6	124.0	0.0	126.2	7.1	123.8	26.9

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/31/2015	10.0	0.0	---	14.7	31.3	12.8	29.0	10.6	27.9	14.0	27.7	18.1
08/01/2015	10.0	0.0	---	15.1	31.2	12.5	31.1	11.2	31.1	17.0	33.8	23.9
08/02/2015	10.0	0.0	---	15.6	31.7	13.1	30.5	11.2	28.8	16.5	28.8	18.9
08/03/2015	6.5	0.2	---	13.6	30.9	15.1	30.7	11.2	30.0	16.3	29.8	20.0
08/04/2015	7.6	0.0	---	13.1	25.7	12.9	24.5	11.2	22.8	10.3	23.1	13.1
08/05/2015	7.6	0.0	---	10.6	26.4	13.8	26.4	9.3	24.4	12.0	26.2	16.3
08/06/2015	7.6	0.0	---	9.3	24.9	12.1	24.3	9.3	23.4	11.1	23.4	13.2
08/07/2015	5.6	0.0	---	8.0	23.0	10.2	22.8	9.3	22.5	10.1	23.1	13.3
08/08/2015	5.7	0.0	---	7.7	19.6	6.6	18.7	6.0	18.7	6.3	19.5	9.4
08/09/2015	5.7	0.0	---	7.4	20.1	7.1	19.7	6.9	19.3	6.8	18.4	8.3
08/10/2015	5.7	0.0	---	7.9	18.7	9.6	17.9	5.5	17.5	5.3	16.3	6.2
08/11/2015	5.7	0.0	---	9.1	18.1	8.9	16.6	4.2	16.6	4.2	15.0	4.9
08/12/2015	5.7	0.0	---	9.7	20.8	11.5	19.8	7.5	19.5	7.3	20.8	9.2
08/13/2015	5.7	0.0	---	8.6	22.3	13.2	20.9	7.3	22.2	9.9	21.3	9.7

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

	McNary		John Day		The Dalles		Bonneville			
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
07/31/2015	155.5	77.8	144.5	43.3	130.3	52.1	145.6	94.6	0.9	37.7
08/01/2015	150.9	75.6	144.7	43.2	131.6	52.7	133.7	88.8	0.9	31.6
08/02/2015	130.5	65.6	117.7	35.5	106.9	42.6	133.6	88.5	0.9	31.8
08/03/2015	126.9	63.7	119.6	35.9	110.9	44.4	129.4	85.1	0.7	31.7
08/04/2015	139.8	70.2	135.9	40.7	123.4	49.2	128.7	85.4	0.0	32.0
08/05/2015	140.8	70.4	124.6	37.4	113.5	45.5	129.9	86.9	0.1	31.6
08/06/2015	149.0	74.7	133.8	40.2	118.7	47.4	132.1	87.8	0.9	32.1
08/07/2015	150.9	76.0	151.8	45.5	139.6	56.0	150.0	95.9	0.8	41.9
08/08/2015	154.2	77.3	144.7	43.7	132.7	53.0	154.2	95.2	0.9	46.7
08/09/2015	122.4	61.3	120.1	35.9	110.8	44.1	135.4	89.9	0.9	33.3
08/10/2015	149.4	74.9	138.4	41.5	123.4	49.3	138.6	93.1	0.9	33.0
08/11/2015	125.5	63.0	122.2	36.7	112.8	45.1	136.0	91.8	0.9	30.8
08/12/2015	145.4	72.9	139.3	41.7	125.9	50.3	130.4	86.5	0.9	30.6
08/13/2015	146.3	73.3	139.6	41.9	126.9	50.6	140.9	89.2	0.9	38.4

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

	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	104.1	104.7	105.1	24	---	---	---	0	107.9	108.1	108.3	24	105.6	106.4	107.0	24	106.8	107.5	107.9	24
8/1	104.4	105.1	105.5	24	---	---	---	0	108.0	108.2	108.4	24	106.0	106.7	107.4	24	107.0	107.3	107.5	24
8/2	104.8	105.5	106.2	24	---	---	---	0	107.8	108.0	108.2	24	106.2	106.8	107.7	24	107.1	107.4	107.6	24
8/3	105.3	106.0	106.4	24	---	---	---	0	107.9	108.0	108.3	24	106.6	107.1	107.8	24	106.9	107.1	107.4	24
8/4	105.2	105.6	106.2	24	---	---	---	0	107.4	107.7	108.0	24	106.0	106.6	107.1	24	106.6	106.8	107.0	24
8/5	103.7	104.1	104.4	24	---	---	---	0	107.2	107.3	107.6	16	105.6	106.3	106.8	24	106.4	106.7	106.8	24
8/6	103.9	104.6	105.0	24	---	---	---	0	106.8	106.9	107.2	24	105.4	105.8	106.3	24	105.7	106.1	106.5	24
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	23	---	---	---	0	107.0	107.2	107.5	14	105.3	105.8	106.2	23	106.1	106.6	107.2	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	106.4	106.7	107.1	24	107.3	108.2	108.9	24	109.0	109.9	110.5	24	108.0	108.5	109.1	24	110.8	111.6	112.0	24
8/1	107.2	107.8	108.8	24	107.5	108.1	108.6	24	108.9	109.6	110.3	24	109.1	109.6	110.2	24	111.3	112.3	112.9	24
8/2	106.7	106.9	107.6	24	107.1	107.5	108.1	24	108.8	109.3	110.0	24	109.0	109.4	109.8	24	111.0	111.9	112.2	24
8/3	106.8	107.3	108.0	24	106.9	107.2	107.7	24	108.4	108.8	109.3	24	108.6	108.8	109.1	24	111.3	112.0	112.5	24
8/4	106.5	106.8	107.7	24	106.1	106.4	107.0	24	107.7	108.5	109.0	24	107.8	108.0	108.2	24	111.0	111.8	112.1	24
8/5	105.9	106.3	106.6	24	105.6	106.0	106.4	24	107.4	108.0	108.7	24	106.5	106.7	107.0	24	110.7	111.6	112.1	24
8/6	105.4	105.9	106.4	24	105.4	105.8	106.3	24	107.2	107.8	108.3	24	105.6	105.8	106.0	24	110.3	110.9	111.4	24
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	23	106.7	107.5	108.0	23	108.3	109.3	110.0	23	107.7	108.0	108.3	23	110.2	112.6	114.6	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	107.8	108.7	109.6	24	113.1	113.8	114.3	24	110.0	111.6	112.3	24	111.8	112.1	113.2	24	110.4	110.9	111.4	24
8/1	108.5	109.3	110.2	24	113.8	114.4	115.6	24	110.4	111.7	112.7	24	111.9	112.2	113.1	24	110.0	110.6	110.8	24
8/2	108.9	109.4	110.1	24	113.9	114.3	115.2	24	107.8	110.5	111.3	24	112.4	113.1	113.5	24	110.5	110.9	111.5	24
8/3	108.4	108.8	109.5	24	114.9	115.7	116.9	23	109.0	109.3	110.0	24	111.9	112.8	114.4	24	108.7	109.1	109.8	24
8/4	108.2	108.4	108.6	24	114.3	114.8	115.6	24	108.3	108.4	108.7	24	111.7	112.4	113.6	24	108.5	109.0	109.6	24
8/5	107.1	107.5	108.2	24	112.8	113.8	115.6	23	106.9	107.2	107.8	24	110.7	111.4	113.5	24	107.5	108.2	109.3	24
8/6	106.7	107.2	107.5	24	112.1	113.1	114.1	24	107.1	107.9	108.5	24	110.5	111.3	114.1	24	107.3	108.5	109.6	24
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	107.3	108.2	109.7	23	107.3	108.2	109.7	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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	112.9	113.5	115.5	24	---	---	---	0	98.8	99.2	99.5	24	100.7	101.8	103.1	24	102.3	103.6	104.9	24
8/1	112.8	113.8	116.1	24	---	---	---	0	99.2	99.6	100.0	24	101.1	102.1	103.5	24	102.3	103.6	104.7	24
8/2	114.6	115.6	117.0	24	---	---	---	0	99.3	99.7	100.1	24	101.1	102.1	103.3	24	102.2	103.5	104.7	24
8/3	112.2	113.2	114.6	24	---	---	---	0	101.0	102.5	104.7	24	102.3	104.1	106.5	24	101.4	102.1	102.9	23
8/4	112.2	114.3	116.5	24	---	---	---	0	99.6	99.9	100.3	24	100.9	101.9	103.2	24	101.8	103.1	104.5	24
8/5	112.0	113.4	115.8	24	---	---	---	0	99.5	99.8	100.3	24	100.1	100.1	100.6	7	101.6	102.7	104.1	24
8/6	110.7	111.7	115.0	24	---	---	---	0	99.2	99.4	99.8	24	102.6	102.6	104.1	12	101.2	102.5	103.8	24
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	---	---	---	0	---	---	---	0	99.5	99.9	100.3	23	101.6	102.9	103.7	23	101.5	102.6	103.4	23

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	103.7	106.2	108.0	24	99.7	99.9	100.2	24	108.3	111.1	111.8	24	101.8	102.0	102.2	24	105.3	106.0	106.6	24
8/1	103.8	106.2	108.1	24	100.4	101.1	102.2	24	109.3	109.8	111.7	24	101.7	102.0	102.3	24	105.5	106.1	107.1	24
8/2	103.5	105.9	107.6	24	102.8	103.5	104.0	24	109.6	110.6	111.8	24	102.6	103.0	103.8	24	105.9	106.3	106.9	24
8/3	102.8	104.5	105.8	24	103.2	103.3	103.6	24	110.4	111.6	112.0	24	103.8	104.1	104.4	24	105.6	106.1	106.5	24
8/4	103.8	105.9	107.6	24	102.4	102.6	102.8	24	109.8	110.3	110.6	24	104.0	104.5	105.0	24	103.6	104.1	105.2	24
8/5	103.5	105.6	107.6	24	101.7	102.0	102.3	24	109.9	110.6	111.2	24	103.4	103.7	103.9	24	103.2	103.7	105.1	24
8/6	103.4	105.8	107.5	24	101.8	102.1	102.4	24	109.5	110.0	110.4	24	103.8	104.2	104.6	24	102.7	103.2	103.6	24
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	103.0	104.8	106.1	23	99.2	99.5	99.8	23	110.2	113.4	114.2	23	103.9	104.3	104.6	23	108.1	108.8	109.3	23

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

	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
7/31	104.6	105.7	106.9	24	112.8	113.6	114.8	24	110.3	110.8	111.5	24	111.3	112.4	113.2	24	---	---	---	0
8/1	105.3	105.7	106.7	24	114.9	115.3	116.0	24	112.3	112.8	113.5	24	113.8	114.5	115.0	24	---	---	---	0
8/2	104.6	104.7	105.0	24	114.7	115.0	115.3	24	112.8	113.2	113.8	24	113.1	113.8	114.4	24	---	---	---	0
8/3	103.3	104.0	105.0	24	114.7	115.0	115.6	24	113.1	113.8	114.4	24	112.7	113.1	113.7	24	---	---	---	0
8/4	104.7	105.5	105.8	24	112.1	112.6	113.3	23	112.5	113.0	113.7	24	110.3	111.2	111.8	24	---	---	---	0
8/5	104.9	105.1	105.2	24	112.4	113.1	113.3	24	111.7	112.0	112.4	24	110.7	112.0	113.3	24	---	---	---	0
8/6	104.8	105.2	105.5	24	112.3	112.7	113.1	24	111.4	111.9	112.4	24	109.9	110.7	111.7	24	---	---	---	0
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	23	109.3	109.8	111.2	23	108.1	108.4	109.1	23	107.1	107.8	108.4	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

	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
7/31	108.1	108.8	109.8	24	115.9	116.3	116.5	24	103.8	104.4	105.4	24	110.2	111.0	111.8	24	107.6	108.1	108.5	24
8/1	109.8	110.7	111.4	24	115.1	115.4	115.5	24	104.2	105.2	105.9	24	109.6	110.8	111.6	24	107.5	108.0	108.5	24
8/2	110.7	111.2	111.7	24	113.9	114.6	115.9	24	105.2	105.7	106.4	24	108.0	108.6	109.5	24	107.2	107.6	108.1	24
8/3	110.2	110.5	110.8	24	112.6	112.7	112.8	24	105.2	105.5	105.9	24	107.0	107.8	108.1	24	105.7	105.9	106.3	24
8/4	109.4	109.7	109.9	24	112.9	113.6	114.0	24	105.7	106.0	106.5	24	108.0	109.7	110.4	24	105.3	105.8	106.1	24
8/5	107.2	107.8	108.3	24	113.7	114.8	115.3	24	105.3	105.6	105.8	24	107.7	108.3	109.0	24	104.9	105.3	105.4	24
8/6	105.2	105.4	105.8	24	114.6	114.9	115.2	24	104.9	105.3	105.5	24	107.8	108.9	109.6	24	104.6	105.4	105.6	24
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	106.4	106.9	107.3	23	115.5	116.4	116.7	23	105.2	105.9	106.4	23	112.6	113.4	114.6	23	106.7	107.0	107.3	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
7/31	113.0	113.7	114.1	24	111.7	112.4	112.7	24	116.8	117.6	117.9	24	114.9	115.9	116.5	24	117.1	117.1	117.2	24
8/1	112.8	113.5	113.9	24	111.5	111.7	111.9	24	117.0	117.2	117.4	24	115.0	116.5	117.5	24	114.7	115.7	117.0	24
8/2	112.2	112.6	113.1	24	109.0	109.6	111.0	24	116.7	117.3	117.7	24	114.3	115.1	116.0	24	114.3	114.9	116.8	24
8/3	111.2	111.4	112.0	24	106.5	107.1	107.9	24	115.2	115.6	115.8	24	113.3	113.9	114.8	24	113.5	113.5	113.6	24
8/4	111.2	111.7	112.0	24	104.1	104.4	104.7	24	113.8	114.4	114.9	24	111.2	112.0	112.8	24	113.3	113.3	113.6	24
8/5	111.1	111.3	111.5	24	103.0	103.2	103.6	24	114.0	114.5	114.9	24	109.8	111.0	111.7	24	113.5	113.8	115.5	24
8/6	110.8	111.8	112.1	24	103.4	103.8	104.5	24	114.7	115.0	115.5	24	111.2	112.8	113.7	24	113.7	114.1	116.6	24
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	23	106.9	107.2	107.8	23	115.2	115.6	115.9	23	128.7	141.7	148.9	23	114.4	114.8	117.0	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center Updated: 8/14/2015 7:01

* One or more of the sites on this date had an incomplete or biased sample.
See Sampling Comments: http://www.fpc.org/currentDaily/smpcomments.htm
For clip information see: http://www.fpc.org/CurrentDaily/catch.htm
For sockeye and yearling chinook (Snake only) race information see: http://www.fpc.org/smoltqueries/currentsmpsubmitdata.asp

				COMBINED YEARLING CHINOOK								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/31/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/01/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/02/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/03/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/04/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/05/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/06/2015	*	---	---	---	---	0	0	0	0	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
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								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
07/31/2015	*	---	---	---	---	1,020	115	35	40	---	462	---
08/01/2015	*	---	---	---	---	1,307	158	84	36	641	---	247
08/02/2015	*	---	---	---	---	2,573	509	118	26	---	---	---
08/03/2015	*	---	---	---	---	4,300	477	66	26	544	---	418
08/04/2015	*	---	---	---	---	9,236	721	32	20	---	201	---
08/05/2015	*	---	---	---	---	7,515	707	46	16	176	---	139
08/06/2015	*	---	---	---	---	3,778	367	16	26	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**41,481**	**6,114**	**1,016**	**294**	**2,296**	**899**	**1,667**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**2,963**	**437**	**73**	**21**	**328**	**225**	**238**
YTD		**1**	**114**	**1,292**	**2,077**	**1,133,938**	**954,488**	**331,123**	**20,733**	**1,562,655**	**826,123**	**2,187,177**

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)
07/31/2015	*	---	---	---	---	0	0	0	0	---	10	---
08/01/2015	*	---	---	---	---	0	0	0	1	0	---	0
08/02/2015	*	---	---	---	---	8	0	0	0	---	---	---
08/03/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/04/2015	*	---	---	---	---	0	0	0	0	---	0	---
08/05/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/06/2015	*	---	---	---	---	0	0	0	0	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**26**	**3**	**0**	**1**	**0**	**10**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**
YTD		**0**	**0**	**0**	**47**	**40,398**	**60,303**	**37,631**	**14,704**	**66,248**	**70,109**	**692,863**

				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)
07/31/2015	*	---	---	---	---	0	18	0	0	---	3	---
08/01/2015	*	---	---	---	---	18	9	8	0	21	---	0
08/02/2015	*	---	---	---	---	25	20	0	0	---	---	---
08/03/2015	*	---	---	---	---	0	13	0	0	10	---	0
08/04/2015	*	---	---	---	---	51	20	0	0	---	0	---
08/05/2015	*	---	---	---	---	0	21	0	0	10	---	0
08/06/2015	*	---	---	---	---	0	13	0	0	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**146**	**195**	**8**	**0**	**51**	**3**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**10**	**14**	**1**	**0**	**7**	**1**	**0**
YTD		**2,567**	**40,594**	**672**	**11,678**	**1,300,167**	**1,073,421**	**576,051**	**12,754**	**456,599**	**201,079**	**1,021,904**

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)
07/31/2015	*	---	---	---	---	0	0	0	0	---	3	---
08/01/2015	*	---	---	---	---	9	0	0	0	0	---	0
08/02/2015	*	---	---	---	---	0	0	0	0	---	---	---
08/03/2015	*	---	---	---	---	0	0	0	0	0	---	0
08/04/2015	*	---	---	---	---	0	0	0	3	---	0	---
08/05/2015	*	---	---	---	---	0	0	0	1	0	---	0
08/06/2015	*	---	---	---	---	0	0	0	0	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**9**	**0**	**0**	**16**	**10**	**3**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**0**
YTD		**74**	**0**	**4**	**47**	**16,237**	**19,851**	**11,030**	**3,920**	**128,914**	**104,375**	**149,234**

				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)
07/31/2015	*	---	---	---	---	0	2	0	3	---	0	---
08/01/2015	*	---	---	---	---	1	2	0	2	0	---	0
08/02/2015	*	---	---	---	---	0	2	0	1	---	---	---
08/03/2015	*	---	---	---	---	0	0	0	2	5	---	0
08/04/2015	*	---	---	---	---	0	0	0	2	---	0	---
08/05/2015	*	---	---	---	---	1	2	0	2	15	---	0
08/06/2015	*	---	---	---	---	0	0	0	4	---	---	---
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		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**2**	**18**	**0**	**30**	**115**	**0**	**0**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**4**	**7**
Average:		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**16**	**0**	**0**
YTD		**0**	**1**	**0**	**0**	**32**	**8,171**	**2,334**	**151**	**8,800**	**19,949**	**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 macropthalmia, 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: 8/14/15 7:00 AM

07/31/15 TO 08/14/15

		Species				
Site	Data	**CH0**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	21,595	15	75	5	21,690
	Sum of NumberBarged	21,859	15	75	3	21,952
	Sum of NumberBypassed	1	0	0	0	1
	Sum of Numbertrucked	0	0	0	0	0
	Sum of SampleMorts	30	0	0	1	31
	Sum of FacilityMorts	34	0	0	1	35
	Sum of ResearchMorts	15	0	0	0	15
	Sum of TotalProjectMorts	79	0	0	2	81
LGS	Sum of NumberCollected	3,803		122		3,925
	Sum of NumberBarged	3,366		119		3,485
	Sum of NumberBypassed	0		0		0
	Sum of Numbertrucked	0		0		0
	Sum of SampleMorts	16		2		18
	Sum of FacilityMorts	12		0		12
	Sum of ResearchMorts	0		0		0
	Sum of TotalProjectMorts	28		2		30
LMN	Sum of NumberCollected	572		4		576
	Sum of NumberBarged	531		4		535
	Sum of NumberBypassed	0		0		0
	Sum of Numbertrucked	0		0		0
	Sum of SampleMorts	0		0		0
	Sum of FacilityMorts	1		0		1
	Sum of ResearchMorts	0		0		0
	Sum of TotalProjectMorts	1		0		1
Total Sum of NumberCollected		25,970	15	201	5	26,191
Total Sum of NumberBarged		25,756	15	198	3	25,972
Total Sum of NumberBypassed		1	0	0	0	1
Total Sum of Numbertrucked		0	0	0	0	0
Total Sum of SampleMorts		46	0	2	1	49
Total Sum of FacilityMorts		47	0	0	1	48
Total Sum of ResearchMorts		15	0	0	0	15
Total Sum of TotalProjectMorts		108	0	2	2	112

YTD Transportation Summary

Source: Fish Passage Center Updated: 8/14/15 7:00 AM

TO: 08/14/15

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	670,475	1,150,138	26,315	10,915	826,749	2,684,592
	Sum of NumberBarged	655,543	473,291	22,805	10,483	363,272	1,525,394
	Sum of NumberBypassed	8,363	676,470	3,499	160	463,117	1,151,609
	Sum of NumberTrucked	4,139	0	0	0	19	4,158
	Sum of SampleMorts	218	43	1	8	30	300
	Sum of FacilityMorts	1,466	318	10	257	261	2,312
	Sum of ResearchMorts	15	16	0	7	40	78
	Sum of TotalProjectMorts	1,699	377	11	272	331	2,690
LGS	Sum of NumberCollected	641,318	807,530	42,064	13,866	748,758	2,253,536
	Sum of NumberBarged	638,162	545,396	40,316	13,819	535,247	1,772,940
	Sum of NumberBypassed	136	261,966	1,720	40	213,220	477,082
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	132	21	0	2	14	169
	Sum of FacilityMorts	2,343	147	26	5	272	2,793
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,475	168	26	7	286	2,962
LMN	Sum of NumberCollected	173,672	642,436	22,120	6,690	322,640	1,167,558
	Sum of NumberBarged	172,303	581,534	21,816	6,640	285,463	1,067,756
	Sum of NumberBypassed	617	60,572	300	30	36,797	98,316
	Sum of NumberTrucked	0	0	0	0	0	0
	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		1,485,465	2,600,104	90,499	31,471	1,898,147	6,105,686
Total Sum of NumberBarged		1,466,008	1,600,221	84,937	30,942	1,183,982	4,366,090
Total Sum of NumberBypassed		9,116	999,008	5,519	230	713,134	1,727,007
Total Sum of NumberTrucked		4,139	0	0	0	19	4,158
Total Sum of SampleMorts		414	109	3	10	83	619
Total Sum of FacilityMorts		4,437	780	38	282	874	6,411
Total Sum of ResearchMorts		15	16	0	7	40	78
Total Sum of TotalProjectMorts		4,866	905	41	299	997	7,108

Cumulative Adult Passage at Mainstem Dams Through: 08/13

		Spring Chinook						Summer Chinook						Fall Chinook					
	END	2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.		2015		2014		10-Yr Avg.	
DAM	DATE	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	08/13	220480	13314	188083	26094	132065	23978	161735	17730	109734	25342	87270	20126	15320	1300	7524	2791	6893	1512
TDA	08/13	194116	12307	143142	21080	101070	20309	123915	15458	96134	19525	74749	16059	9027	996	4040	1804	3855	953
JDA	08/13	166015	11514	123224	19103	88117	19021	108768	10988	86033	17655	66973	16286	6130	643	2130	879	2058	639
MCN	08/13	156151	8767	107147	16033	79364	15788	96287	8723	87974	17022	63834	12059	4130	315	1105	489	1333	285
IHR	08/13	116462	5745	79298	12428	55061	10384	21408	2807	17433	4474	17149	4587	403	9	143	13	97	14
LMN	08/13	111511	8697	79942	14020	55282	9560	17764	4835	16064	8136	18783	5224	0	0	0	0	1	0
LGS	08/13	105124	8553	77966	13649	51473	10681	15066	4422	16915	7451	17870	5834	0	0	0	0	0	0
LGR	08/13	104873	8379	79167	13732	50576	11930	14363	4126	14531	7073	15770	6348	0	0	0	0	0	0
PRD	08/12	27716	1570	23742	2649	15720	1631	77548	3503	78195	4794	53698	2371	0	0	0	0	0	0
WAN	08/12	25982	1077	0	0	15431	2202	76045	2145	0	0	49756	1946	0	0	0	0	0	0
RIS	08/12	31749	1092	23247	2934	15126	2669	85065	2321	76875	5901	50475	4954	0	0	0	0	0	0
RRH	08/12	15244	609	12376	2377	6372	1183	71503	1761	56818	4185	38962	3380	0	0	0	0	0	0
WEL	08/10	19971	1520	15377	2544	5959	1398	51753	2859	45069	4067	27393	2586	0	0	0	0	0	0
WFA	08/10	50934	2036	29988	1580	33669	1180	0	0	0	0	0	0	0	0	0	0	0	0

		Coho						Sockeye			Steelhead						Lamprey		
	END	2015		2014		10-Yr Avg.				10-Yr			10-Yr	Wild	Wild	10-Yr			10-Yr
DAM	DATE	Adult	Jack	Adult	Jack	Adult	Jack	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.	2015	2014	Avg.
BON	08/13	47	23	130	51	113	27	510327	614067	241276	137509	157762	175520	59345	77118	70029	35217	28639	18740
TDA	08/13	8	0	1	1	6	0	429001	586005	206874	45781	74051	79362	24708	40179	36034	10479	9342	4897
JDA	08/13	5	0	0	1	4	2	365034	557409	205421	20898	43649	57962	11418	22191	24863	6661	6603	4177
MCN	08/13	15	5	0	0	1	0	277979	545805	181582	16857	38670	43795	8914	19396	17542	1325	1181	1038
IHR	08/13	0	0	0	0	0	0	1027	2385	742	8008	18713	23368	3853	6957	7041	601	460	167
LMN	08/13	0	0	0	0	0	0	873	2800	898	8171	21939	22869	4348	8989	7719	199	119	44
LGS	08/13	0	0	0	0	0	0	558	2801	879	3376	11403	11535	2176	6054	4654	97	81	23
LGR	08/13	0	0	0	0	0	0	403	2702	937	10558	14050	14962	5238	6978	5737	37	34	4
PRD	08/12	0	0	0	0	0	0	300396	607925	215666	3473	5103	4934	0	0	0	4646	3063	1319
WAN	08/12	0	0	0	0	0	0	295295	0	191274	3224	0	5215	0	0	0	3242	0	509
RIS	08/12	0	-2	0	0	0	0	262115	580426	212089	2377	2824	3529	1332	1558	1876	0	518	226
RRH	08/12	0	0	0	0	0	0	213747	492005	180848	1480	1504	2500	814	798	1238	0	511	98
WEL	08/10	0	0	0	0	0	0	184179	488061	174179	751	874	1035	416	484	507	0	0	2
WFA	08/10	1	0	9	0	1	0	0	0	0	7009	26342	23025	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.

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