Fish Passage Center

Weekly Report #13 - 19

July 26, 2013

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Adult Passage Issue at Lower Granite Dam
(see page 4)

Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has been below average over July, ranging between 0% and 47% of average at individual sub-basins. Precipitation above The Dalles has been 23% of average over July. Over the 2013 water year, precipitation has ranged between 68% and 105% 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 2013 July 1–24, 2013		Water Year 2013 October 1, 2012 to July 24, 2013	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.44	22	32.7	97
Snake River above Ice Harbor	0.26	34	14.9	72
Columbia above The Dalles	0.27	23	21.0	83
Kootenai	0.44	20	36.3	105
Clark Fork	0.30	25	18.6	75
Flathead	0.30	17	31.5	96
Pend Oreille Basin	0.25	17	25.8	86
Snake Basin above Hells Canyon	0.29	47	11.8	70
Salmon River Basin	0.42	35	17.8	68
Clearwater	0.10	7	31.7	83
Willamette River above Portland	0.00	0	55.1	90

Table 2 displays the April 7th and July 24th ESP runoff volume forecasts for multiple reservoirs. The July 24th forecast at The Dalles between January and July is 97,770 Kaf (96% of average).

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

Location	April 7, 2013 ESP		July 24, 2013 ESP	
	% Average (1971–2000)	Runoff Volume (Kaf)	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Jan–July)	93	94287	96	97770
Grand Coulee (Jan–July)	101	60415	107	63754
Libby Res. Inflow, MT (Apr–Aug)	102	6001 *6189	121	7136 **6464
Hungry Horse Res. Inflow, MT (Jan–July)	99	2084	110	2308
Lower Granite Res. Inflow (Apr–July)	83	16485	70	13941
Brownlee Res. Inflow (Apr–July)	62	3376	48	2604
Dworshak Res. Inflow (Apr–July)	96	2319 *2036	87	2106 **2158

* Denotes COE April Forecast
** Denotes COE June Forecast

Grand Coulee Reservoir is at 1288.0 feet (7-25-13) and drafted 0.8 feet over the last week. Outflows at Grand Coulee have ranged between 115.7 and 152.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2455.0 feet (7-25-13) and has drafted 0.2 feet last week. Outflows at Libby Dam have been 14.0–18.3 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3558.3 feet (7-25-13) and has drafted 0.6 feet last week. Outflows at Hungry Horse Dam have been 2.8 Kcfs over the last week.

Dworshak is currently at an elevation of 1574.3 feet (7-25-13) and has drafted 6.9 feet last week. Outflows from Dworshak have ranged from 9.7 Kcfs to 11.8 Kcfs over the last week for temperature and flow augmentation in the lower Snake River.

The Brownlee Reservoir was at an elevation of 2061.5 feet on July 25th, 2013, drafting 3.6 feet over the last week. Over the last week, inflows at Brownlee have ranged between 6.2 and 7.4 Kcfs.

The flow objective at Lower Granite over the summer period (June 21st to August 31st) is 50 Kcfs; over the summer period flows at Lower Granite have averaged 37.8 Kcfs and 28.1 Kcfs over the last week.

The flow objective at McNary over the summer period (July 1st to August 31st) is 200 Kcfs; over the summer period flows at McNary have averaged 222.4 Kcfs and over the last week have averaged 186.4 Kcfs.

Smolt Monitoring: Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, and LGR). The Imnaha River Trap is the only trap that continues to operate for the 2013 season.

Subyearling Chinook were the dominant species of salmonid at all SMP dams over the past week. When compared to last week, subyearling Chinook passage decreased at all SMP sites this week except at RIS. Although subyearling Chinook dominate the collections, all of the SMP sites continue to collect a few spring migrants.

Passage of subyearling Chinook decreased substantially this week, when compared to last week. This week's daily average passage index for subyearling Chinook was just under 13,000 per day. Last week's daily average passage index for subyearling Chinook was about 96,500 per day. Passage of spring migrants at BON remained low this week. Both pacific lamprey ammocoetes and macropthalmia were collected at BON this week. Pacific lamprey ammocoetes were collected on only one day this week while macropthalmia were collected five of the seven days this week. The daily average collection for pacific lamprey macropthalmia this week was 24 per day. On the afternoon of July 25th, temperatures in the BON sample tank met the criteria to initiate high temperature sampling protocols. Under the high temperature sampling protocol, daily index sampling will occur every other day. All fish will be bypassed on non-sample days. These high temperature sampling protocols will remain in effect until temperatures decrease to safer levels.

Subyearling Chinook continued to dominate the bypass samples at JDA this week. This week's daily average passage index for subyearling Chinook was just over 20,000 per day, which is a decrease over last week's daily average passage index of nearly 49,000 per day. Sockeye were the only spring migrants that were collected at JDA this week. This week's daily average passage index for sockeye at JDA was about 50 per day, which is a decrease from last week's daily average passage index of nearly 100 per day. Only pacific lamprey macropthalmia were sampled at JDA this week. Passage of pacific lamprey macropthalmia decreased this week when compared to last week. The daily average collection for pacific lamprey macropthalmia this week was about 210 per day. Last week's daily average collection was nearly 1,100 per day. Due to elevated temperatures in the juvenile facility, high temperature sampling protocols were initiated on Thursday, July 25th. Under the high temperature sampling protocols, the SMP crew at JDA will sample for condition only on Tuesdays and Thursdays. This limited sampling will continue until temperatures decrease to safer levels. It is important to note that sampling under the higher temperature protocols at JDA will result in biased collection estimates, as limited sampling is taking place.

Sampling at MCN for the 2013 season is every-other-day. Subyearling Chinook continued to dominate the bypass sample at MCN this week. This week's daily average passage index for subyearling Chinook at MCN was about 54,600 per day. Last week's daily average passage index for subyearling Chinook was nearly 111,000 per day. Similar to JDA, sockeye were the only spring migrants that were collected at MCN this week. This week's daily average passage index for sockeye was about 480 per day, which is actually an increase over last week's daily average passage

index of 310 per day. Pacific lamprey macropthalmia continue to be the only species and life-stage of lamprey collected at MCN this season. This week's daily average collection for pacific lamprey macropthalmia was about 33, which was much lower than last week's daily average collection of nearly 300 per day.

Passage of subyearling Chinook at LGR continued to decrease this week compared to last week. This week's daily average passage index for subyearling Chinook was about 2,400 per day. Last week's daily average passage index was just over 4,000 per day. A very small number of yearling Chinook and steelhead were collected this week, but no coho or sockeye juveniles were in this week's collections. In addition, no lamprey juveniles were collected this week. Finally, due to the possible resampling of PIT-tagged research fish that were released into the gatewells, the estimated year-to-date collection and passage index totals for yearling Chinook, steelhead, subyearling Chinook, and pacific lamprey macropthalmia are likely inflated. The FPC is aware of this possible bias and is investigating ways to correct these inflated estimates after the season has ended. However, the magnitude of this bias is relatively low and is unlikely to skew estimates of timing for this species.

Subyearling Chinook passage at LGS decreased again this week. This week's daily average passage index for subyearling Chinook at LGS was about 1,900 per day. Last week's daily average passage index was nearly 2,500 per day. No yearling Chinook or coho juveniles were sampled at LGS this week, and very few sockeye and steelhead were collected in this week's samples. Finally, both pacific lamprey ammocoetes and macropthalmia were collected at LGS this week. Pacific ammocoetes were collected on only three days this week and in very low numbers. Pacific lamprey macropthalmia were sampled every day this week, with a daily average collection of about 50 per day.

As with LGR and LGS, passage of subyearling Chinook at LMN decreased this week, when compared to last week. This week's daily average passage index for subyearling Chinook at LMN was about 840 per day. Last week's daily average passage index was nearly 2,200 per day. The only spring migrants that were collected this week were yearling Chinook and steelhead. Finally, only pacific lamprey macropthalmia were collected at LMN this week. Pacific lamprey macropthalmia were only collected on three days this week.

Collections at RIS this week continued to be dominated by subyearling Chinook. In fact, when compared to last week, subyearling Chinook passage increased this week. This week's daily average passage index for subyearling Chinook at RIS was just under 400 per day. Last week's daily average passage index for subyearling Chinook was about 290 per day. Passage of yearling Chinook, coho, sockeye, and steelhead was extremely low this week. Finally, pacific lamprey macropthalmia were collected almost every day this week, although in low numbers.

Collections at the Imnaha River Trap continued this week. However, as of this writing we have not received sample data since the June 25th 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. There were no new releases of juvenile salmonids scheduled for this zone this week. In addition, there are no new releases scheduled for this zone over the next two weeks.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. No new releases of juvenile salmonids were scheduled to begin in this zone this week. There are also no releases of juvenile salmonids in this zone over the next two weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. No new releases of juvenile salmonids were scheduled for this zone this week. Furthermore, there are no new releases to this zone scheduled over the next two weeks.

Adult Fish Passage: Daily adult summer Chinook passage numbers at Bonneville Dam ranged between 474 and 813 in the last week. The 2013 summer Chinook count of 89,014 is about 1.13 times greater than the 2012 count of 78,938 and 1.05 times greater than the 10-year average count of 84,875. The 2013 Bonneville Dam summer Chinook jack count of 25,322 is 2.2 times greater than the 2012 count of 11,452 and 1.5 times greater than the 10-year average count of 16,885. At McNary Dam 70,650 adult summer Chinook have been counted. The 2013 adult summer Chinook count at McNary Dam is about 1.2 times greater than the 2012 count and 1.2 times greater than the 10-year average. The 2013 McNary Dam summer Chinook jack count of 13,751 is about 3.2 times greater than the 2012 count and 1.2 times greater than the10-year average count. The 2013 adult summer Chinook count at Lower Granite Dam in the Snake River of 7,339 is about 61.1% of the 2012 count and 48.3% of the 10-year average count. The 2013 Lower Granite summer Chinook jack count of 6,728 is about 4.4 times greater than the 2012 count and 1.3 times greater than the 10-year average count.

The 2013 Bonneville Dam adult steelhead count of 43,122 is about 66.4% of the 2012 count of 64,698 and 52% of the 10-year average count of 82,945. The 2013 Bonneville Dam adult wild steelhead count of 23,759 is about 82.8% of the 2012 count of 28,674 and 65.5% of the 10-year average count of 36,244. In the Snake River, this year's Lower Granite steelhead count of 8,152 is about 82.2% of the 2012 count of 9,922 and 66.4% of the 10-year average count of 12,285. The 2013 Lower Granite Dam adult wild steelhead count of 3,518 is about 80.6% of the 2012 count of 4,364 and about 85.6% of the 10-year average count of 4,107. At Willamette Falls, the 2013 count for steelhead was 16,626 as of July 13th. This year's steelhead count is about 54.7% of the 2012 count of 30,406 and about 68% of the 10-year average count of 24,442.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 296 and 846 last week. The 2013 adult sockeye count at Bonneville Dam of 183,834 is about 35.7% of the 2012 count of 515,190, while being 1.04 times greater than the 10-year average count of 177,227. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). The 2013 McNary Dam adult sockeye count of 132,257 is about 36.4% of the 2012 count of 363,214, while being 1.07 times greater than the 10-year average count of 125,199. The Lower Granite Dam 2013 adult sockeye count of 600 is about 1.6 times greater than the 2012 count of 379 and 1.05 times greater than the 10-year average count of 569. As of July 25th at Bonneville Dam, the adult shad count was 3,745,594. This year's shad count is about 1.5 times greater than the 2012 count of 2,427,617 and 1.3 times greater than the 10-year average count of 2,857,889.

Lower Granite Dam
Excessive Temperature Issue

Over the last week, adult passage at Lower Granite Dam has been impeded by excessive temperatures in the ladder. The upper fishway at Lower Granite reported water temperatures between 72º and 76º F, while the tailrace at the dam was reporting temperatures below 68º F. The thermal gradient within the ladder had caused minimal adult passage for all species. Of particular importance were the very low daily passage numbers of sockeye and the discrepancy between the counts of sockeye reported at Little Goose Dam as compared to those reported at Lower Granite Dam.

Concerning this issue, three Technical Management Team calls were initiated between July 22nd and July 24th, 2013. After the initial call on July 22nd, the action agencies implemented an operation that prioritized Unit #1, effectively moving more water through the powerhouse and less water over the spillway, with all spilled water moving over the RSW. Adult fish counts did not show a response to this operation.

On July 23rd, 2013, the Fish Passage Advisory Committee (FPAC) submitted SOR 2013-4 which asked the Action Agencies to immediately take actions that may increase adult passage and decrease the water temperature in the adult ladder. Several operations were suggested in the SOR, however, FPAC was clear that the COE should not be limited to the suggested options and should consider all options.

After the submission of SOR 2013-4 to the Action Agencies, a TMT call was convened to discuss the options presented in the SOR. At the TMT Meeting the COE agreed to implement the modified project operations that resulted in two cycles of two test periods, with one maximizing Unit 1 powerhouse operation and the other maximizing spill. The COE also agreed to investigate upper ladder options that would potentially aid in the reduction of the warmest water contributions to the ladder.

At a subsequent TMT meeting on July 24, 2013, the COE suggested utilizing the emergency pumping system to attempt to change the temperature differential between the adult fish ladder and tailrace. The emergency pumps draw water from deeper in the forebay (cooler water) as compared to the other sources of water contributing to the upper ladder. Shortly after 7:00 A.M. on July 25th, 2013, emergency Pump #2 was turned on, which provided cooler water to enter into Diffuser 14 to mix with the warmer water entering through the fishway exit. The COE reported that the initiation of this pump gradually began decreasing water temperatures below Diffuser #14. At 3:30 P.M. on July 25th, 2013, emergency Pump #1 was turned on to initiate cooling in the control section of the ladder. Water from Pump #1 enters into the control section (vertical slot weirs) adjacent to the exit into the forebay.

Adults passing through the ladder did respond to the initiation of the emergency pumps and resulting cooler ladder water on July 25th, 2013. Twenty-six sockeye passed at Lower Granite on July 25th, 2013 as compared to daily counts between 1 and 6 the previous six days. Additionally, on July 25th, 204 adult Chinook and 170 jack Chinook passed as compared to -4 to 23 adults and 6 to 22 jacks over the prior six days.

Hatchery Releases Last Two Weeks

Hatchery Release Summary
From: 7/12/2013 to 07/25/13

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

Hatchery Releases Next Two Weeks

Hatchery Release Summary
From: 7/26/2013 to 8/8/2013

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

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
07/12/2013	151.3	2.7	154.3	12.1	167.9	10.0	170.1	24.1	172.9	38.1	183.9	44.6	183.6	34.4
07/13/2013	161.3	3.8	159.2	3.2	164.9	10.0	162.4	15.5	166.3	34.8	175.1	33.6	168.8	29.4
07/14/2013	146.3	0.2	149.5	0.0	159.1	10.0	158.9	14.4	163.8	32.4	174.0	34.9	173.7	39.6
07/15/2013	152.5	0.2	151.8	0.0	157.5	10.2	154.5	13.6	157.6	33.5	162.9	27.7	160.5	28.5
07/16/2013	148.3	0.2	140.1	0.0	149.1	11.5	153.3	14.0	157.8	32.7	171.3	32.3	173.9	34.1
07/17/2013	153.9	0.2	153.0	0.0	153.5	10.7	152.9	15.3	155.1	32.4	159.1	23.3	150.1	27.9
07/18/2013	144.8	0.2	150.6	0.0	156.8	10.5	155.9	13.9	158.4	30.4	168.8	29.4	164.9	28.3
07/19/2013	152.0	0.2	144.9	0.0	155.4	10.1	160.5	13.0	164.1	30.9	174.5	32.7	172.7	29.9
07/20/2013	121.2	0.2	123.5	0.0	137.1	9.4	139.4	11.7	143.2	28.5	162.2	20.1	163.7	26.1
07/21/2013	115.7	0.2	113.2	0.0	121.3	8.5	122.7	11.6	124.8	27.5	154.7	18.5	152.9	24.8
07/22/2013	130.2	0.2	131.9	0.0	140.0	10.0	143.6	12.1	148.1	28.2	138.0	24.3	134.6	23.7
07/23/2013	137.9	0.2	136.5	0.0	137.4	9.8	134.1	12.3	133.8	28.7	142.0	33.3	140.3	25.4
07/24/2013	133.4	0.2	133.7	0.0	134.3	9.2	131.7	11.7	134.1	28.3	138.2	27.7	132.2	25.9
07/25/2013	130.1	0.2	133.8	0.0	142.0	9.5	140.7	11.9	141.3	28.6	146.9	25.1	143.9	26.3

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
07/12/2013	10.9	1.3	---	---	32.4	18.5	30.3	9.1	32.2	17.0	31.7	9.5
07/13/2013	9.6	0.0	---	---	32.2	18.0	35.9	10.7	36.0	16.6	37.8	25.4
07/14/2013	10.0	0.3	---	---	27.9	15.0	24.1	7.2	25.4	13.0	26.5	16.1
07/15/2013	12.1	2.4	---	---	31.4	21.9	35.8	10.7	36.4	16.1	36.6	26.2
07/16/2013	9.7	0.0	---	---	32.8	23.1	32.2	9.7	31.7	16.2	32.8	22.4
07/17/2013	9.7	0.0	---	---	30.4	18.3	31.5	9.5	31.2	16.1	31.6	21.4
07/18/2013	9.6	0.0	---	---	30.3	18.3	30.3	8.8	32.1	17.0	32.9	22.5
07/19/2013	9.7	0.0	---	---	29.4	17.4	28.9	9.1	29.2	14.8	27.8	17.4
07/20/2013	9.7	0.0	---	---	31.2	18.1	31.5	9.1	33.7	17.0	35.2	24.7
07/21/2013	10.9	1.2	---	---	27.1	15.0	28.1	9.0	29.2	16.9	28.9	19.1
07/22/2013	11.8	2.1	---	---	26.9	13.0	28.0	9.0	28.1	15.6	28.6	18.6
07/23/2013	11.1	1.4	---	---	27.5	15.1	26.8	9.1	29.0	15.3	28.9	18.0
07/24/2013	11.1	1.3	---	---	27.9	16.5	28.5	9.1	29.5	17.0	30.8	20.3
07/25/2013	10.3	0.5	---	---	26.8	13.3	29.6	9.1	30.3	15.9	29.2	18.5

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
07/12/2013	200.5	100.6	195.7	74.6	187.3	74.8	190.1	89.8	0.7	87.3
07/13/2013	217.6	108.7	212.0	63.7	193.6	77.0	213.3	94.8	21.4	84.7
07/14/2013	218.6	109.4	206.0	64.9	188.5	75.1	202.9	100.8	4.4	85.3
07/15/2013	215.6	108.2	212.0	84.2	196.3	78.4	214.9	96.0	22.8	83.7
07/16/2013	210.5	105.7	197.3	75.4	181.5	72.9	202.0	90.5	12.6	86.5
07/17/2013	196.9	99.2	187.2	56.0	173.6	69.6	190.8	95.4	8.2	74.7
07/18/2013	196.8	99.2	194.5	61.9	176.2	70.1	189.5	99.8	0.0	77.3
07/19/2013	190.5	95.4	186.9	74.4	176.9	70.6	182.9	95.4	0.0	75.1
07/20/2013	216.0	108.2	197.9	75.9	187.2	74.8	197.4	90.1	7.1	87.8
07/21/2013	197.1	98.8	179.1	53.9	160.9	64.4	183.6	87.0	2.1	82.1
07/22/2013	190.6	95.7	194.9	58.1	181.8	72.4	196.9	87.2	19.0	78.3
07/23/2013	178.7	89.5	164.0	49.2	151.3	60.4	173.1	87.1	3.4	70.2
07/24/2013	161.2	80.7	151.1	45.4	137.0	54.8	155.3	86.9	0.0	56.0
07/25/2013	170.8	85.6	169.2	50.7	154.8	61.8	160.1	87.4	0.0	60.2

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											
	07/15/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/22/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Lower Monumental Dam											
	07/17/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/24/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	07/15/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/23/13	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
	07/25/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	07/13/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/20/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/23/13	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Rock Island Dam											
	07/16/13	Chinook + Steelhead	50	0	0	0.00%	0.00%	0	0	0	0
	07/18/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/23/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/24/13	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

	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
7/12	106.9	106.9	107.2	6	---	---	---	0	114.2	114.4	114.9	24	109.2	109.6	110.4	24	110.9	111.1	111.2	24
7/13	106.5	106.5	106.5	1	---	---	---	0	113.9	114.2	114.5	24	109.2	110.0	110.5	24	110.8	111.1	111.2	24
7/14	106.6	107.0	107.4	24	---	---	---	0	114.3	114.6	115.1	24	109.8	110.5	111.1	24	111.5	112.0	112.3	24
7/15	106.1	106.3	106.9	23	---	---	---	0	114.6	114.7	115.0	24	110.4	110.8	111.3	24	111.3	111.6	111.7	24
7/16	105.7	106.0	106.4	24	---	---	---	0	114.8	115.0	115.5	24	111.2	111.8	113.3	24	111.3	111.6	112.2	24
7/17	105.8	106.3	106.9	24	---	---	---	0	114.2	114.6	114.8	24	110.3	110.6	111.2	24	112.0	112.2	112.4	24
7/18	105.6	105.9	106.3	24	---	---	---	0	113.3	113.6	113.9	24	110.1	110.5	110.9	24	111.8	112.1	112.2	24
7/19	106.0	106.4	106.7	24	---	---	---	0	113.0	113.7	114.4	24	110.6	111.4	111.7	24	112.3	112.7	112.9	24
7/20	106.6	107.1	107.7	24	---	---	---	0	113.4	113.8	114.0	24	110.1	110.9	111.5	24	112.8	113.1	113.5	24
7/21	106.7	107.1	107.5	24	---	---	---	0	113.7	114.1	114.6	24	110.7	111.9	112.2	24	112.8	113.2	113.4	24
7/22	111.3	116.3	119.7	24	---	---	---	0	113.4	113.6	113.7	24	110.8	111.2	111.5	24	112.6	113.1	113.6	24
7/23	113.5	119.2	119.5	24	---	---	---	0	112.9	113.2	113.7	24	110.4	110.9	111.1	23	112.5	112.9	113.1	24
7/24	106.5	106.9	107.5	24	---	---	---	0	113.3	113.4	113.7	24	110.4	110.8	111.1	24	112.4	112.7	113.1	24
7/25	106.6	106.8	107.2	23	---	---	---	0	113.3	113.5	113.7	23	109.9	110.6	111.1	23	112.2	112.6	113.1	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
7/12	109.6	110.1	110.5	24	110.2	110.7	110.9	23	111.9	112.3	112.8	23	110.3	110.6	110.8	24	115.9	117.1	118.1	24
7/13	109.7	110.1	110.4	24	109.4	109.7	109.9	24	111.1	111.5	112.0	24	109.9	110.3	110.6	24	114.4	115.4	115.8	24
7/14	110.6	111.1	111.5	24	110.6	111.0	111.3	24	112.0	112.7	113.1	24	110.3	110.9	111.2	24	114.2	115.1	115.6	24
7/15	110.6	110.8	111.0	24	110.4	110.7	111.2	24	112.0	112.5	113.1	24	110.7	111.1	111.5	24	114.1	115.1	115.4	24
7/16	110.4	110.9	112.0	24	110.6	110.9	111.2	24	112.2	112.6	113.0	24	110.9	111.5	111.8	24	114.3	115.2	115.6	24
7/17	111.0	111.3	111.5	24	110.8	111.0	111.2	20	112.7	113.1	113.5	20	111.3	111.6	112.0	24	114.8	115.7	116.1	24
7/18	110.7	110.9	111.1	24	111.5	112.0	112.6	21	112.9	113.7	114.6	21	111.3	112.0	112.4	24	114.6	115.6	116.2	24
7/19	111.1	111.5	111.7	24	111.9	112.3	112.9	24	113.5	114.2	114.9	24	112.2	112.9	113.4	24	115.2	116.4	117.1	24
7/20	112.0	112.3	112.5	24	112.3	112.8	113.2	24	113.2	114.0	114.7	24	113.0	113.6	113.9	24	114.9	115.9	116.6	24
7/21	112.3	112.7	113.4	24	112.5	113.2	113.8	23	113.2	113.9	114.6	23	112.5	112.9	113.2	24	114.2	114.9	115.3	24
7/22	112.3	113.0	113.8	24	112.0	112.4	113.2	20	113.1	113.8	114.5	20	111.9	112.2	112.5	24	114.4	115.3	116.3	24
7/23	111.9	112.2	112.5	24	112.0	112.6	113.3	20	113.2	114.0	114.8	20	111.7	112.3	112.9	24	114.3	115.7	116.1	24
7/24	111.8	112.4	112.8	24	112.4	112.8	113.7	20	113.5	114.2	115.5	20	112.2	112.9	113.3	24	114.2	115.5	116.3	24
7/25	111.4	111.8	112.4	23	112.2	112.7	113.3	22	113.4	114.3	115.2	22	112.5	112.9	113.1	23	114.5	115.3	116.1	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
7/12	110.8	111.8	113.6	24	116.3	117.3	118.4	24	111.9	112.5	113.5	24	112.8	113.1	113.3	24	111.4	111.7	112.1	24
7/13	109.9	110.7	111.5	24	115.6	116.8	117.3	24	111.2	111.9	112.8	24	112.3	112.5	112.6	24	110.5	111.3	112.1	24
7/14	110.4	111.3	112.0	24	115.9	117.2	117.8	24	111.9	112.5	112.9	24	112.8	113.3	113.5	24	112.6	113.4	113.9	24
7/15	110.6	111.4	112.1	24	116.0	117.1	117.7	24	111.6	112.3	112.8	24	112.9	113.2	113.5	24	112.1	112.6	112.9	24
7/16	110.9	111.6	112.3	24	116.1	117.0	117.5	24	111.9	112.5	112.9	24	113.7	114.0	114.2	24	112.9	113.3	113.7	24
7/17	111.2	111.7	112.3	24	116.5	117.4	118.0	24	111.5	112.1	112.6	24	113.0	113.1	113.4	24	111.5	112.2	113.3	24
7/18	111.1	111.9	112.5	24	116.2	117.2	117.9	24	111.9	113.1	114.4	24	112.5	112.8	112.9	24	111.5	112.3	112.8	24
7/19	111.3	112.4	113.2	24	116.5	117.4	118.1	24	112.8	113.8	114.6	24	113.2	113.7	113.9	24	112.5	113.2	113.7	24
7/20	112.2	112.9	113.6	24	117.1	118.0	118.4	24	112.5	113.2	114.2	24	113.8	114.1	114.3	24	112.4	112.9	113.4	24
7/21	111.9	112.4	112.7	24	116.8	117.5	117.8	24	111.1	111.8	112.4	24	112.9	113.2	113.9	24	111.1	111.5	112.0	24
7/22	111.3	111.8	112.4	24	115.6	116.3	117.0	24	---	---	---	0	---	---	---	0	---	---	---	0
7/23	111.0	111.8	112.5	24	115.5	116.5	117.2	24	---	---	---	0	---	---	---	0	---	---	---	0
7/24	111.4	112.0	112.5	24	116.2	116.8	117.7	24	---	---	---	0	---	---	---	0	---	---	---	0
7/25	111.7	112.3	112.9	23	116.1	116.8	117.9	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
7/12	113.8	114.1	114.6	24	---	---	---	0	102.9	105.5	106.7	23	104.2	105.5	107.1	23	101.7	102.8	103.9	24
7/13	112.7	113.1	113.8	24	---	---	---	0	99.0	99.3	99.6	24	101.4	102.4	103.3	24	101.7	102.9	104.0	24
7/14	114.9	115.2	115.4	24	---	---	---	0	99.8	100.7	104.9	24	101.8	103.1	104.1	24	102.3	103.7	104.8	24
7/15	114.1	114.3	114.9	24	---	---	---	0	104.7	105.4	105.8	24	105.1	106.3	107.1	24	102.3	103.2	104.5	20
7/16	115.1	115.3	115.5	24	---	---	---	0	100.0	100.4	100.8	24	102.2	103.2	103.9	24	102.4	103.6	104.6	24
7/17	114.1	114.6	115.2	24	---	---	---	0	99.8	100.1	100.3	24	102.1	103.2	104.0	24	102.3	103.6	104.9	24
7/18	113.5	113.8	114.0	24	---	---	---	0	99.3	99.7	100.0	24	101.8	103.1	104.1	24	102.3	103.8	105.0	24
7/19	114.3	114.5	114.7	24	---	---	---	0	99.5	100.0	100.3	24	101.9	103.1	104.1	24	102.9	103.1	105.4	13
7/20	114.5	114.7	114.8	24	---	---	---	0	100.1	100.5	100.9	24	102.2	103.4	104.5	24	102.7	104.1	105.4	24
7/21	113.4	113.7	114.3	24	---	---	---	0	102.4	105.0	105.9	24	103.4	105.7	107.4	24	102.6	104.0	105.4	24
7/22	---	---	---	0	---	---	---	0	104.0	104.9	105.2	24	104.7	105.8	106.8	24	101.8	102.4	104.9	16
7/23	---	---	---	0	---	---	---	0	102.0	102.3	102.6	24	103.2	104.2	105.0	24	103.4	103.6	105.2	13
7/24	---	---	---	0	---	---	---	0	101.9	102.4	102.8	24	102.9	104.1	105.0	24	102.4	103.8	105.2	24
7/25	---	---	---	0	---	---	---	0	100.8	101.4	102.3	23	102.3	103.1	103.7	23	102.3	103.8	105.3	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
7/12	105.0	107.1	109.3	23	101.3	101.5	101.7	24	116.9	117.3	117.5	24	112.6	112.8	112.9	24	107.8	108.3	108.6	24
7/13	103.6	106.1	107.8	24	101.2	101.3	101.5	24	116.6	117.0	117.5	24	110.9	111.3	112.1	24	108.5	109.0	109.6	24
7/14	103.9	106.5	108.3	24	101.3	101.5	101.7	24	116.1	116.4	116.8	24	110.7	111.0	111.3	24	108.0	108.9	109.5	24
7/15	104.6	107.5	109.2	24	101.2	101.5	101.8	24	118.5	120.6	121.0	24	110.8	111.0	111.4	24	109.5	110.1	110.3	24
7/16	104.5	106.3	107.2	24	102.3	102.6	102.8	24	119.0	120.9	121.5	24	110.7	110.9	111.3	24	108.0	108.7	109.3	24
7/17	104.2	106.6	108.3	24	102.1	102.3	102.5	24	116.7	117.0	117.3	24	111.0	111.7	112.2	24	105.3	105.9	107.1	24
7/18	104.1	106.6	108.3	24	102.4	102.7	103.2	24	116.7	117.0	117.3	24	111.3	111.5	111.8	24	105.2	106.4	107.9	24
7/19	104.1	106.5	108.3	24	102.4	102.6	102.9	24	116.7	117.3	117.8	24	110.6	110.7	110.9	24	103.2	104.4	105.1	24
7/20	104.2	106.7	108.4	24	102.9	103.1	103.4	24	116.7	117.0	117.8	24	111.9	112.5	113.3	24	104.0	105.1	105.8	24
7/21	104.1	106.6	108.3	24	103.0	103.1	103.4	24	115.7	116.7	117.0	24	113.4	113.6	113.8	24	105.2	106.0	106.4	24
7/22	105.0	107.3	108.9	24	102.1	102.3	102.6	24	115.6	117.1	117.3	24	113.5	113.7	113.8	24	107.3	108.4	109.1	24
7/23	104.7	107.0	108.7	24	101.7	101.9	102.0	24	116.0	117.8	119.3	24	113.5	113.7	113.9	24	106.8	107.4	107.9	24
7/24	104.5	106.8	108.4	24	101.6	101.8	101.9	24	116.4	117.8	118.8	24	112.7	112.9	113.4	24	107.4	108.2	108.3	24
7/25	104.4	106.7	108.3	23	101.5	101.6	101.8	23	115.3	116.8	118.5	23	112.1	112.2	112.4	23	109.4	110.5	111.1	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
7/12	111.5	111.8	111.9	24	115.7	116.0	116.4	24	113.7	114.0	114.7	24	111.7	112.4	113.0	24	---	---	---	0
7/13	110.1	110.4	110.9	24	115.3	115.8	116.2	24	112.8	113.0	113.2	24	112.2	113.3	113.5	24	---	---	---	0
7/14	109.1	109.2	109.4	24	112.9	113.7	115.4	24	111.5	111.8	112.0	24	110.8	111.6	112.3	24	---	---	---	0
7/15	108.9	109.2	109.4	24	115.1	116.0	116.3	24	111.4	111.6	111.8	24	112.0	113.5	114.0	24	---	---	---	0
7/16	109.4	109.8	110.4	24	115.1	115.7	116.1	24	111.7	112.1	112.4	24	112.7	113.5	114.3	24	---	---	---	0
7/17	109.0	109.2	109.5	24	115.2	116.0	116.2	24	111.1	111.4	112.0	24	112.0	113.5	114.5	24	---	---	---	0
7/18	108.8	109.0	109.2	24	115.9	116.2	116.5	24	110.1	110.3	110.8	24	113.0	113.8	114.4	24	---	---	---	0
7/19	109.3	109.7	110.1	24	114.8	116.1	116.8	24	110.5	110.7	111.0	24	111.7	112.7	113.2	24	---	---	---	0
7/20	109.4	109.6	109.8	24	116.1	116.2	116.4	24	111.1	111.4	111.7	24	113.4	114.4	115.2	24	---	---	---	0
7/21	109.5	109.8	110.3	24	116.1	116.4	116.9	24	111.3	111.6	112.1	24	112.2	113.2	114.2	24	---	---	---	0
7/22	109.9	110.1	110.3	24	115.2	115.7	116.2	24	111.6	112.0	112.3	24	112.3	113.5	114.2	24	---	---	---	0
7/23	109.9	110.1	110.3	24	115.3	116.0	116.4	24	111.9	112.1	112.2	24	112.8	113.5	114.0	24	---	---	---	0
7/24	109.7	110.0	110.1	24	116.2	116.4	116.7	24	111.6	111.9	112.0	24	112.7	113.5	114.2	24	---	---	---	0
7/25	109.0	109.3	109.5	23	115.5	116.1	116.6	23	111.4	111.5	111.7	23	113.1	113.6	114.1	23	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	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
7/12	110.7	111.1	111.5	24	116.4	116.7	117.0	24	108.8	109.1	109.5	24	114.5	115.4	116.3	24	108.7	108.8	108.9	24
7/13	109.5	109.6	109.7	24	116.5	116.9	117.2	24	107.7	108.2	108.5	24	113.3	113.8	114.3	24	109.1	109.6	110.6	24
7/14	109.3	109.7	110.2	24	116.8	117.0	117.2	24	108.5	108.8	109.2	24	113.8	114.1	114.9	24	110.5	110.7	110.8	24
7/15	110.2	110.6	111.0	24	116.9	117.1	117.5	24	108.0	108.8	110.4	24	115.2	116.0	117.5	24	110.0	110.7	111.6	24
7/16	110.2	110.5	110.7	24	116.5	116.8	116.9	24	108.3	108.9	109.4	24	113.5	114.7	115.7	24	111.9	112.2	112.6	24
7/17	109.5	109.9	110.5	24	116.4	116.7	117.2	24	108.4	108.7	109.5	24	114.2	114.6	114.9	24	109.5	110.5	111.1	24
7/18	108.9	109.1	109.2	24	116.3	116.8	117.3	24	108.2	108.9	109.3	24	114.4	115.1	116.1	24	108.1	108.5	109.1	24
7/19	109.6	109.9	110.2	24	116.4	116.8	117.1	24	108.9	109.4	109.6	24	114.5	115.3	116.0	24	109.6	110.1	110.8	24
7/20	110.6	110.8	111.3	24	116.9	117.3	117.7	24	108.9	109.2	109.5	24	114.8	115.8	116.2	24	110.1	110.4	110.6	24
7/21	111.2	111.5	111.6	24	116.8	117.0	117.4	24	108.2	108.6	108.9	24	114.5	114.7	114.9	24	108.9	109.6	110.2	24
7/22	110.8	111.0	111.2	24	116.6	117.0	117.3	24	107.3	107.5	107.7	24	114.7	114.9	115.4	24	107.2	107.5	107.7	24
7/23	110.3	110.8	111.6	24	116.1	116.6	116.9	24	107.5	108.4	109.3	24	114.0	114.6	115.2	24	107.8	108.3	108.8	24
7/24	109.7	109.9	110.3	24	115.8	116.7	117.2	24	108.6	109.1	109.5	24	114.9	115.3	115.8	24	109.1	109.4	109.5	24
7/25	109.5	109.9	110.2	23	116.3	116.8	117.1	23	108.3	108.6	108.9	23	114.4	114.7	115.0	23	108.6	108.8	109.0	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
7/12	114.0	114.4	114.9	24	107.1	107.3	107.5	24	112.9	113.1	113.5	24	110.0	110.7	111.3	24	116.5	117.2	118.9	24
7/13	114.2	115.0	115.6	24	107.9	109.0	109.5	24	114.1	115.2	116.4	24	110.2	112.4	114.2	24	116.7	117.6	119.4	24
7/14	115.0	115.4	115.7	24	112.1	113.3	113.9	24	116.0	116.6	116.9	24	112.0	114.3	115.8	24	118.4	118.8	119.7	24
7/15	114.9	115.6	115.9	24	112.9	113.3	113.8	24	116.3	116.8	117.1	24	113.6	115.4	116.4	24	118.3	118.6	118.7	24
7/16	115.1	115.5	115.9	24	112.9	113.3	113.6	24	115.3	115.6	115.9	24	113.3	113.7	114.4	24	116.9	117.6	119.4	24
7/17	113.0	113.6	114.2	24	111.1	111.8	113.3	24	115.4	116.3	117.7	24	112.2	113.9	115.7	24	116.7	117.7	119.5	24
7/18	112.6	113.4	113.9	24	108.4	108.8	109.3	24	115.1	115.7	116.7	24	112.3	113.8	115.2	24	117.7	118.1	118.7	24
7/19	113.8	114.5	115.1	24	108.2	108.5	108.8	24	114.4	114.9	115.1	24	111.5	112.6	113.4	24	117.3	117.5	117.8	24
7/20	113.8	114.5	115.1	24	107.4	107.7	107.9	24	113.5	113.8	114.0	24	111.0	111.9	112.5	24	116.2	116.8	119.2	24
7/21	113.0	113.7	114.0	24	106.9	107.2	107.4	24	114.0	114.7	115.9	24	110.3	111.8	113.2	24	116.4	117.4	119.4	24
7/22	111.8	112.4	112.6	24	106.5	107.0	107.3	24	113.1	114.4	116.3	24	110.4	112.4	114.2	24	116.3	117.4	119.3	24
7/23	112.1	112.7	113.1	24	107.3	107.9	108.3	24	114.4	114.9	115.6	24	110.7	112.7	113.8	24	116.1	117.4	119.5	24
7/24	113.9	115.3	115.8	24	107.9	108.2	108.7	24	115.8	116.4	117.5	24	112.5	114.4	115.9	24	116.2	117.3	118.9	24
7/25	114.6	115.2	115.7	23	107.1	107.5	108.0	23	116.1	117.1	118.0	23	113.5	115.3	117.0	23	116.0	116.9	118.8	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center Updated: 7/26/2013 7:15

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.
See Sampling Comments: http://www.fpc.org/currentDaily/smpcomments.htm
For clip information see: http://www.fpc.org/CurrentDaily/catch.htm
For sockeye and yearling chinook (Snake only) race information see: http://www.fpc.org/smoltqueries/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)
07/12/2013		---	---	---	---	0	0	8	0	206	0	0
07/13/2013	*	---	---	---	---	0	0	0	0	---	0	316
07/14/2013		---	---	---	---	0	0	8	0	0	143	0
07/15/2013	*	---	---	---	---	0	0	0	0	---	0	0
07/16/2013		---	---	---	---	0	0	0	0	0	0	0
07/17/2013	*	---	---	---	---	0	0	0	0	---	0	0
07/18/2013		---	---	---	---	0	0	9	0	0	0	0
07/19/2013	*	---	---	---	---	0	0	0	0	---	0	55
07/20/2013		---	---	---	---	0	0	0	0	0	0	0
07/21/2013	*	---	---	---	---	0	0	0	0	---	0	221
07/22/2013		---	---	---	---	0	0	0	0	0	0	0
07/23/2013	*	---	---	---	---	0	0	0	2	---	0	0
07/24/2013		---	---	---	---	0	0	5	0	0	0	0
07/25/2013	*	---	---	---	---	10	0	0	0	---	0	0
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**10**	**0**	**30**	**2**	**206**	**143**	**592**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**29**	**10**	**42**
YTD		**50,632**	**55,599**	**26,301**	**2,797**	**2,607,064**	**1,500,072**	**614,207**	**28,314**	**2,123,325**	**2,056,882**	**1,881,668**

				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)
07/12/2013		---	---	---	---	5,004	2,925	1,926	323	184,617	67,454	123,121
07/13/2013	*	---	---	---	---	4,162	3,680	2,124	334	---	46,945	196,262
07/14/2013		---	---	---	---	4,897	2,338	944	178	113,523	51,220	142,054
07/15/2013	*	---	---	---	---	3,230	1,853	1,224	253	---	78,823	93,550
07/16/2013		---	---	---	---	3,649	2,091	1,438	231	61,718	39,537	71,754
07/17/2013	*	---	---	---	---	3,530	2,557	4,708	259	---	19,292	25,782
07/18/2013		---	---	---	---	3,911	1,918	2,747	434	83,269	37,648	23,070
07/19/2013	*	---	---	---	---	3,496	1,616	1,431	378	---	30,526	13,284
07/20/2013		---	---	---	---	2,637	1,602	1,452	272	62,315	18,694	12,467
07/21/2013	*	---	---	---	---	2,328	1,628	891	439	---	14,559	14,809
07/22/2013		---	---	---	---	2,073	1,084	463	364	68,393	13,190	12,278
07/23/2013	*	---	---	---	---	1,650	741	465	480	---	20,624	20,284
07/24/2013		---	---	---	---	2,254	2,720	594	447	33,168	25,755	7,136
07/25/2013	*	---	---	---	---	2,383	3,980	557	368	---	19,131	10,136
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**45,204**	**30,733**	**20,964**	**4,760**	**607,003**	**483,398**	**765,987**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**3,229**	**2,195**	**1,497**	**340**	**86,715**	**34,528**	**54,713**
YTD		**2**	**60**	**195**	**2,668**	**671,190**	**579,989**	**256,834**	**14,855**	**3,412,707**	**2,414,351**	**4,749,301**

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)
07/12/2013		---	---	---	---	0	0	0	0	0	0	0
07/13/2013	*	---	---	---	---	0	0	0	9	---	0	0
07/14/2013		---	---	---	---	0	0	0	1	0	0	0
07/15/2013	*	---	---	---	---	0	0	0	6	---	152	0
07/16/2013		---	---	---	---	0	0	0	3	0	0	0
07/17/2013	*	---	---	---	---	0	0	0	2	---	0	0
07/18/2013		---	---	---	---	0	0	0	3	0	0	0
07/19/2013	*	---	---	---	---	0	0	0	6	---	0	0
07/20/2013		---	---	---	---	0	0	0	0	0	0	0
07/21/2013	*	---	---	---	---	0	0	0	6	---	0	221
07/22/2013		---	---	---	---	0	0	0	0	0	0	0
07/23/2013	*	---	---	---	---	0	0	0	2	---	0	0
07/24/2013		---	---	---	---	0	0	0	9	0	0	0
07/25/2013	*	---	---	---	---	0	0	0	6	---	0	0
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**152**	**221**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**11**	**16**
YTD		**0**	**0**	**0**	**107**	**61,810**	**54,156**	**10,580**	**49,965**	**85,339**	**188,509**	**770,818**

				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)
07/12/2013		---	---	---	---	41	14	0	0	0	0	0
07/13/2013	*	---	---	---	---	0	43	0	0	---	0	316
07/14/2013		---	---	---	---	0	0	8	1	0	143	0
07/15/2013	*	---	---	---	---	0	22	8	0	---	0	0
07/16/2013		---	---	---	---	34	17	8	2	0	0	0
07/17/2013	*	---	---	---	---	0	14	0	2	---	0	0
07/18/2013		---	---	---	---	0	0	18	0	0	0	0
07/19/2013	*	---	---	---	---	10	7	0	0	---	0	0
07/20/2013		---	---	---	---	10	11	0	0	0	0	0
07/21/2013	*	---	---	---	---	0	11	9	3	---	0	0
07/22/2013		---	---	---	---	0	0	5	1	0	0	0
07/23/2013	*	---	---	---	---	7	9	0	0	---	0	60
07/24/2013		---	---	---	---	0	9	5	0	0	0	10
07/25/2013	*	---	---	---	---	0	18	0	2	---	0	0
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**102**	**175**	**61**	**11**	**0**	**143**	**386**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**7**	**13**	**4**	**1**	**0**	**10**	**28**
YTD		**3,789**	**40,840**	**3,547**	**9,925**	**2,036,981**	**1,715,716**	**610,891**	**14,960**	**471,593**	**732,359**	**470,274**

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)
07/12/2013		---	---	---	---	0	0	0	9	822	0	335
07/13/2013	*	---	---	---	---	0	0	0	7	---	0	316
07/14/2013		---	---	---	---	0	0	0	6	0	143	343
07/15/2013	*	---	---	---	---	0	0	0	2	---	0	0
07/16/2013		---	---	---	---	0	0	0	11	2	238	0
07/17/2013	*	---	---	---	---	0	7	0	11	---	156	0
07/18/2013		---	---	---	---	0	0	0	8	414	143	0
07/19/2013	*	---	---	---	---	0	7	0	4	---	0	0
07/20/2013		---	---	---	---	0	0	0	3	1,025	0	0
07/21/2013	*	---	---	---	---	0	0	0	9	---	0	230
07/22/2013		---	---	---	---	0	0	0	8	412	57	56
07/23/2013	*	---	---	---	---	0	0	0	7	---	286	179
07/24/2013		---	---	---	---	0	0	0	7	0	0	0
07/25/2013	*	---	---	---	---	0	0	0	2	---	0	0
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**0**	**14**	**0**	**94**	**2,675**	**1,023**	**1,459**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**0**	**1**	**0**	**7**	**382**	**73**	**104**
YTD		**1**	**0**	**0**	**326**	**54,652**	**32,998**	**11,379**	**25,015**	**631,029**	**414,086**	**395,366**

				COMBINED LAMPREY JUVENILES								
		WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
07/12/2013		---	---	---	---	0	145	12	0	500	2,286	0
07/13/2013	*	---	---	---	---	10	195	0	0	---	2,000	143
07/14/2013		---	---	---	---	0	110	4	0	300	1,100	183
07/15/2013	*	---	---	---	---	0	155	8	0	---	600	0
07/16/2013		---	---	---	---	0	95	12	0	200	1,000	143
07/17/2013	*	---	---	---	---	4	60	0	1	---	200	203
07/18/2013		---	---	---	---	0	100	4	1	200	450	0
07/19/2013	*	---	---	---	---	0	80	12	1	---	600	50
07/20/2013		---	---	---	---	0	128	0	0	100	100	50
07/21/2013	*	---	---	---	---	0	72	0	3	---	160	20
07/22/2013		---	---	---	---	0	40	0	2	0	240	50
07/23/2013	*	---	---	---	---	0	24	2	3	---	200	25
07/24/2013		---	---	---	---	0	12	0	1	0	100	0
07/25/2013	*	---	---	---	---	0	18	4	4	---	67	0
07/26/2013		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**14**	**1,234**	**58**	**16**	**1,300**	**9,103**	**867**
# Days:		**0**	**0**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**1**	**88**	**4**	**1**	**186**	**650**	**62**
YTD		**0**	**8**	**0**	**0**	**4,956**	**54,856**	**63,614**	**131**	**74,110**	**173,687**	**6,049**

Two-Week Summary of Passage Indices

* See sampling comments http://www.fpc.org/currentDaily/smpcomments.htm

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:
Two classes of fish counts are shown in these tables:
Collection counts (Coll), which account for sample rates but are not adjusted for flow;
Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.
Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.
The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.
Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macropthalmia, and unidentified lamprey species.
†† Passage index for yearling Chinook, steelhead, and subyearling Chinook at LGR may be inflated in 2013 due to possible resampling of PIT-tagged research fish
† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

Definitions for Smolt Index Counts
WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts
IMN (Collection) = Imnaha River Trap : Collection Counts
GRN (Collection) = Grande Ronde River Trap : Collection Counts
LEW (Collection) = Snake River Trap at Lewiston : Collection Counts
LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts
Passage Index = 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: 7/26/13 7:17 AM

07/12/13 TO 07/26/13

		Species				
Site	Data	**CH0**	**CH1**	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	18,400	4	42		18,446
	Sum of NumberBarged	18,353	4	39		18,396
	Sum of NumberBypassed	1	0	0		1
	Sum of Numbertrucked	0	0	0		0
	Sum of SampleMorts	31	0	1		32
	Sum of FacilityMorts	15	0	2		17
	Sum of ResearchMorts	0	0	0		0
	Sum of TotalProjectMorts	46	0	3		49
LGS	Sum of NumberCollected	21,118		122	10	21,250
	Sum of NumberBarged	20,992		122	8	21,122
	Sum of NumberBypassed	0		0	0	0
	Sum of Numbertrucked	0		0	0	0
	Sum of SampleMorts	34		0	0	34
	Sum of FacilityMorts	92		0	2	94
	Sum of ResearchMorts	0		0	0	0
	Sum of TotalProjectMorts	126		0	2	128
LMN	Sum of NumberCollected	10,030	14	28		10,072
	Sum of NumberBarged	9,728	14	28		9,770
	Sum of NumberBypassed	200	0	0		200
	Sum of Numbertrucked	0	0	0		0
	Sum of SampleMorts	19	0	0		19
	Sum of FacilityMorts	83	0	0		83
	Sum of ResearchMorts	0	0	0		0
	Sum of TotalProjectMorts	102	0	0		102
MCN	Sum of NumberCollected	295,315	100		1,301	296,716
	Sum of NumberBarged	0	0		0	0
	Sum of NumberBypassed	295,213	100		1,301	296,614
	Sum of Numbertrucked	0	0		0	0
	Sum of SampleMorts	67	0		0	67
	Sum of FacilityMorts	35	0		0	35
	Sum of ResearchMorts	0	0		0	0
	Sum of TotalProjectMorts	102	0		0	102
Total Sum of NumberCollected		344,863	118	192	1,311	346,484
Total Sum of NumberBarged		49,073	18	189	8	49,288
Total Sum of NumberBypassed		295,414	100	0	1,301	296,815
Total Sum of Numbertrucked		0	0	0	0	0
Total Sum of SampleMorts		151	0	1	0	152
Total Sum of FacilityMorts		225	0	2	2	229
Total Sum of ResearchMorts		0	0	0	0	0
Total Sum of TotalProjectMorts		376	0	3	2	381

YTD Transportation Summary

Source: Fish Passage Center Updated: 7/26/13 7:17 AM

TO: 07/26/13

		Species						
Site	Data	**CH0**	**CH1**	CO	SO	ST	LU	**Grand Total**
LGR	Sum of NumberCollected	436,865	1,865,115	48,070	42,630	1,444,830		3,837,510
	Sum of NumberBarged	422,351	1,554,568	47,801	42,561	1,087,910		3,155,191
	Sum of NumberBypassed	13,693	308,258	210	52	356,574		678,787
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	467	173	2	2	40		684
	Sum of FacilityMorts	316	2,066	57	15	258		2,712
	Sum of ResearchMorts	38	52	0	0	47		137
	Sum of TotalProjectMorts	821	2,291	59	17	345		3,533
LGS	Sum of NumberCollected	402,747	1,026,506	36,885	22,611	1,174,635		2,663,384
	Sum of NumberBarged	402,154	979,234	36,685	22,607	1,108,302		2,548,982
	Sum of NumberBypassed	251	46,698	200	1	66,201		113,351
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	74	14	0	0	9		97
	Sum of FacilityMorts	268	560	0	3	123		954
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	342	574	0	3	132		1,051
LMN	Sum of NumberCollected	161,110	470,875	7,998	8,064	459,569	1	1,107,617
	Sum of NumberBarged	146,904	469,263	7,997	8,058	458,175	0	1,090,397
	Sum of NumberBypassed	13,312	1,079	0	2	1,141	98	15,632
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of SampleMorts	85	15	0	0	18	0	118
	Sum of FacilityMorts	292	518	1	4	235	0	1,050
	Sum of ResearchMorts	0	0	0	0	0	0	0
	Sum of TotalProjectMorts	377	533	1	4	253	0	1,168
MCN	Sum of NumberCollected	1,639,360	1,098,880	43,783	313,236	255,352		3,350,611
	Sum of NumberBarged	0	0	0	0	0		0
	Sum of NumberBypassed	1,639,007	1,098,057	43,779	312,988	255,297		3,349,128
	Sum of NumberTrucked	0	0	0	0	0		0
	Sum of SampleMorts	240	62	1	33	8		344
	Sum of FacilityMorts	114	761	3	215	47		1,140
	Sum of ResearchMorts	0	0	0	0	0		0
	Sum of TotalProjectMorts	354	823	4	248	55		1,484
Total Sum of NumberCollected		2,640,082	4,461,376	136,736	386,541	3,334,386	1	10,959,122
Total Sum of NumberBarged		971,409	3,003,065	92,483	73,226	2,654,387	0	6,794,570
Total Sum of NumberBypassed		1,666,263	1,454,092	44,189	313,043	679,213	98	4,156,898
Total Sum of NumberTrucked		0	0	0	0	0	0	0
Total Sum of SampleMorts		866	264	3	35	75	0	1,243
Total Sum of FacilityMorts		990	3,905	61	237	663	0	5,856
Total Sum of ResearchMorts		38	52	0	0	47	0	137
Total Sum of TotalProjectMorts		1,894	4,221	64	272	785	0	7,236

Cumulative Adult Passage at Mainstem Dams Through: 07/26

		Spring Chinook						Summer Chinook						Fall Chinook					
		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.		2013		2012		10-Yr Avg.	
DAM	ENDDATE	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	**07/25**	**83345**	**33820**	**158089**	**7592**	**141713**	**20323**	**89014**	**25322**	**78938**	**11452**	**84875**	**16885**	**0**	**0**	**0**	**0**	**0**	**0**
TDA	**07/25**	**69202**	**32311**	**117087**	**7175**	**107368**	**16911**	**80808**	**19792**	**65126**	**9218**	**71355**	**13055**	**0**	**0**	**0**	**0**	**0**	**0**
JDA	**07/25**	**56991**	**28957**	**107655**	**6755**	**92410**	**15875**	**70857**	**18818**	**56525**	**9367**	**64258**	**13533**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**07/25**	**52176**	**22279**	**102763**	**4787**	**83990**	**13854**	**70650**	**13751**	**58298**	**4283**	**58902**	**9945**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**07/25**	**38017**	**18611**	**71957**	**2905**	**58986**	**8558**	**10909**	**6198**	**13491**	**1346**	**16897**	**4153**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**07/24**	**36470**	**19053**	**68608**	**2891**	**58025**	**7379**	**10745**	**7441**	**14328**	**1413**	**18100**	**4042**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**07/25**	**35072**	**19443**	**68247**	**3449**	**53406**	**8429**	**9020**	**7347**	**13499**	**1476**	**16620**	**4717**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**07/25**	**35031**	**19940**	**66366**	**3525**	**53382**	**9851**	**7339**	**6728**	**12003**	**1535**	**15197**	**5296**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**07/23**	**13725**	**1298**	**19495**	**1015**	**15225**	**1406**	**61385**	**1910**	**39337**	**696**	**44683**	**1594**	**0**	**0**	**0**	**0**	**0**	**0**
WAN	**07/23**	**13715**	**1661**	**19804**	**973**	**15699**	**2278**	**60349**	**1294**	**38774**	**582**	**38414**	**1159**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**07/22**	**13345**	**3100**	**19881**	**800**	**14248**	**2237**	**55089**	**1948**	**35673**	**1062**	**39428**	**3489**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**07/22**	**6841**	**2101**	**6641**	**459**	**5306**	**853**	**45271**	**2177**	**23627**	**850**	**26373**	**2474**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**07/13**	**7133**	**2980**	**5311**	**700**	**4618**	**880**	**22571**	**2009**	**8014**	**460**	**10245**	**473**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**07/13**	**26728**	**1468**	**34898**	**1215**	**45226**	**1040**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

		Coho						Sockeye			Steelhead						Lamprey		
		2013		2012		10-Yr Avg.				10-Yr			10-Yr	Wild 2013	Wild 2012	10-Yr			10-Yr
DAM	ENDDATE	Adult	Jack	Adult	Jack	Adult	Jack	2013	2012	Avg.	2013	2012	Avg.			Avg.	2013	2012	Avg.
BON	**07/25**	**0**	**0**	**0**	**0**	**0**	**0**	**183834**	**515190**	**177227**	**43122**	**64968**	**82945**	**23759**	**28674**	**36244**	**16301**	**17389**	**25185**
TDA	**07/25**	**0**	**0**	**1**	**0**	**0**	**0**	**160274**	**409428**	**145917**	**21825**	**36573**	**42341**	**12178**	**17058**	**19514**	**4872**	**1761**	**4708**
JDA	**07/25**	**1**	**0**	**9**	**0**	**0**	**0**	**153958**	**393385**	**148459**	**14562**	**22284**	**35506**	**7344**	**11116**	**14452**	**2885**	**1137**	**3309**
MCN	**07/25**	**1**	**0**	**0**	**0**	**0**	**0**	**132257**	**363214**	**125199**	**9821**	**16875**	**23245**	**4315**	**6942**	**8510**	**479**	**110**	**971**
IHR	**07/25**	**0**	**0**	**0**	**0**	**0**	**0**	**870**	**419**	**417**	**8506**	**5761**	**13339**	**2676**	**1931**	**3760**	**107**	**51**	**119**
LMN	**07/24**	**0**	**0**	**0**	**0**	**0**	**0**	**988**	**457**	**515**	**5810**	**6660**	**16356**	**2320**	**2876**	**4948**	**31**	**11**	**21**
LGS	**07/25**	**0**	**0**	**0**	**0**	**0**	**0**	**935**	**399**	**483**	**3552**	**5258**	**12843**	**1735**	**2866**	**4130**	**13**	**8**	**26**
LGR	**07/25**	**0**	**0**	**0**	**0**	**0**	**0**	**600**	**379**	**569**	**8152**	**9922**	**12285**	**3518**	**4364**	**4107**	**5**	**1**	**2**
PRD	**07/23**	**0**	**0**	**0**	**0**	**0**	**0**	**155474**	**399040**	**151017**	**802**	**1405**	**1589**	**0**	**0**	**0**	**472**	**95**	**261**
WAN	**07/23**	**0**	**0**	**0**	**0**	**0**	**0**	**147808**	**435162**	**189804**	**791**	**1380**	**1627**	**0**	**0**	**0**	**124**	**47**	**108**
RIS	**07/22**	**0**	**0**	**0**	**0**	**0**	**0**	**144025**	**382441**	**143383**	**590**	**1021**	**1040**	**371**	**579**	**658**	**22**	**3**	**41**
RRH	**07/22**	**0**	**0**	**0**	**0**	**0**	**0**	**114419**	**325847**	**119130**	**418**	**1253**	**969**	**290**	**874**	**606**	**11**	**1**	**10**
WEL	**07/13**	**0**	**0**	**0**	**0**	**0**	**0**	**63585**	**118605**	**66800**	**154**	**222**	**183**	**112**	**145**	**110**	**0**	**0**	**0**
WFA	**07/13**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16626**	**30406**	**24442**	**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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