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

Fish Passage Center

Weekly Report #15–17

July 10, 2015

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 3% and 191% of average at individual sub-basins over early July. Precipitation above The Dalles has been 33% of average over July. Over the 2015 water year, precipitation has ranged between 73% and 95% of average.

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

Location	Water Year 2015 July 1–9, 2015		Water Year 2015 October 1, 2014 to July 9, 2015	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.07	11	30.3	93
Snake River above Ice Harbor	0.21	79	15.9	79
Columbia above The Dalles	0.12	33	20.4	84
Kootenai	0.13	17	31.5	95
Clark Fork	0.03	7	17.4	73
Flathead	0.16	28	26.9	85
Pend Oreille River Basin above Waneta Dam	0.07	15	23.1	80
Salmon River Basin	0.07	18	19.3	76
Upper Snake Tributaries	0.74	191	18.6	78
Clearwater	0.02	4	29.3	79
Willamette River above Portland	0.01	3	48.7	80

Table 2 displays the July 9th ESP runoff volume forecasts for multiple reservoirs along with the June COE forecasts at Libby and Dworshak. The July 9th ESP forecast at The Dalles between April and August is 58,845 Kaf (67% of average).

Table 2. July ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Location	July 9, 2015 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Apr–Aug)	67	58,845
Grand Coulee (Apr–Aug)	74	42,164
Libby Res. Inflow, MT (Apr–Aug)	71 86*	4,206 5,090*
Hungry Horse Res. Inflow, MT (Apr–Aug)	64	1,246
Lower Granite Res. Inflow (Apr–July)	53	1,0558
Brownlee Res. Inflow (Apr–July)	45	2,463
Dworshak Res. Inflow (Apr–July)	45 42*	1,095 1,113*

* Denotes COE June Forecast

Grand Coulee Reservoir is at 1,287.2 feet (7-9-15) and has refilled 2.4 feet over the last week. Outflows at Grand Coulee have ranged between 84.3 and 107.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,443.8 feet (7-9-15) and has refilled 0.6 feet over the previous week. Daily average outflows at Libby Dam have been 9.5 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,549.0 feet (7-9-15) and drafted 0.6 feet over the last week. Outflows at Hungry Horse have been 2.5 Kcfs over the last week.

Dworshak is currently at an elevation of 1,584.1 feet (7-9-15) and drafted 4.4 feet over the last week. Outflows have ranged between 5.4 and 7.5 Kcfs over the last week.

The Brownlee Reservoir was at an elevation of 2,071.7 feet on July 9, 2015, and has drafted 1.8 feet over the last week. Hells Canyon outflows have ranged between 7.5 and 17.5 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 29.3 Kcfs and over the last week have averaged 25.1 Kcfs.

The Summer Biological Opinion Flow Objectives (which began July 1st) is 200 Kcfs at McNary Dam. Over July, flows at McNary have averaged 149.1 Kcfs.

Spill

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

At the lower Snake River projects spill has been implemented according to the 2015 Fish Operations Plan (2015 FOP). With the initiation of summer spill, volumes at the Snake River projects on June 21st were as follows: 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 45Kcgs/gas cap spill. However, low flow over this past week caused operations to switch from these spill levels at all the Snake River projects. Lower Granite Dam spilled all water in excess of that needed to operate one turbine unit, and spill has ranged from 10.1 Kcfs to 15.9 Kcfs. Spill at Little Goose Dam was changed from an instantaneous 30% level to a fixed spill volume on June 16th. This change is specified in the 2015 FOP. However, the 2015 FOP did not provide details as to when the fixed spill volume would switch between the specified 11, 9, and 7 Kcfs levels. On June 25th, the Salmon Managers proposed criteria that clarified when the specified spill levels would be provided. These criteria were approved at the June 25th Technical Management Team meeting and are as follows: (1) at daily average outflows of ≥28 Kcfs but <32 Kcfs, a constant 11 Kcfs spill will be provided, (2) at daily average outflows of ≥24 Kcfs but <28 Kcfs, a constant 9 Kcfs spill will be provided, (3) at daily average outflows of <24 Kcfs, a constant 7 Kcfs spill will be provided, and (4) when 7 Kcfs spill is not possible, spill will be total outflow minus powerhouse minimums. Daily average outflow will be based on the previous day's 24-hour average outflow at Little Goose Dam. Spill over the past week ranged from 7.4 Kcfs to 10.3 Kcfs.

Summer spill volumes at Lower Monumental Dam were equal to all flow in excess of the amount needed to operate one turbine unit and ranged from 7.3 Kcfs to 13 Kcfs. The "test-like" conditions, where spill alternates between 30% instantaneous and 45 Kcfs/gas cap, were in place last week. Flows are sufficiently low that the 45 Kcfs/gas cap spill condition is not implementable and spill is occurring as all flow in excess of the amount needed to operate one turbine unit during these blocks of time. Spill averaged from 8.3Kcfs to 16.8 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	**June 21–July 13:** 30%/30% vs. 45 Kcfs/Gas Cap **July 13–August 31:** 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	**June 16–July 20**: 30%/30% and 40%/40% **July 20–August 31:** 30%/30%
The Dalles	40%/40%
Bonneville	**June 16–Aug 31:** 85 Kcfs/121 Kcfs and 95 Kcfs/95 Kcfs

Over the past week TDG measurements have been within all waiver limits at all of the TDG monitors. **Note**: The State of Oregon and the State of Washington use different methodologies to estimate the 12-hour average TDG. For Oregon, the 12-hour average is based on the 12 highest hourly TDG measurements in a single calendar day (not necessarily consecutive). For Washington, the 12-hour average is based on 12-hour rolling averages. The highest of the rolling averages is what is reported as the 12-hour average for a given day. The location of a TDG monitor will dictate which of these methodologies is used for compliance monitoring. The Washington methodology will apply to all the lower Snake River projects, as well as the middle Columbia River forebay monitors. On any given day the compliance of the tailrace monitors at the middle Columbia River projects will be determined using either the Washington or Oregon methodology, whichever is the most restrictive, and spill will be decreased if needed.

Monitoring for signs of gas bubble trauma (GBT) occurred at Little Goose, Lower Monumental, Bonneville and Rock Island dams over the past week. Monitoring at Lower Granite Dam ended for the season due to low fish numbers. Monitoring at McNary Dam did not occur because of high temperature concerns. No fish were detected over the past week with signs of GBT.

Smolt Monitoring

All Smolt Monitoring Program bypass facilities continued sampling this week. Sampling at the Snake River, Salmon River, and Grande Ronde River traps has been terminated for the season. Sampling at the Imnaha River Trap was terminated after the July 7th sample.

Passage of spring migrants (i.e., yearling Chinook, steelhead, coho, and sockeye) was low at all of the SMP sites this week. Subyearling Chinook dominated the collections at all the SMP dam sites this week. On the Snake River, subyearling Chinook passage decreased at Lower Granite and Lower Monumental dams this week, while passage at Little Goose Dam remained similar to last week. Subyearling Chinook passage increased at Bonneville, McNary, and Rock Island dams this week when compared to last week.

Samples at Bonneville Dam (BON) continue to be dominated by subyearling Chinook. The BON Juvenile Fish Facility is currently operating under the high temperature sampling protocol. 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. This week's daily average passage index was nearly 42,000 which is an increase over last week's daily average passage index of nearly 30,000. The only spring migrants that were encountered in this week's samples were steelhead, which were encountered in only one of this week's samples (July 8th). Finally, Pacific lamprey ammocoetes and macropthalmia were encountered in only one of the three sample days this week. Ammocoetes were encountered in the July 8th sample while the macropthalmia were encountered in the July 4th sample.

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. Passage of spring migrants was very low this week. No lamprey juveniles were encountered in this week's samples. Finally, mortality levels for subyearling Chinook at JDA remained elevated this week. The July 3rd sample had a mortality rate of nearly 20% and the July 7th sample had a mortality rate of 17.3%. There is still no clear cause to the elevated mortality.

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 nearly 204,000 per day, which is large increase over last week's daily average passage index of about 94,000 per day. The only spring migrants that were encountered in this week's samples were steelhead, which were encountered in the July 4th sample. Finally, Pacific lamprey macropthalmia were encountered in one of this week's three samples. To date, MCN has not sampled any pacific lamprey ammocoetes for 2015. Sample mortalities for subyearling Chinook have been elevated this week, when compared to previous weeks. Mortality rates this week have ranged from 4.5% to 8.5%. Mortality rates from the previous week were in the 0.53% to 2.0% range. As with JDA, there is no clear cause of the elevated mortality rates at this time.

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 nearly 7,800, which was a decrease over last week's daily average passage index of about 9,700 fish per day. Passage of spring migrants continued to be very low this week. Finally, 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 11,850 fish per day, which is very similar to last week's daily average passage index of nearly 11,820 per day. No sockeye juveniles were encountered in this week's samples, and coho and yearling Chinook were encountered in only one of this week's samples (July 3rd for coho and July 7th for yearling Chinook). Steelhead, however, were encountered in all of this week's samples, with a daily average passage index of about 450 per day. This is a decrease over last week's daily average passage index of about 900 per day. Finally, no lamprey juveniles were encountered in 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 1,800 per day. This is a decrease over last week's daily average passage index of about 6,500 per day. Passage of spring migrants was very low this week. Finally, Pacific lamprey macropthalmia were encountered in only one of this week's samples (July 9th). No ammocoetes were encountered at LMN this week.

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 400 fish per day, which is a slight increase over last week's daily average passage index of about 330 per day. Passage of spring migrants was extremely low this week. Finally, Pacific lamprey macropthalmia were encountered in six of this week's samples but in low numbers. No Pacific lamprey ammocoetes were encountered in this week's samples.

The Imnaha River Trap (IMN) is located at river kilometer 7 and is operated by the Nez Perce Tribe. Sampling at IMN is year-round, however the FPC typically receives data only from early March through July. Due to the remote nature of the trap, the Nez Perce Tribe is able to send collection data to the FPC only periodically. Therefore, data for IMN may be several days behind. To date, we have received data through June 29th. Due to high water temperatures and low flows, sampling at IMN was terminated after the July 15th sample.

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. However, about 2.0 million subyearling fall Chinook juveniles are scheduled for release from Willard NFH in mid-July. This is the only release of juvenile salmonids that is scheduled for this zone over the next 2 weeks.

Adult Passage

Daily passage numbers at Bonneville Dam ranged between 1,298 and 3,199 adult summer Chinook in the last week. The 2015 summer Chinook count of 123,315 is about 1.4 times greater than the 2014 count and 1.7 times greater than the 10-year average. The 2015 summer Chinook jack count of 13,966 is about 73.2% of the 2014 count and 85% of the 10-year average count. As of July 9th, a total of 67,666 adult summer Chinook have been counted at McNary Dam and 9,549 have been counted at Lower Granite Dam. The 2015 McNary Dam adult summer Chinook count has 2,709 more fish than the 2014 count, while being 1.4 times greater than the 10-year average count. The 2015 Lower Granite Dam adult summer Chinook count has 118 fewer fish than the 2014 count and 3,161 fewer fish than the 10-year average count.

The 2015 Bonneville Dam adult steelhead count of 16,725 is 56.1% of the 2014 count of 29,796 and 61.9% of the 10-year average count of 26,961. The 2015 Bonneville Dam adult wild steelhead count of 8,553 is about 63.7% of the 2014 count of 13,434 and 79.8% of the 10-year average count of 10,716. Daily adult steelhead counts at Lower Granite Dam ranged from 530 to 843 adults per day last week. This year's Lower Granite steelhead count of 9,351 is about 1.1 times greater than the 2014 count of 8,280, while having 157 fewer fish than the 10-year average count of 9,508. The 2015 Lower Granite Dam adult wild steelhead count of 4,410 is 1.2 times greater than the 2014 count of 3,766 and is about 1.3 times greater than the 10-year average count of 3,425. At Willamette Falls, the 2015 count for steelhead was 6,862 as of July 8th. This year's steelhead count is about 27.9% of the 2014 count of 24,627 and about 31.8% of the 10-year average count of 21,544.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 9,030 and 20,974 last week. The 2015 adult sockeye count at Bonneville Dam of 460,674 is 85.4% of the 2014 count, while being 2.1 times greater than the 10-year average count. The 2015 adult sockeye count at McNary Dam of 260,699 is 68.2% of the 2014 count, while being 1.8 times greater than the 10-year average count. The Lower Granite Dam 2015 adult sockeye count of 185 has 475 fewer fish than the 2014 count of 660 and 137 fewer fish than the 10-year average. As of July 9th at Bonneville Dam, the adult shad count was 1,791,923. This year's shad count is about 69.1% of the 2014 count of 2,592,524 and 72.3% of the 10-year average count of 2,477,216.

Warm water temperatures throughout the Willamette and Snake Rivers have been stalling the upriver passage of salmonid adults. Over the last week at the Willamette Falls fish ladder, no salmonids passed the project. Willamette River temperatures have reached approximately 80°F and ODFW has counted nearly 500 pre-spawn mortality salmon in a 4-mile stretch below Willamette Falls since June 18, 2015. In the lower Snake River, adult passage has been intermittent. On July 7, 2015, the passage of sockeye at Lower Granite Dam fell to zero due to excessive water temperature and the formation of an eddy at the southern powerhouse created by the focused spill of the RSW and minimal powerhouse flow. At the July 8, 2015, FPOM meeting, it was agreed to discontinue the use of the RSW and move to a uniform spill pattern. In subsequent days, passage at Lower Granite has

increased, however passage has dropped at other Snake River projects. At Lower Granite Dam, the COE has begun the use of rental and auxiliary pumps that pull deeper and cooler water from the Lower Granite forebay into the fish ladder. IDFG has stated that they plan to implement an emergency trap and haul operation for sockeye in the Snake River beginning Monday July 13, 2015. Trapping will likely occur at Lower Granite Dam (with a possibility of trapping also occurring at Ice Harbor Dam) and trapped fish will be hauled to the Eagle Fish Hatchery in Idaho.

Hatchery Releases Last Two Weeks

Hatchery Release Summary
From: 6/27/2015 to 07/10/15

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2015	4,500,000	07-02-15	07-02-15	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service Total					**4,500,000**				
Washington Dept. of Fish and W	Ringold Springs Hatchery	CH0	FA	2015	3,500,000	06-22-15	07-03-15	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**3,500,000**				
Grand Total					**8,000,000**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary
From: 7/11/2015 to 7/23/2015

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
U.S. Fish and Wildlife Service	Willard Hatchery	CH0	FA	2015	2,000,000	07-15-15	07-20-15	Willard Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service Total					**2,000,000**				
Grand Total					**2,000,000**				

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

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
06/26/2015	121.9	0.1	119.6	0.0	121.3	8.4	113.5	10.0	113.4	22.8	110.9	17.4	107.3	27.1
06/27/2015	108.7	0.1	108.8	0.0	113.5	8.0	110.5	10.2	114.7	22.6	125.3	19.1	123.2	27.7
06/28/2015	105.9	0.1	106.9	0.0	111.0	7.8	109.7	9.7	110.8	22.8	108.9	19.6	105.7	28.7
06/29/2015	108.5	0.2	108.6	0.0	114.2	8.1	112.8	10.2	116.0	22.6	133.6	19.1	133.8	27.6
06/30/2015	118.6	0.0	112.1	0.0	118.1	8.5	113.6	9.3	115.9	22.4	118.4	18.7	117.1	28.3
07/01/2015	112.8	0.0	118.2	0.0	119.6	8.6	117.1	9.1	120.2	19.6	119.0	19.8	114.4	29.6
07/02/2015	103.6	0.0	105.3	0.0	112.0	8.3	112.9	9.4	116.1	22.8	135.7	19.6	136.2	28.3
07/03/2015	106.1	0.0	104.0	0.0	107.1	8.5	105.4	8.4	107.0	19.1	109.6	19.0	107.6	28.8
07/04/2015	107.3	0.0	108.3	0.0	110.6	9.0	105.7	7.4	106.9	17.4	108.0	19.8	105.1	29.5
07/05/2015	107.0	0.0	106.7	0.0	113.1	9.1	109.0	7.1	112.6	17.7	128.1	19.8	127.1	29.5
07/06/2015	86.4	0.0	90.6	0.0	98.6	7.8	95.3	8.5	98.8	20.7	113.1	19.2	113.8	28.1
07/07/2015	84.3	0.0	84.3	0.0	91.2	6.8	87.2	8.6	87.1	19.1	98.6	17.4	100.4	25.8
07/08/2015	98.2	0.0	98.0	0.0	102.2	8.0	101.0	9.3	102.9	20.8	111.5	17.6	109.3	26.0
07/09/2015	79.1	0.0	75.0	0.0	86.0	5.9	85.8	8.2	83.2	17.6	105.4	15.7	104.1	25.7

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
06/26/2015	8.8	0.0	---	10.2	30.9	18.2	31.8	11.0	29.6	17.0	30.5	9.1
06/27/2015	12.4	2.8	---	9.7	32.9	18.1	31.8	11.1	31.9	16.6	31.1	9.3
06/28/2015	13.2	3.6	---	9.5	36.5	18.1	35.8	11.1	35.1	17.0	36.8	11.0
06/29/2015	11.4	1.8	---	9.0	34.2	18.0	35.4	10.6	33.3	16.3	33.1	9.8
06/30/2015	9.6	0.0	---	10.9	30.8	18.0	28.4	8.5	27.7	15.4	26.4	15.3
07/01/2015	9.6	0.0	---	9.6	30.9	18.2	30.5	10.5	30.8	16.6	31.9	20.7
07/02/2015	5.4	0.0	---	9.0	28.4	15.8	29.0	10.9	28.9	16.5	31.1	21.0
07/03/2015	5.4	0.0	---	8.3	24.7	12.1	23.0	10.3	22.9	10.4	20.5	10.6
07/04/2015	5.4	0.0	---	9.3	22.8	10.1	19.9	7.4	19.6	7.3	19.9	10.0
07/05/2015	5.4	0.0	---	8.8	22.9	10.1	22.8	7.4	20.9	8.8	20.3	10.4
07/06/2015	7.5	0.0	---	9.2	24.7	12.0	24.9	7.4	24.8	12.5	26.6	16.8
07/07/2015	7.5	0.0	---	11.5	24.9	12.0	24.9	9.2	24.8	12.5	24.6	10.2
07/08/2015	7.5	0.0	---	10.3	27.5	14.5	25.6	9.3	25.5	12.0	26.6	8.3
07/09/2015	7.5	0.0	---	9.4	29.1	15.9	27.5	9.4	25.3	13.0	24.0	12.5

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
06/26/2015	152.9	76.6	144.3	43.5	133.2	53.3	139.5	89.3	0.9	36.9
06/27/2015	158.7	79.6	151.7	45.5	137.3	54.9	157.5	93.4	0.9	50.9
06/28/2015	162.4	81.5	149.4	44.9	138.9	55.3	155.2	100.3	0.9	41.6
06/29/2015	168.5	84.5	161.8	48.6	143.7	57.3	157.3	95.4	0.9	48.6
06/30/2015	156.3	78.4	148.8	47.1	137.8	55.2	150.6	91.5	0.9	45.8
07/01/2015	147.4	74.0	143.1	57.3	127.9	51.3	142.4	90.3	0.9	38.8
07/02/2015	164.2	82.2	158.3	63.2	144.4	57.6	155.8	99.9	0.9	42.6
07/03/2015	160.6	80.5	142.4	56.7	127.3	51.1	151.9	95.0	0.9	43.5
07/04/2015	129.9	65.3	135.1	53.9	120.9	48.3	137.3	88.4	0.9	35.6
07/05/2015	146.3	73.4	132.6	53.1	118.5	47.6	135.2	89.9	0.9	32.0
07/06/2015	153.5	76.9	140.7	56.1	128.3	51.3	150.1	96.9	0.8	40.0
07/07/2015	155.6	77.9	152.1	60.7	137.7	55.3	152.2	95.1	1.0	43.7
07/08/2015	135.1	67.6	128.3	48.8	115.3	46.2	134.5	85.8	0.9	35.3
07/09/2015	137.3	68.9	126.0	37.8	111.0	44.5	131.0	85.5	---	---

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank: Rank 1	Rank 2	Rank 3	Rank 4
Lower Granite Dam											
Little Goose Dam											
	06/29/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/06/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	07/01/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/08/15	Chinook + Steelhead	79*	0	0			0	0	0	0
McNary Dam											
	07/01/15	Chinook + Steelhead	85*	0	0			0	0	0	0
Bonneville Dam											
	06/27/15	Chinook + Steelhead	84*	0	0			0	0	0	0
	07/01/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/05/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/07/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	06/30/15	Chinook + Steelhead	75*	0	0			0	0	0	0
	07/02/15	Chinook + Steelhead	75*	0	0			0	0	0	0
	07/07/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/09/15	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0

* Due to low fish numbers, sample size criteria were not met. Therefore, % fish with GBT not estimated for this sample day.

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			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	106.0	106.4	106.9	24	---	---	---	0	108.0	108.3	108.4	24	106.2	106.8	107.1	24	107.2	107.8	108.2	24
6/27	106.2	106.7	107.2	24	---	---	---	0	108.3	108.6	108.7	24	106.3	106.9	107.8	24	107.5	107.9	108.3	24
6/28	106.7	107.1	107.5	24	---	---	---	0	108.5	108.9	109.2	24	106.5	107.1	107.5	24	107.5	107.9	108.2	24
6/29	106.6	106.7	106.9	24	---	---	---	0	108.5	108.7	108.9	24	106.5	107.0	107.4	24	107.3	107.7	108.2	24
6/30	106.7	107.0	107.3	24	---	---	---	0	108.2	108.5	108.6	24	106.4	106.8	107.1	24	107.0	107.4	107.8	24
7/1	106.8	107.0	107.3	24	---	---	---	0	108.1	108.3	108.4	24	106.4	106.9	107.4	24	106.8	107.3	107.6	24
7/2	107.1	107.5	107.8	24	---	---	---	0	107.9	108.1	108.3	24	106.5	107.1	107.7	24	107.3	107.8	108.1	24
7/3	107.3	107.7	108.0	24	---	---	---	0	108.2	108.6	108.8	24	107.2	108.0	108.8	24	108.0	108.6	109.1	24
7/4	107.5	107.9	108.2	24	---	---	---	0	108.5	108.7	108.9	24	107.2	107.9	109.0	24	108.4	108.8	109.2	24
7/5	106.0	106.8	107.4	24	---	---	---	0	108.2	108.5	109.1	24	106.7	107.3	107.5	24	107.6	107.8	108.0	24
7/6	105.4	106.0	106.2	24	---	---	---	0	107.8	108.1	108.8	24	106.4	107.1	107.7	24	107.4	107.9	108.8	24
7/7	105.4	105.8	106.0	24	---	---	---	0	107.8	107.9	108.2	24	107.2	107.8	108.5	24	107.9	108.3	108.7	24
7/8	105.0	105.7	105.9	24	---	---	---	0	108.4	109.0	109.6	24	107.3	108.0	108.8	24	108.3	108.7	108.8	24
7/9	105.7	106.3	106.7	23	---	---	---	0	109.1	109.3	109.6	23	108.0	108.8	109.7	23	109.2	109.7	110.0	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	106.7	106.9	107.4	24	108.2	109.1	109.4	24	109.7	110.6	111.1	24	109.0	109.6	110.0	24	112.1	113.5	114.1	24
6/27	107.3	107.7	108.1	24	108.7	109.3	110.0	24	109.9	110.7	111.4	24	110.0	110.3	111.0	24	113.1	113.9	114.5	24
6/28	107.2	107.5	108.0	24	109.0	109.8	110.4	24	110.3	111.2	111.5	24	110.4	110.7	111.3	24	113.2	114.2	114.7	24
6/29	107.7	108.2	108.9	24	108.5	108.9	109.4	23	109.9	110.5	111.1	23	110.0	110.2	110.3	24	113.1	114.3	114.9	24
6/30	107.1	107.7	108.8	24	108.2	108.8	109.3	21	109.5	110.1	110.6	21	109.7	110.0	110.2	24	112.3	113.7	114.7	24
7/1	107.0	107.4	108.3	24	107.8	108.0	109.3	17	109.3	109.5	110.6	17	109.3	109.5	109.6	22	112.1	113.1	114.5	22
7/2	107.2	107.8	108.7	24	108.4	109.2	109.9	24	109.8	110.7	111.4	24	109.2	109.7	110.3	24	112.5	113.8	114.1	24
7/3	107.6	108.1	109.4	24	108.9	109.7	110.2	22	110.3	111.0	111.7	22	110.4	110.9	111.6	24	112.5	113.8	114.2	24
7/4	108.2	108.7	109.3	24	109.2	110.0	110.6	23	110.7	111.4	112.3	23	110.4	110.9	111.4	24	112.3	113.3	114.6	24
7/5	107.6	108.0	108.6	24	108.1	108.6	109.2	24	109.6	110.1	110.5	24	109.6	109.8	110.1	24	111.7	112.5	113.3	24
7/6	107.4	107.8	108.3	24	108.1	108.9	109.4	24	109.4	110.2	110.8	24	109.1	109.4	109.8	24	111.7	112.8	113.6	24
7/7	107.1	107.5	108.1	24	108.5	109.3	110.0	24	109.3	110.1	110.7	24	109.5	110.1	111.0	24	111.2	111.9	112.8	24
7/8	107.9	108.2	108.6	24	108.9	109.7	110.7	21	110.0	111.0	111.7	21	109.8	110.5	111.1	24	111.9	113.4	114.6	24
7/9	108.6	108.9	109.5	23	109.7	110.7	111.2	23	110.3	111.5	112.2	23	110.5	110.8	111.2	23	111.8	112.9	113.7	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	109.6	110.2	110.8	24	115.3	116.1	117.5	24	112.2	113.6	114.3	24	111.6	112.3	112.5	24	110.3	111.0	111.9	24
6/27	110.4	111.1	111.7	24	115.5	116.1	117.3	24	113.3	114.1	114.9	24	112.3	112.7	113.4	24	111.5	112.0	112.5	24
6/28	110.6	111.2	111.6	24	116.2	116.9	117.7	24	113.4	114.4	115.7	24	112.6	113.1	114.1	24	111.8	112.4	112.7	24
6/29	110.3	110.9	111.3	24	115.4	116.3	117.7	24	112.1	112.5	113.2	24	112.5	112.8	113.2	24	110.1	110.7	111.7	24
6/30	109.9	110.6	111.3	24	115.2	116.0	117.8	24	111.0	112.4	113.3	24	111.5	112.2	112.7	24	109.4	110.0	110.6	24
7/1	109.6	110.4	111.1	23	114.4	115.3	116.2	23	112.5	114.3	115.4	24	112.1	112.7	113.9	24	110.1	110.8	111.3	24
7/2	109.6	110.5	111.5	24	115.2	115.9	116.4	24	114.2	115.0	116.0	24	112.4	112.7	113.3	24	111.6	112.5	113.0	24
7/3	110.2	111.0	111.7	24	114.6	115.3	116.6	24	112.4	113.0	113.7	24	111.4	112.1	113.1	24	111.4	111.9	112.4	24
7/4	110.4	111.1	111.8	24	114.9	115.5	116.5	24	111.7	112.6	113.6	24	111.4	112.1	112.5	24	110.8	111.1	111.4	24
7/5	109.7	110.2	110.5	24	114.1	114.7	115.8	24	111.3	111.9	112.2	24	111.3	111.7	112.5	24	110.2	110.5	111.1	24
7/6	109.6	110.4	111.2	24	114.8	115.5	117.8	24	111.1	112.3	113.7	24	110.8	111.5	112.4	24	110.9	111.5	111.8	24
7/7	109.6	110.1	110.4	24	114.5	115.5	117.1	24	110.6	111.7	112.7	24	109.6	110.5	110.9	24	109.8	110.5	111.4	24
7/8	109.8	110.6	111.3	24	114.8	115.4	117.6	24	112.5	114.3	114.9	24	110.9	111.6	112.2	24	110.8	112.0	113.2	24
7/9	110.5	111.0	111.3	23	115.4	116.2	118.2	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			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	113.6	114.4	116.4	24	---	---	---	0	97.8	98.3	98.7	24	100.9	102.1	103.3	24	104.0	107.0	110.1	24
6/27	113.6	113.9	115.1	24	---	---	---	0	104.4	106.1	107.4	24	104.4	106.2	107.6	24	103.7	106.5	109.5	24
6/28	114.2	114.6	116.0	24	---	---	---	0	107.2	107.5	107.8	24	107.1	108.0	108.9	24	104.0	106.9	109.6	24
6/29	112.9	113.2	113.6	24	---	---	---	0	102.8	106.9	107.1	24	105.3	106.6	107.1	24	101.4	101.7	103.2	15
6/30	113.1	113.6	116.1	24	---	---	---	0	98.1	98.4	98.6	24	102.1	103.3	104.3	24	102.7	104.1	105.2	24
7/1	114.3	115.4	117.0	24	---	---	---	0	98.2	98.6	98.9	24	101.9	103.1	104.5	24	102.9	104.4	105.7	24
7/2	113.8	114.0	114.2	24	---	---	---	0	98.8	99.4	100.0	24	102.9	104.5	106.1	24	103.0	104.5	105.8	24
7/3	113.8	114.1	116.1	24	---	---	---	0	98.9	99.6	100.1	24	102.9	104.5	106.1	24	103.0	104.6	106.0	24
7/4	113.8	114.4	116.8	24	---	---	---	0	99.0	99.7	100.1	24	103.0	104.6	106.5	24	102.9	104.5	106.0	24
7/5	112.9	113.3	114.5	24	---	---	---	0	98.9	99.5	100.1	24	102.7	104.1	105.6	24	102.4	103.8	105.0	24
7/6	113.3	113.7	115.5	24	---	---	---	0	98.3	98.7	99.1	24	101.5	102.6	104.2	24	102.4	104.2	105.4	24
7/7	112.5	113.0	114.7	24	---	---	---	0	98.5	98.8	99.2	24	101.7	102.7	104.2	24	102.5	103.8	105.2	22
7/8	113.6	114.3	115.7	24	---	---	---	0	98.9	99.4	99.8	24	102.0	103.3	104.8	24	102.8	104.5	105.8	24
7/9	---	---	---	0	---	---	---	0	100.9	102.9	106.3	23	102.7	104.4	106.4	23	102.7	104.1	105.9	23

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	104.0	106.5	108.2	24	103.2	103.7	103.9	24	114.0	114.2	114.5	24	108.3	108.5	108.6	24	105.5	106.2	106.9	24
6/27	104.5	107.2	108.8	24	104.6	105.0	105.2	24	114.0	114.3	114.7	24	108.6	109.1	109.6	24	105.0	105.4	105.7	24
6/28	106.5	109.0	110.8	24	105.9	106.3	106.5	24	113.8	114.0	114.1	24	109.0	109.3	109.5	24	105.0	105.3	105.7	24
6/29	105.7	107.7	109.6	24	106.6	106.8	106.9	24	113.8	114.0	114.1	24	109.1	109.5	109.9	24	105.8	106.1	106.8	24
6/30	105.0	107.6	109.4	24	104.7	106.5	106.9	23	114.7	115.2	115.8	24	110.4	111.3	111.9	24	107.1	109.3	111.3	24
7/1	104.8	107.5	109.3	24	103.1	103.4	103.5	24	115.2	115.5	115.7	24	112.1	112.5	113.2	24	110.8	111.3	112.7	24
7/2	105.1	108.2	110.4	24	103.6	103.9	104.2	24	114.2	115.3	115.7	24	112.1	112.4	112.9	24	110.5	111.1	111.6	24
7/3	105.1	108.3	110.3	24	104.4	104.9	105.1	24	112.4	113.8	115.6	24	111.9	112.1	112.3	24	110.5	111.2	111.7	24
7/4	105.0	107.8	109.9	24	104.8	105.1	105.5	24	111.1	111.5	112.0	24	112.0	112.1	112.4	24	109.9	110.4	110.9	24
7/5	104.5	107.1	109.0	24	104.5	104.8	105.3	24	110.7	111.2	112.3	24	111.4	111.8	114.0	24	110.2	110.7	111.1	24
7/6	104.3	106.9	108.8	24	104.1	104.3	104.5	24	113.5	113.9	114.2	24	112.3	113.0	115.4	24	110.5	111.1	111.6	24
7/7	104.5	106.9	108.9	24	104.1	104.3	104.8	24	113.9	114.2	114.4	24	111.3	111.4	111.7	24	110.5	110.9	111.2	24
7/8	104.8	107.3	109.2	24	104.0	104.2	104.3	24	111.9	114.6	115.7	24	112.2	112.4	112.7	24	110.7	111.2	111.7	24
7/9	104.6	107.1	108.9	23	103.0	103.2	103.6	23	109.3	110.8	112.0	23	111.9	112.1	112.2	23	110.6	111.2	111.9	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			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/26	108.1	108.3	108.4	24	115.5	115.9	116.2	24	113.1	113.4	113.6	24	112.9	113.7	114.1	24	---	---	---	0
6/27	108.1	108.5	109.0	24	115.4	116.0	116.5	24	113.4	113.8	114.1	24	112.9	113.6	114.3	24	---	---	---	0
6/28	109.0	109.4	110.0	24	115.5	116.0	116.3	24	114.3	114.7	115.1	24	113.3	114.1	115.0	24	---	---	---	0
6/29	108.8	109.1	109.7	24	115.3	115.9	116.5	24	114.0	114.4	114.7	24	113.1	113.7	114.6	24	---	---	---	0
6/30	108.7	108.8	109.0	24	115.0	115.6	116.1	24	114.0	114.2	114.4	24	112.3	113.6	114.7	24	---	---	---	0
7/1	108.2	108.5	108.8	24	115.2	115.8	116.5	24	113.7	113.9	114.1	24	112.8	114.5	114.9	24	---	---	---	0
7/2	108.2	108.4	108.8	24	115.5	116.0	116.4	24	113.3	113.4	113.6	24	113.5	114.3	114.9	24	---	---	---	0
7/3	108.5	109.2	109.5	24	112.6	113.1	113.5	24	113.0	113.3	113.5	24	112.0	113.1	113.7	24	---	---	---	0
7/4	108.6	108.9	109.4	24	112.4	112.8	113.1	24	113.4	113.8	114.1	24	112.0	113.1	113.9	24	---	---	---	0
7/5	108.8	109.2	109.6	24	112.7	113.2	114.4	24	113.1	113.2	113.6	24	111.4	112.2	112.8	24	---	---	---	0
7/6	108.8	109.1	109.5	24	112.8	113.1	113.5	24	113.2	113.4	113.8	24	111.0	111.9	112.5	24	---	---	---	0
7/7	108.3	108.5	109.0	24	112.7	113.2	113.4	24	113.7	114.1	117.0	24	111.9	113.2	114.4	24	---	---	---	0
7/8	108.1	108.4	108.7	24	112.3	112.6	112.8	24	112.5	113.0	113.5	24	111.6	112.3	112.8	24	---	---	---	0
7/9	108.3	108.5	108.6	23	112.4	112.8	113.1	23	111.1	111.6	112.0	23	110.8	111.2	112.0	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	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
6/26	109.1	109.8	110.6	24	115.7	116.4	116.8	24	106.1	107.0	108.0	24	112.0	112.9	113.5	24	109.6	110.7	111.5	24
6/27	110.6	111.0	112.3	24	115.8	116.8	117.3	24	108.4	109.2	110.8	24	112.1	112.6	113.2	24	110.8	111.3	111.6	24
6/28	110.8	111.1	111.5	24	116.3	116.7	117.0	24	109.4	109.9	110.3	24	111.2	111.7	112.3	24	109.4	109.8	110.0	24
6/29	110.5	110.7	110.9	24	116.3	116.9	117.4	24	108.6	109.1	109.6	24	112.8	114.5	115.0	24	107.7	108.0	108.2	24
6/30	109.9	110.1	110.2	24	115.8	116.9	117.3	24	108.2	108.8	109.1	24	114.4	114.8	115.3	24	108.0	108.5	109.0	24
7/1	109.6	110.2	111.7	24	115.8	116.7	117.2	24	108.3	108.9	109.7	24	113.8	114.8	115.1	24	109.4	109.9	110.1	24
7/2	109.8	110.2	111.6	24	116.4	117.1	117.4	24	109.6	110.2	111.1	24	113.7	114.6	115.0	24	112.0	112.9	113.3	24
7/3	110.9	111.3	112.3	24	115.7	116.0	116.5	24	110.6	111.0	111.4	24	114.9	115.2	115.6	24	110.8	111.2	111.4	24
7/4	110.5	110.9	111.2	24	113.8	114.6	116.6	24	109.5	110.0	110.4	24	114.7	114.9	115.3	24	109.4	109.5	109.7	24
7/5	110.5	110.7	111.9	24	114.1	115.1	115.4	24	108.3	108.7	109.4	24	114.4	114.6	114.9	24	109.3	109.8	110.0	24
7/6	110.3	110.6	111.8	24	115.4	116.1	117.7	24	108.5	109.0	109.6	24	113.8	114.4	114.7	24	110.5	111.3	111.6	24
7/7	109.5	109.8	110.7	24	115.5	116.2	116.9	24	108.4	108.7	109.2	24	113.7	114.3	114.5	24	109.3	109.7	109.9	24
7/8	109.1	109.4	109.9	24	114.6	115.1	115.6	24	107.9	108.5	109.0	24	114.1	114.3	114.6	24	108.6	108.9	109.2	24
7/9	109.7	110.3	110.8	23	115.3	116.7	117.1	23	108.4	108.8	109.3	23	114.1	114.6	115.2	23	110.8	111.5	112.1	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
6/26	115.0	116.2	117.0	24	110.5	111.8	112.5	24	117.1	117.5	117.9	24	116.6	118.3	119.4	24	114.8	115.7	117.7	24
6/27	116.0	116.6	117.0	24	112.8	113.2	113.5	24	117.1	117.8	118.7	24	116.2	117.4	118.4	24	115.5	116.6	118.5	24
6/28	115.2	115.6	115.9	24	111.8	112.3	112.7	24	117.8	118.5	119.2	24	115.0	116.4	117.4	24	117.2	117.5	118.6	24
6/29	113.6	114.0	114.7	21	108.5	108.8	109.6	24	116.2	116.6	117.2	24	114.8	115.4	115.9	24	116.7	116.8	117.0	24
6/30	113.2	113.8	114.2	23	107.3	107.7	108.0	24	115.2	115.8	116.1	24	112.9	113.8	114.3	24	115.0	116.0	117.9	24
7/1	113.6	114.6	115.2	24	107.9	108.8	109.4	24	116.0	116.5	116.8	24	113.7	115.4	116.8	24	114.8	115.7	118.7	24
7/2	115.1	116.0	116.4	24	110.0	110.8	111.3	24	117.3	117.9	118.3	24	114.7	116.5	117.9	24	117.6	117.9	119.0	24
7/3	114.7	115.2	115.4	24	109.9	110.2	110.5	24	116.3	116.9	117.5	24	114.3	115.2	115.7	24	117.4	117.5	117.6	24
7/4	114.0	114.3	114.5	24	108.6	108.9	109.2	24	115.5	115.9	116.3	24	113.4	114.6	115.3	24	115.0	115.9	117.4	24
7/5	113.7	114.2	114.5	24	108.3	108.6	108.9	24	116.3	116.5	116.7	24	114.4	115.9	117.1	24	115.0	115.8	117.4	24
7/6	114.1	114.9	115.4	24	108.6	109.2	109.4	24	116.2	116.6	117.1	24	114.1	115.3	116.2	24	117.1	117.2	117.3	24
7/7	113.9	114.6	115.1	24	107.7	108.0	108.3	24	115.3	116.0	116.8	24	112.7	114.0	114.8	24	117.1	117.2	117.3	24
7/8	113.5	113.9	114.5	24	107.7	108.2	108.5	24	115.0	115.4	116.1	24	112.9	113.9	114.6	24	114.6	115.3	117.2	24
7/9	114.3	115.2	115.8	23	107.1	107.5	108.2	23	114.7	115.0	115.4	23	112.8	113.7	114.3	23	114.5	114.7	117.9	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center Updated: 7/10/2015 7:10

* 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)
06/26/2015	*	---	46	---	---	25	0	0	0	0	0	116
06/27/2015	*	---	---	---	---	25	0	0	0	---	0	0
06/28/2015	*	---	---	---	---	44	0	0	0	0	0	0
06/29/2015	*	---	17	---	---	40	36	82	0	---	---	---
06/30/2015	*	---	---	---	---	0	0	0	1	0	0	0
07/01/2015	*	---	---	---	---	0	0	0	0	---	---	---
07/02/2015	*	---	---	---	---	0	0	45	0	0	---	0
07/03/2015	*	---	---	---	---	0	0	21	0	---	0	---
07/04/2015	*	---	---	---	---	0	0	17	0	0	---	0
07/05/2015	*	---	---	---	---	0	0	33	0	---	---	---
07/06/2015	*	---	---	---	---	0	0	0	0	0	---	0
07/07/2015	*	---	---	---	---	0	1	0	0	---	0	---
07/08/2015	*	---	---	---	---	0	0	0	0	0	---	0
07/09/2015	*	---	---	---	---	0	0	0	0	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**63**	**0**	**0**	**134**	**37**	**198**	**1**	**0**	**0**	**116**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**32**	**0**	**0**	**10**	**3**	**14**	**0**	**0**	**0**	**15**
YTD		**40,054**	**68,271**	**7,458**	**1,081**	**1,769,126**	**1,156,885**	**1,126,655**	**16,456**	**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)
06/26/2015	*	---	0	---	---	14,918	10,629	6,975	206	78,385	63,741	9,351
06/27/2015	*	---	---	---	---	14,768	7,443	5,593	345	---	78,258	11,251
06/28/2015	*	---	---	---	---	12,133	10,966	8,996	469	63,739	65,491	17,409
06/29/2015	*	---	0	---	---	8,362	14,503	10,705	298	---	---	---
06/30/2015	*	---	---	---	---	5,999	9,767	6,162	179	102,095	27,533	64,102
07/01/2015	*	---	---	---	---	5,469	16,273	5,482	296	---	---	---
07/02/2015	*	---	---	---	---	6,356	14,047	1,723	521	133,511	---	46,317
07/03/2015	*	---	---	---	---	7,072	9,747	3,670	494	---	31,509	---
07/04/2015	*	---	---	---	---	5,453	4,581	2,302	416	102,337	---	57,607
07/05/2015	*	---	---	---	---	3,713	2,601	1,629	414	---	---	---
07/06/2015	*	---	---	---	---	5,374	8,892	1,767	504	314,092	---	18,239
07/07/2015	*	---	---	---	---	9,149	16,868	1,731	388	---	22,268	---
07/08/2015	*	---	---	---	---	13,883	15,874	737	270	195,390	---	49,650
07/09/2015	*	---	---	---	---	9,693	24,394	754	361	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**122,342**	**166,585**	**58,226**	**5,161**	**989,549**	**288,800**	**273,926**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**0**	**0**	**0**	**8,739**	**11,899**	**4,159**	**369**	**141,364**	**48,133**	**34,241**
YTD		**1**	**114**	**1,292**	**2,077**	**950,957**	**769,483**	**321,865**	**17,065**	**1,394,092**	**803,119**	**1,959,515**

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)
06/26/2015	*	---	0	---	---	0	39	0	7	829	0	0
06/27/2015	*	---	---	---	---	0	0	0	5	---	287	49
06/28/2015	*	---	---	---	---	0	0	0	10	0	0	103
06/29/2015	*	---	0	---	---	0	0	0	10	---	---	---
06/30/2015	*	---	---	---	---	0	36	0	4	0	36	0
07/01/2015	*	---	---	---	---	49	0	0	5	---	---	---
07/02/2015	*	---	---	---	---	0	0	0	14	0	---	14
07/03/2015	*	---	---	---	---	0	42	0	6	---	106	---
07/04/2015	*	---	---	---	---	0	0	0	8	0	---	0
07/05/2015	*	---	---	---	---	0	0	0	5	---	---	---
07/06/2015	*	---	---	---	---	0	0	0	4	0	---	0
07/07/2015	*	---	---	---	---	0	0	0	3	---	0	---
07/08/2015	*	---	---	---	---	0	0	0	1	0	---	0
07/09/2015	*	---	---	---	---	0	0	0	0	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**49**	**117**	**0**	**82**	**829**	**429**	**166**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**0**	**0**	**0**	**4**	**8**	**0**	**6**	**118**	**72**	**21**
YTD		**0**	**0**	**0**	**47**	**40,180**	**60,208**	**37,631**	**14,685**	**66,238**	**70,099**	**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)
06/26/2015	*	---	1	---	---	74	526	0	22	415	143	227
06/27/2015	*	---	---	---	---	74	1,087	49	19	---	0	70
06/28/2015	*	---	---	---	---	88	1,497	0	13	1,241	205	12
06/29/2015	*	---	0	---	---	0	1,875	123	13	---	---	---
06/30/2015	*	---	---	---	---	0	646	84	4	827	0	0
07/01/2015	*	---	---	---	---	99	407	95	12	---	---	---
07/02/2015	*	---	---	---	---	0	387	0	5	415	---	0
07/03/2015	*	---	---	---	---	42	504	63	7	---	0	---
07/04/2015	*	---	---	---	---	40	355	17	16	831	---	0
07/05/2015	*	---	---	---	---	73	167	16	10	---	---	---
07/06/2015	*	---	---	---	---	111	442	62	17	0	---	0
07/07/2015	*	---	---	---	---	79	867	21	9	---	0	---
07/08/2015	*	---	---	---	---	200	405	6	14	0	---	448
07/09/2015	*	---	---	---	---	0	394	17	7	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**1**	**0**	**0**	**880**	**9,559**	**553**	**168**	**3,729**	**348**	**757**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**1**	**0**	**0**	**63**	**683**	**40**	**12**	**533**	**58**	**95**
YTD		**2,567**	**40,593**	**672**	**11,678**	**1,299,253**	**1,071,576**	**575,868**	**12,704**	**456,290**	**201,076**	**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)
06/26/2015	*	---	0	---	---	0	0	0	4	0	0	56
06/27/2015	*	---	---	---	---	25	0	0	4	---	0	0
06/28/2015	*	---	---	---	---	0	0	0	1	0	0	0
06/29/2015	*	---	0	---	---	0	0	0	1	---	---	---
06/30/2015	*	---	---	---	---	0	36	0	0	0	0	0
07/01/2015	*	---	---	---	---	0	0	0	5	---	---	---
07/02/2015	*	---	---	---	---	0	0	0	4	0	---	0
07/03/2015	*	---	---	---	---	0	0	0	6	---	106	---
07/04/2015	*	---	---	---	---	0	0	0	2	0	---	0
07/05/2015	*	---	---	---	---	0	0	0	2	---	---	---
07/06/2015	*	---	---	---	---	37	0	0	10	0	---	0
07/07/2015	*	---	---	---	---	0	0	0	5	---	0	---
07/08/2015	*	---	---	---	---	0	0	0	0	0	---	0
07/09/2015	*	---	---	---	---	0	0	0	1	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**62**	**36**	**0**	**45**	**0**	**106**	**56**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**0**	**0**	**0**	**4**	**3**	**0**	**3**	**0**	**18**	**7**
YTD		**74**	**0**	**4**	**47**	**16,228**	**19,851**	**11,030**	**3,869**	**128,863**	**104,372**	**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)
06/26/2015	*	---	0	---	---	0	0	0	0	0	0	14
06/27/2015	*	---	---	---	---	0	0	0	2	---	0	20
06/28/2015	*	---	---	---	---	0	25	0	2	400	0	4
06/29/2015	*	---	0	---	---	0	50	20	1	---	---	---
06/30/2015	*	---	---	---	---	0	25	0	1	200	0	0
07/01/2015	*	---	---	---	---	0	25	0	3	---	---	---
07/02/2015	*	---	---	---	---	0	25	0	4	400	---	0
07/03/2015	*	---	---	---	---	0	0	0	5	---	0	---
07/04/2015	*	---	---	---	---	1	0	0	3	200	---	100
07/05/2015	*	---	---	---	---	0	0	0	1	---	---	---
07/06/2015	*	---	---	---	---	0	0	0	1	0	---	0
07/07/2015	*	---	---	---	---	0	0	0	0	---	0	---
07/08/2015	*	---	---	---	---	0	0	0	3	0	---	4
07/09/2015	*	---	---	---	---	0	0	8	2	---	---	---
07/10/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**1**	**150**	**28**	**28**	**1,200**	**0**	**142**
# Days:		**0**	**2**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**6**	**8**
Average:		**0**	**0**	**0**	**0**	**0**	**11**	**2**	**2**	**171**	**0**	**18**
YTD		**0**	**1**	**0**	**0**	**28**	**7,916**	**2,318**	**70**	**8,015**	**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: 7/10/15 7:12 AM

06/26/15 TO 07/10/15

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	56,370	60	20	420	30	56,900
	Sum of NumberBarged	56,112	59	19	417	30	56,637
	Sum of NumberBypassed	4	0	0	0	0	4
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	28	0	0	0	0	28
	Sum of FacilityMorts	226	1	1	3	0	231
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	254	1	1	3	0	259
LGS	Sum of NumberCollected	108,766	26	76	6,303	25	115,196
	Sum of NumberBarged	107,651	26	73	6,262	23	114,035
	Sum of NumberBypassed	2	0	0	0	0	2
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	50	0	0	2	0	52
	Sum of FacilityMorts	1,063	0	3	39	2	1,107
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,113	0	3	41	2	1,159
LMN	Sum of NumberCollected	27,746	100		261		28,107
	Sum of NumberBarged	27,225	100		245		27,570
	Sum of NumberBypassed	176	0		3		179
	Sum of Numbertrucked	0	0		0		0
	Sum of SampleMorts	24	0		1		25
	Sum of FacilityMorts	321	0		12		333
	Sum of ResearchMorts	0	0		0		0
	Sum of TotalProjectMorts	345	0		13		358
Total Sum of NumberCollected		192,882	186	96	6,984	55	200,203
Total Sum of NumberBarged		190,988	185	92	6,924	53	198,242
Total Sum of NumberBypassed		182	0	0	3	0	185
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		102	0	0	3	0	105
Total Sum of FacilityMorts		1,610	1	4	54	2	1,671
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		1,712	1	4	57	2	1,776

YTD Transportation Summary

Source: Fish Passage Center Updated: 7/10/15 7:12 AM

TO: 07/10/15

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	574,130	1,150,098	26,170	10,910	826,194	2,587,502
	Sum of NumberBarged	564,463	473,252	22,661	10,480	362,751	1,433,607
	Sum of NumberBypassed	8,362	676,470	3,499	160	463,116	1,151,607
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	135	43	0	7	30	215
	Sum of FacilityMorts	1,170	317	10	256	257	2,010
	Sum of ResearchMorts	0	16	0	7	40	63
	Sum of TotalProjectMorts	1,305	376	10	270	327	2,288
LGS	Sum of NumberCollected	524,146	807,530	42,008	13,866	747,581	2,135,131
	Sum of NumberBarged	522,448	545,396	40,264	13,819	534,130	1,656,057
	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	72	21	0	2	11	106
	Sum of FacilityMorts	1,490	147	24	5	253	1,919
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,562	168	24	7	264	2,025
LMN	Sum of NumberCollected	169,406	642,432	22,120	6,690	322,558	1,163,206
	Sum of NumberBarged	168,254	581,530	21,816	6,640	285,383	1,063,623
	Sum of NumberBypassed	521	60,572	300	30	36,797	98,220
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	47	45	2	0	38	132
	Sum of FacilityMorts	584	315	2	20	340	1,261
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	631	360	4	20	378	1,393
Total Sum of NumberCollected		1,267,682	2,600,060	90,298	31,466	1,896,333	5,885,839
Total Sum of NumberBarged		1,255,165	1,600,178	84,741	30,939	1,182,264	4,153,287
Total Sum of NumberBypassed		9,019	999,008	5,519	230	713,133	1,726,909
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		254	109	2	9	79	453
Total Sum of FacilityMorts		3,244	779	36	281	850	5,190
Total Sum of ResearchMorts		0	16	0	7	40	63
Total Sum of TotalProjectMorts		3,498	904	38	297	969	5,706

Cumulative Adult Passage at Mainstem Dams Through: 07/09

		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	07/09	220480	13314	188083	26094	132065	23978	123315	13966	91068	19070	72852	16438	0	0	0	0	0	0
TDA	07/09	194116	12307	143142	21080	101070	20309	91500	11179	76998	13553	60560	12509	0	0	0	0	0	0
JDA	07/09	166015	11514	123224	19103	88117	19021	79140	7687	66808	11722	52802	12155	0	0	0	0	0	0
MCN	07/09	156151	8767	107147	16033	79364	15788	67666	5713	64957	10808	47704	8800	0	0	0	0	0	0
IHR	07/09	116462	5745	79298	12428	55061	10384	17942	2486	13224	3581	14714	3921	0	0	0	0	0	0
LMN	07/09	111511	8697	79942	14020	55282	9560	13763	3571	11689	6068	15874	4141	0	0	0	0	0	0
LGS	07/09	105124	8553	77966	13649	51473	10681	11578	3167	11113	5156	14462	4578	0	0	0	0	0	0
LGR	07/09	104873	8379	79167	13732	50576	11930	9549	2740	9667	4444	12710	4654	0	0	0	0	0	0
PRD	07/06	27716	1570	23742	2649	15720	1631	40385	1836	40632	1198	26225	819	0	0	0	0	0	0
WAN	07/06	25982	1077	0	0	15431	2202	38818	976	0	0	21984	777	0	0	0	0	0	0
RIS	07/08	31749	1092	23247	2934	15126	2669	42010	974	39182	918	22864	1600	0	0	0	0	0	0
RRH	07/08	15244	609	12376	2377	6372	1183	30857	679	24912	523	13468	801	0	0	0	0	0	0
WEL	07/08	19971	1520	15377	2544	5959	1398	16417	913	13258	539	6775	358	0	0	0	0	0	0
WFA	07/08	50005	1992	28946	1368	32148	1041	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	07/09	0	0	5	-2	0	0	460674	539225	222841	16725	29796	26961	8553	13434	10716	15975	15045	8770
TDA	07/09	0	0	0	0	0	0	379992	491925	184955	5034	12623	12692	2562	6394	5457	6497	2667	1321
JDA	07/09	0	0	0	1	0	1	328040	446455	177542	4338	10023	12984	2382	4402	4702	4454	1588	803
MCN	07/09	13	5	0	0	1	0	260699	382028	145212	3239	5950	9869	1465	2495	3127	618	148	111
IHR	07/09	0	0	0	0	0	0	697	881	396	2688	4689	7189	1199	1504	1995	258	35	10
LMN	07/09	0	0	0	0	0	0	585	913	426	4330	7720	8742	2146	2290	2605	48	11	0
LGS	07/09	0	0	0	0	0	0	374	838	361	1751	2780	3991	1100	1447	1679	31	3	0
LGR	07/09	0	0	0	0	0	0	185	660	322	9351	8280	9508	4410	3766	3425	5	1	0
PRD	07/06	0	0	0	0	0	0	255303	249783	107508	602	497	398	0	0	0	878	98	73
WAN	07/06	0	0	0	0	0	0	231351	0	82846	388	0	439	0	0	0	394	0	40
RIS	07/08	0	0	0	0	0	0	217912	208491	89013	357	492	322	240	295	181	0	5	3
RRH	07/08	0	0	0	0	0	0	166608	140427	61091	226	328	488	145	191	317	0	0	0
WEL	07/08	0	0	0	0	0	0	128371	101938	39820	106	175	133	68	104	83	0	0	2
WFA	07/08	1	0	9	0	0	0	0	0	0	6862	24627	21544	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.

Page last updated on: 07/10/15