



Fish Passage Center

Weekly Report #12 - 27

September 14, 2012

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Summary of Events:

NOTE: This is the last weekly report of the season; bi-weekly reports begin September 28th through the end of October.

Water Supply: Precipitation throughout the Columbia Basin has varied between 1% and 64% of average at individual sub-basins over September. Precipitation above The Dalles has been 34% of average for September 1-10. Over the 2012 water year, precipitation has ranged between 88% and 117% of average.

Table 1. Summary of September precipitation and cumulative October through September 10, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2012 September 1-10, 2012		Water Year 2012 October 1, 2011 to September 10, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.23	44	27.90	114
Snake River Above Ice Harbor	0.10	29	16.04	93
Columbia Above The Dalles	0.15	34	23.99	106
Kootenai	0.34	64	29.47	117
Clark Fork	0.03	7	17.05	100
Flathead	0.26	47	24.98	111
Pend Oreille/Spokane	0.06	13	34.43	113
Central Washington	0.02	11	7.92	89
Snake River Plain	0.15	54	9.71	88
Salmon/Boise/Payette	0.02	5	18.01	92
Clearwater	0.01	1	31.56	105
SW Washington Cascades/Cowlitz	0.08	8	69.47	100
Willamette Valley	0.02	2	62.26	106

Grand Coulee Reservoir is at 1283.6 feet (9-13-12) and refilled 1.8 feet over the last week. Outflows at Grand Coulee have ranged between 47.7 and 101.6 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2450.6 feet (9-13-12) and has drafted 0.5 feet over the last week. Outflows at Libby Dam have been 8.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3551.6 feet (9-13-12) and has drafted 0.9 feet over the last week. Outflows at Hungry Horse have ranged between 2.0 and 2.2 Kcfs last week.

Dworshak is currently at an elevation of 1522.1 feet (9-13-12) and has drafted 4.4 feet over the last week for temperature and flow augmentation. Outflows from Dworshak have ranged between 4.8 and 8.2 Kcfs the past week.

The Brownlee Reservoir drafted 2.6 feet over the past week with an elevation of 2051.3 feet on September 13th, 2012. Over the last week, outflows at Brownlee have ranged between 11.6 and 15.1 Kcfs.

The Biological Opinion summer flow objective at Lower Granite (June 21st to August 31st) was 52 Kcfs; over the summer period flows at Lower Granite averaged 42.3 Kcfs.

The Summer Biological Opinion Flow Objective was 200 Kcfs at McNary Dam (began July 1st and ended August 31st). Over the summer period, flows at McNary averaged 265.2 Kcfs.

Smolt Monitoring:

Smolt monitoring activities are ongoing at all six SMP dams (BON, JDA, MCN, LGR, LGS, and LMN). SMP sampling at RIS for the 2012 season ended on August 31st. SMP sampling at JDA will end on September 15th.

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 or remained the same at all SMP sites this week, except LGR and LMN.

Subyearling Chinook numbers at BON decreased this week, with a daily average passage index of about 1,200 per day, compared to last week's daily average passage index of about 2,000 per day. No other species of salmonid was sampled at BON this week. Only pacific lamprey macrophthalmia were collected at BON this week, but in very low numbers. All but three screens have been pulled from the juvenile bypass system at the second powerhouse. These screens are expected to remain out for the remainder of the 2012 SMP season. The three screens that remain are in units 11, 12, and 18. Pulled screens will likely result in bias collection estimates, as not as many fish will be guided into the juvenile bypass system in the second powerhouse.

Passage of subyearling Chinook at JDA decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at JDA this week was nearly 3,500 per day, compared to about 5,800 per day last week. As with previous weeks, sockeye were the only spring migrants that were collected at JDA this week. Furthermore, only pacific lamprey macrophthalmia were collected at JDA this week. Daily collections of lamprey macrophthalmia at JDA ranged from 0 to 83 per day this week. Sampling for the 2012 SMP season is scheduled to end at JDA on September 15th.

Passage of subyearling Chinook at MCN decreased this week. The daily average passage index for subyearling Chinook at MCN this week was nearly 4,800 per day, compared to about 7,650 per day last week. A very small number of yearling Chinook were collected at MCN this week. Daily average collections of pacific lamprey macrophthalmia increased this week, when compared to last week. Daily collections of pacific lamprey macrophthalmia ranged from 0 to 50 per day this week. No pacific lamprey ammocoetes were collected at MCN this week.

Subyearling Chinook passage at LGR increased slightly this week, when compared to last week. The daily average passage index for subyearling Chinook at LGR this week was about 175 per day. Last week's daily average passage index for subyearling Chinook was about 104 per day. Some coho, sockeye/kokanee, and steelhead juveniles were also collected at LGR this week, but in very small numbers. Only one pacific lamprey ammocoete was sampled at LGR this week.

When compared to last week, passage of subyearling Chinook at LGS remained similar, whereas that for LMN increased. The daily average passage

index for subyearling Chinook at LGS this week was about 14 per day, compared to about 10 per day last week. This week's daily average passage index for subyearling Chinook at LMN was about 213 per day, compared to about 29 per day last week. Collections this week included a small number of sockeye, coho, and steelhead juveniles at LGS and yearling Chinook, sockeye, coho, and steelhead at LMN. Only pacific lamprey macrophthalmia were collected at LGS and LMN this week. Mortality of subyearling Chinook at LMN has remained high this week. As with previous weeks, most of the mortalities seen this week are due to Columnaris infections, which tend to increase during this time of year.

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 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:

Fall Chinook began to pass Bonneville Dam on August 1st. Daily counts of fall Chinook at Bonneville Dam ranged from 7,102 to 14,675. The adult fall Chinook count of 225,817 is about 90.5% of the 2011 count of 249,588 and about 83.1% of the 10 year average count of 271,867. The 2012 Bonneville Dam fall Chinook jack count of 55,316 is about 1.5 times greater than the 2011 count of 38,006 and about 1.9 times greater than 10 year average count of 28,621. The 2012 McNary Dam adult fall Chinook count of 72,888 is about 1.4 times greater than the 2011 count and about 1.4 times larger than the 10 year average. The 2012 McNary Dam 2012 jack count of 13,429 is about 1.3 times greater than the 2011 count and 1.3 times greater than the 10 year average count.

During this time of year, there are times when there are higher steelhead counts at upstream projects compared to downstream projects. The higher counts of steelhead at upstream sites compared to downstream sites in any particular year is because some steelhead spend the winter between sites, for instance between Ice Harbor and Lower Granite, and then resume their migration upstream the following year. The summer steelhead run is delineated according to dates of passage past Bonneville Dam and is made up of two components. A-run steelhead are considered those that pass Bonneville Dam from the first of June through August 25th and B-run steelhead pass Bonneville from August 26th through October. The 2012 B-run adult steelhead count at Bonneville of 37,328 is about 58.2% of the 2011 count of 64,173 and 48.1% of the 10 year average count of 77,583.

The Bonneville Dam 2012 steelhead count of 196,268 is about 60% of the 2011 count of 326,615 and about 59.5% of the 10 year average count of 329,937. The 2012 Bonneville wild adult steelhead count of 73,977 is about 62.7% of the 2011 count of 118,041 and about 70.8% of the 10 year average count of 104,490. In the Snake River, this year's Lower Granite steelhead count of 20,697 is about 30.7% of the 2011 count of 67,473 and 50.3% of the 10 year average of 41,135. The 2012 Lower Granite wild adult steelhead count of 8,197 is about 35.2% of the 2011 count of 23,257 and 64.9% of the 10 year average count of 12,634. At Willamette Falls Dam, the 2012 count for steelhead was 29,074, as of September 12th. This year's steelhead count is about 1.06 times greater than the 2011 count of 27,506 and 1.06 times greater than the 10 year average count of 27,434. The 2012 accumulated total adult sockeye count at Bonneville Dam of 515,670, as of 9/13/2012, is about 2.77 times greater than the 2011 count of 185,796 and about 3.94 times greater than the 10 year average count of 130,981. The 2012 McNary Dam adult sockeye count of 364,142 is about 3.2 times greater than the 2011 count of 113,946 and 3.9 times greater than the 10 year average count of 93,284. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River at Ice Harbor Dam, the 2012 adult sockeye count of 453 is 39.7% of the 2011 count of 1,141, while being 1.16 times greater than the 10 year average count of 390. The Lower Granite Dam 2012 adult sockeye count of 461 is about 30.7% of the 2011 count of 1,502 and about 80.5% of the 10 year average count of 573. The 2012 adult coho Bonneville Dam count of 24,929 adults is about 34% of the 2011 count of 73,216 and about 49% of the 10 year average count of 50,869. The 2012 Bonneville Dam coho jack count of 1,482 is about

74.6% of the 2011 count of 1,986 and about 56.6% of the 10 year average count of 2,617. As of September 13th at Bonneville Dam, the adult shad count was 2,432,394. This year's shad count is about 2.56 times greater than the 2011 count of 948,070, while being 82.8% of the 10 year average count of 2,936,990.

Hatchery Releases Last Two Weeks

No releases to report.

Hatchery Releases Next Two Weeks

No releases to report.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/31/2012	109.0	0.1	121.7	0.0	127.3	7.6	134.4	4.3	139.4	0.0	157.6	29.1	154.8	17.4
09/01/2012	81.3	0.1	82.8	0.0	82.8	0.0	84.3	0.0	87.2	0.0	93.7	1.9	93.1	7.5
09/02/2012	74.1	0.1	72.7	0.0	70.0	0.0	65.3	0.0	66.8	0.0	64.2	2.0	61.4	7.5
09/03/2012	89.6	0.1	87.9	0.0	87.4	0.7	86.6	0.7	91.5	0.0	97.9	2.7	94.8	7.7
09/04/2012	117.0	0.1	121.0	0.0	120.3	9.2	119.1	0.8	119.2	0.0	120.6	6.4	108.1	7.6
09/05/2012	92.4	0.1	95.0	0.0	97.7	0.0	102.3	0.0	109.2	0.0	121.5	5.5	121.9	16.4
09/06/2012	86.7	0.1	78.6	0.0	82.9	0.0	84.4	0.0	86.8	0.0	102.7	1.7	101.9	7.0
09/07/2012	101.6	0.1	104.8	0.0	98.5	0.6	96.1	0.0	99.1	0.0	92.5	3.2	85.4	8.6
09/08/2012	80.3	0.1	78.0	0.0	80.3	0.1	83.0	0.0	87.3	0.0	94.3	2.6	92.3	8.0
09/09/2012	47.7	0.1	49.8	0.0	53.1	0.0	52.9	0.0	54.0	0.0	63.8	2.1	66.4	7.0
09/10/2012	74.7	0.1	74.5	0.0	73.8	0.0	75.0	0.0	77.1	0.0	79.2	2.1	75.0	7.1
09/11/2012	86.6	0.1	86.6	0.0	89.2	0.0	90.1	0.0	94.7	0.0	106.6	1.6	99.7	7.4
09/12/2012	79.5	0.3	78.2	0.0	75.9	0.0	75.2	0.0	77.4	0.0	83.7	1.5	83.5	7.5
09/13/2012	93.4	0.1	93.2	0.0	91.6	0.8	90.7	0.9	92.8	0.0	86.6	4.2	79.6	6.5

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/31/2012	8.7	0.0	10.1	9.7	23.6	11.0	27.2	7.4	26.3	13.8	28.5	18.3
09/01/2012	8.5	0.0	9.9	9.7	23.7	0.1	20.0	0.0	18.3	0.0	14.2	0.1
09/02/2012	8.5	0.0	9.6	9.7	24.1	0.0	22.3	0.0	18.5	0.0	16.4	0.0
09/03/2012	8.5	0.0	9.9	10.2	25.4	0.0	12.9	0.0	12.8	0.0	12.5	0.0
09/04/2012	8.5	0.0	9.6	9.9	26.0	0.0	18.1	0.0	20.1	0.0	17.1	0.0
09/05/2012	8.5	0.0	10.5	15.4	23.6	0.0	22.9	0.0	24.3	0.0	24.5	0.0
09/06/2012	8.3	0.0	10.5	15.8	32.3	0.0	33.3	0.0	37.1	0.0	36.5	0.0
09/07/2012	8.2	0.0	9.5	15.0	30.5	0.0	30.5	0.0	30.9	0.0	31.0	0.0
09/08/2012	8.2	0.0	9.1	12.7	27.2	0.0	21.7	0.0	22.2	0.0	23.3	0.0
09/09/2012	5.9	0.0	10.0	13.2	25.0	0.0	26.0	0.0	27.4	0.0	27.6	0.0
09/10/2012	5.9	0.0	9.7	11.5	25.5	0.0	25.8	0.0	28.4	0.0	31.4	0.0
09/11/2012	5.8	0.0	9.8	11.9	24.1	0.0	27.1	0.0	28.5	0.0	27.7	0.0
09/12/2012	4.8	0.0	10.1	14.9	22.6	0.0	24.8	0.0	25.2	0.0	25.0	0.0
09/13/2012	4.8	0.0	---	---	25.0	0.0	23.5	0.0	26.7	0.0	26.5	0.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
08/31/2012	196.9	98.7	175.0	52.6	160.1	63.9	164.6	91.6	19.1	41.5
09/01/2012	141.5	16.4	143.9	1.1	139.2	0.0	148.9	1.8	88.6	46.1
09/02/2012	95.4	0.0	101.2	1.0	102.9	0.0	114.6	1.3	69.5	31.3
09/03/2012	102.6	0.0	94.0	0.9	94.1	0.0	100.8	1.3	45.5	41.5
09/04/2012	114.2	14.3	113.5	0.9	114.3	0.0	119.0	1.3	63.1	43.4
09/05/2012	155.0	58.7	141.3	1.0	135.9	0.0	141.9	10.0	74.0	45.5
09/06/2012	153.2	47.8	152.3	0.9	151.1	0.0	162.6	5.0	94.0	51.2
09/07/2012	110.0	0.0	111.9	0.9	111.3	0.0	123.8	1.4	56.6	53.4
09/08/2012	123.1	10.9	115.3	1.0	113.8	0.0	122.0	1.3	63.0	45.3
09/09/2012	105.9	0.0	92.7	0.9	92.9	0.0	100.2	1.3	43.4	43.1
09/10/2012	104.5	0.0	104.6	1.0	105.2	0.0	110.9	1.3	49.0	48.1
09/11/2012	110.2	10.7	117.0	1.0	114.8	0.0	118.0	1.3	50.9	53.4
09/12/2012	126.2	21.6	125.2	1.0	126.6	0.0	136.4	1.3	64.9	57.7
09/13/2012	102.8	0.0	98.1	0.9	96.8	0.0	108.4	1.3	40.5	54.2

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			#	<u>Boundary</u>			#	<u>Grand Coulee</u>			#	<u>Grand C. Tlwr</u>			#	<u>Chief Joseph</u>					
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>High</u>	<u>High</u>	<u>hr</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>				
8/31	103.8	104.5	105.0	24	111.4	111.8	112.4	23	109.4	110.3	110.7	24	107.0	108.5	109.6	23	109.8	110.0	110.3	24		
9/1	103.8	104.1	104.6	24	110.5	111.1	111.6	23	109.6	110.0	110.3	24	106.2	106.9	107.3	23	109.1	109.4	109.8	24		
9/2	103.3	103.5	103.7	24	106.8	107.0	107.4	24	109.6	109.8	110.0	24	106.2	107.0	107.9	21	108.2	108.5	108.7	24		
9/3	102.9	103.5	104.0	23	106.4	106.7	107.0	24	108.5	109.0	109.2	24	106.8	107.6	108.6	21	108.3	108.8	108.9	24		
9/4	103.2	103.6	103.9	24	106.0	106.3	106.6	23	108.5	109.2	109.5	24	107.4	108.3	108.9	22	108.6	109.3	109.7	24		
9/5	102.9	103.2	103.4	23	105.9	106.1	106.4	19	109.4	109.8	110.2	24	108.6	109.3	109.8	19	109.9	110.2	110.6	24		
9/6	103.3	103.6	103.9	24	105.7	105.8	106.2	20	108.0	108.6	109.1	24	108.1	108.5	109.2	20	108.8	109.1	109.2	24		
9/7	101.8	102.2	102.5	24	105.5	106.0	106.4	22	107.1	107.7	108.3	24	107.4	108.0	108.6	22	108.1	108.3	108.5	24		
9/8	102.3	102.8	103.2	24	106.3	106.9	107.7	22	107.0	107.4	107.9	24	107.1	108.0	109.1	22	108.9	109.3	109.7	24		
9/9	102.7	103.1	103.4	23	106.7	107.1	108.6	23	107.8	108.2	108.6	24	109.0	110.2	113.2	23	109.6	110.2	110.7	24		
9/10	102.7	103.0	103.2	24	105.8	106.1	106.5	21	108.8	109.2	109.6	24	108.5	109.0	109.9	21	108.4	108.7	108.8	24		
9/11	102.6	103.0	103.5	24	104.5	104.8	105.1	21	108.3	108.4	108.8	24	106.7	107.0	107.4	21	106.9	107.0	107.3	24		
9/12	102.2	102.6	103.0	24	104.2	104.9	105.6	22	105.5	106.0	106.7	24	105.9	106.5	107.8	22	106.4	106.5	106.9	24		
9/13	101.2	101.7	102.0	24	104.9	105.5	106.0	23	104.8	105.0	105.2	24	106.1	106.7	107.4	23	107.1	107.6	107.9	24		

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			#	<u>Wells</u>			#	<u>Wells Dwnstrm</u>			#	<u>Rocky Reach</u>			#	<u>Rocky R. Tlwr</u>					
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>High</u>	<u>High</u>	<u>hr</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>				
8/31	108.9	109.3	109.8	24	109.2	109.7	110.4	24	111.1	113.0	117.4	24	109.8	110.2	110.6	24	109.7	110.6	112.6	24		
9/1	108.0	108.5	108.7	24	108.1	108.6	109.1	24	107.7	108.3	108.7	24	110.6	110.8	111.1	24	109.1	109.3	109.6	24		
9/2	107.1	107.5	107.8	24	108.1	108.7	109.3	24	107.7	108.4	108.7	24	109.7	110.3	110.8	24	108.2	108.6	109.2	24		
9/3	107.2	107.7	108.2	24	108.2	108.9	109.6	24	108.2	108.9	109.6	24	106.6	107.1	107.9	24	106.0	106.4	107.1	24		
9/4	107.7	108.4	108.6	24	107.7	108.3	108.7	24	109.2	111.3	117.0	24	106.5	107.0	107.3	24	105.9	106.5	109.3	24		
9/5	108.9	109.4	109.7	24	108.8	109.8	110.4	24	109.2	110.5	115.9	24	107.4	107.8	108.1	24	106.7	107.3	108.6	24		
9/6	107.8	108.2	108.5	24	108.2	109.0	109.5	24	107.9	108.7	109.1	24	107.8	108.6	109.6	24	106.7	107.3	107.9	24		
9/7	106.9	107.2	107.3	24	108.2	108.8	109.2	24	107.9	108.7	109.1	24	108.2	108.6	109.4	24	107.0	107.4	107.6	24		
9/8	107.9	108.4	108.7	24	108.6	109.5	110.0	24	108.5	109.2	109.7	24	107.2	107.8	108.3	24	106.1	106.7	107.3	24		
9/9	109.2	109.9	110.6	24	108.5	108.9	109.3	24	108.2	108.8	109.6	24	108.1	108.4	108.8	24	106.4	106.8	107.1	24		
9/10	107.8	108.4	108.6	24	107.0	107.4	107.8	24	106.5	106.9	107.3	24	107.0	107.4	107.7	24	105.0	106.0	106.5	24		
9/11	105.7	106.1	106.3	24	105.5	105.9	106.2	24	105.2	105.8	106.2	24	105.0	105.5	106.2	24	104.1	104.6	104.7	24		
9/12	105.1	105.5	105.8	24	104.9	105.6	106.0	24	104.4	105.3	105.9	24	102.7	103.0	103.6	24	101.8	102.3	102.7	24		
9/13	106.0	106.5	106.8	24	105.8	105.8	107.0	9	104.4	104.4	105.3	9	103.5	104.4	104.8	24	102.7	103.8	104.4	24		

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			#	<u>Rock I. Tlwr</u>			#	<u>Wanapum</u>			#	<u>Wanapum Tlwr</u>			#	<u>Priest Rapids</u>					
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>High</u>	<u>High</u>	<u>hr</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>				
8/31	108.6	109.8	110.4	24	108.6	109.8	110.4	24	107.3	107.8	108.3	24	109.3	111.3	121.2	24	108.5	110.7	114.7	24		
9/1	108.2	109.2	109.7	24	107.2	108.7	109.4	24	104.7	105.5	106.9	24	105.7	106.0	106.8	24	107.7	108.4	110.2	24		
9/2	109.2	109.6	109.9	24	106.2	108.8	109.4	24	103.4	103.7	104.0	24	105.1	105.6	106.7	24	105.0	105.2	105.8	24		
9/3	107.5	108.1	109.2	24	107.2	107.9	109.1	24	103.5	104.3	105.1	24	104.9	105.4	105.7	24	104.5	104.7	104.9	24		
9/4	105.8	106.5	106.7	24	105.9	106.4	106.7	24	105.3	106.4	107.1	24	106.7	108.4	120.2	24	104.1	104.3	104.6	24		
9/5	106.9	107.8	108.2	24	106.1	107.7	108.1	24	107.3	107.8	108.1	24	108.7	109.6	115.0	24	108.0	111.6	114.2	24		
9/6	106.4	106.9	107.4	24	103.0	105.7	107.0	24	106.0	106.4	107.0	24	106.6	106.9	107.1	24	108.4	109.0	110.0	24		
9/7	107.5	108.4	109.2	24	105.6	108.3	109.2	24	105.0	105.8	106.4	24	105.8	106.2	108.5	24	106.8	107.0	107.4	24		
9/8	106.9	107.3	107.6	24	106.8	107.3	107.7	24	105.8	106.4	106.9	24	106.1	106.8	107.6	24	106.6	106.9	107.3	24		
9/9	106.9	107.1	107.4	24	105.4	106.8	107.4	24	103.8	104.7	106.6	24	106.1	106.5	106.7	24	106.0	106.6	107.1	24		
9/10	105.9	106.1	106.3	24	105.7	106.1	106.2	24	100.4	101.0	101.4	24	104.3	104.7	104.9	24	103.1	103.5	104.2	24		
9/11	104.8	105.1	105.3	24	104.3	105.1	105.3	24	101.7	102.6	102.8	24	103.1	103.2	103.4	24	101.3	101.5	102.1	24		
9/12	103.2	103.5	104.4	24	100.5	101.2	103.0	24	101.8	102.2	102.6	24	102.9	103.1	103.3	24	100.7	100.8	100.9	24		
9/13	102.7	103.3	103.9	24	102.1	103.4	104.0	24	101.2	102.5	103.3	24	103.7	104.5	112.6	24	101.0	101.4	101.6	24		

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

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwrtr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/31	109.3	110.5	113.1	24	105.4	106.0	106.5	24	101.0	101.3	101.7	24	102.2	103.3	104.2	24	101.8	103.1	104.6	24
9/1	106.8	107.3	108.4	24	105.7	106.8	107.6	24	100.5	100.7	101.0	24	101.6	102.6	103.6	24	101.0	102.2	103.5	24
9/2	105.5	105.9	106.3	24	105.0	105.5	106.5	24	100.1	100.4	100.8	24	101.4	102.2	103.2	21	101.0	102.3	103.5	24
9/3	105.7	106.2	106.6	24	104.2	104.8	105.2	24	100.1	100.5	100.9	24	101.3	102.3	103.3	22	101.3	102.6	103.9	24
9/4	105.6	106.1	106.3	24	104.0	104.9	105.3	24	100.0	100.2	100.5	24	101.1	102.0	103.0	22	101.4	102.7	104.0	24
9/5	109.7	111.5	113.0	24	104.8	105.9	106.2	24	100.3	100.7	101.0	24	101.2	102.4	103.3	24	101.8	103.1	104.5	24
9/6	108.2	108.5	109.2	24	105.7	106.2	106.5	24	100.3	100.5	100.9	24	101.2	102.1	102.9	22	101.1	101.8	102.6	24
9/7	107.3	107.9	108.2	24	105.4	106.1	106.5	24	99.7	99.9	100.3	24	100.7	101.6	102.7	23	101.2	102.4	103.6	24
9/8	107.5	108.0	108.2	24	105.6	106.5	106.8	24	100.0	100.5	100.8	24	100.9	102.0	103.1	23	101.9	103.2	104.4	24
9/9	106.7	107.3	107.8	24	105.3	105.8	106.2	24	103.3	103.8	104.3	24	102.7	104.1	105.3	24	101.9	102.7	104.0	24
9/10	104.6	104.9	105.1	24	102.7	103.2	103.7	24	102.9	103.3	103.7	24	102.3	103.3	104.3	24	100.8	101.7	102.9	24
9/11	103.3	103.7	103.9	24	101.4	102.2	102.6	24	102.3	102.7	103.1	24	101.7	102.9	104.1	24	100.6	101.8	103.1	24
9/12	103.7	104.2	104.4	24	101.6	102.2	102.6	24	99.1	99.7	101.9	24	99.3	100.2	101.0	21	100.9	102.0	103.2	24
9/13	104.1	104.7	104.9	24	102.4	103.6	104.0	24	99.0	99.6	100.1	24	98.9	99.9	101.2	22	101.5	102.6	103.7	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwrtr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/31	102.3	104.0	105.5	24	100.1	100.6	100.9	24	114.1	114.6	115.0	24	105.6	105.7	105.9	24	106.1	107.1	108.7	24
9/1	101.9	103.6	105.1	24	100.0	100.1	100.4	24	100.4	101.5	111.9	24	107.1	107.7	107.9	24	103.8	104.6	105.1	24
9/2	101.7	103.4	105.0	23	99.4	99.5	99.7	24	99.0	99.3	99.6	24	107.0	107.3	107.8	24	103.5	104.4	105.0	24
9/3	101.9	103.7	105.2	23	99.2	99.6	99.9	24	99.3	99.8	99.9	24	106.3	106.4	106.6	24	102.7	103.2	103.9	24
9/4	101.8	103.5	104.9	24	99.0	99.2	99.6	24	99.1	99.4	100.2	24	105.5	105.8	106.2	24	102.8	103.6	104.0	24
9/5	102.0	103.9	105.4	24	99.8	100.0	100.4	24	99.9	100.6	101.8	24	106.5	106.9	107.4	24	103.8	104.5	105.2	24
9/6	101.8	103.4	104.8	24	99.8	100.0	100.2	24	99.6	100.0	100.2	24	106.4	106.8	107.3	24	104.1	104.8	105.6	24
9/7	101.6	103.3	104.9	23	99.5	99.7	100.0	24	98.9	99.3	99.4	24	105.9	106.1	106.4	24	101.2	101.9	103.2	24
9/8	102.0	103.9	105.3	23	100.1	100.5	102.6	24	100.5	101.6	102.1	24	105.7	106.1	106.4	24	97.9	98.6	99.3	24
9/9	102.1	103.5	104.9	24	100.8	101.1	102.4	24	100.6	101.1	101.5	24	104.4	105.5	106.3	24	97.2	98.1	98.5	24
9/10	101.2	102.8	104.1	24	100.5	100.6	100.9	24	99.2	99.5	99.6	24	99.7	100.1	101.1	24	94.4	95.1	95.6	24
9/11	101.1	102.9	104.5	24	99.3	99.5	99.9	24	98.3	98.7	99.0	24	99.3	99.3	99.5	10	96.2	99.0	100.3	23
9/12	101.1	103.0	104.7	24	98.6	98.7	99.0	24	97.8	98.3	98.6	24	---	---	---	0	98.9	99.2	99.4	24
9/13	100.9	102.8	104.2	24	98.9	99.4	100.6	24	98.1	98.9	99.3	24	---	---	---	0	98.1	98.4	98.6	24

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/31	105.5	105.8	106.0	24	114.4	116.0	116.4	24	109.2	109.4	109.7	24	111.2	112.2	112.9	24	---	---	---	0
9/1	105.0	105.3	105.6	24	105.6	106.8	115.0	24	108.5	108.7	109.1	24	108.7	109.9	111.6	24	---	---	---	0
9/2	104.9	105.0	105.2	24	104.1	104.6	105.1	24	108.5	108.6	108.7	24	107.3	108.1	108.7	24	---	---	---	0
9/3	104.4	104.6	104.9	24	104.3	104.9	105.8	24	108.4	108.5	108.7	24	107.5	108.5	109.3	24	---	---	---	0
9/4	103.9	104.1	104.3	24	104.3	105.3	108.5	24	108.1	108.2	108.4	24	107.9	108.8	109.7	24	---	---	---	0
9/5	104.3	104.5	104.6	24	104.8	105.4	106.5	24	109.3	109.8	110.0	24	109.1	110.0	110.5	24	---	---	---	0
9/6	104.7	104.8	104.9	24	104.7	105.1	106.4	24	109.2	109.4	109.6	24	109.0	109.4	109.8	24	---	---	---	0
9/7	103.9	104.0	104.2	24	103.9	104.5	105.8	24	107.9	108.1	108.5	24	107.9	108.3	108.7	24	---	---	---	0
9/8	104.2	104.5	104.8	24	104.0	104.8	105.3	24	106.7	106.9	107.5	24	106.5	107.1	107.8	24	---	---	---	0
9/9	104.4	104.6	104.7	24	104.4	104.9	105.1	24	105.4	106.0	106.4	24	105.4	105.9	106.5	24	---	---	---	0
9/10	104.6	104.8	105.0	24	104.2	104.7	105.7	24	104.5	104.8	105.1	24	104.0	104.3	104.7	24	---	---	---	0
9/11	103.2	103.4	104.1	24	102.9	103.2	103.7	24	103.0	103.4	103.8	24	102.9	103.3	103.7	24	---	---	---	0
9/12	101.9	102.3	102.6	24	101.5	102.1	103.1	24	101.8	102.0	102.1	24	101.7	102.2	102.7	24	---	---	---	0
9/13	101.2	101.6	101.8	24	100.5	101.1	101.5	24	101.3	101.4	101.6	24	101.4	102.1	102.6	24	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>AVG</u>	<u>High</u>	
8/31	107.0	107.5	108.1	24	116.2	116.5	116.8	24	105.3	105.5	105.7	24	114.3	115.6	116.1	24	107.6	108.1	108.4	24
9/1	105.5	105.6	105.8	24	108.8	110.4	114.1	24	104.5	104.8	105.2	24	104.6	105.1	108.6	24	105.4	105.9	106.6	24
9/2	104.9	105.2	105.5	24	104.6	104.8	105.2	24	103.8	104.0	104.1	24	103.6	103.9	104.2	24	103.2	103.6	104.6	24
9/3	104.4	104.7	104.9	24	104.1	104.3	104.5	24	103.8	104.1	104.4	24	103.6	104.1	104.4	24	102.0	102.3	102.4	24
9/4	104.3	104.8	105.6	24	106.6	109.4	109.9	24	103.9	104.4	104.8	24	103.9	104.3	105.0	24	102.2	102.6	102.9	24
9/5	105.6	106.2	108.0	24	114.2	117.4	119.9	24	105.1	105.5	105.9	24	104.8	105.4	105.9	24	103.6	104.3	104.7	24
9/6	104.7	105.4	106.3	24	112.9	113.8	114.8	24	106.5	107.7	108.4	24	105.4	105.9	106.2	24	103.9	104.1	104.2	24
9/7	103.7	104.4	105.8	24	103.8	104.2	105.8	24	106.9	107.6	108.2	24	105.8	106.0	106.5	24	104.1	104.6	104.9	24
9/8	104.8	105.4	106.7	24	106.3	108.7	109.7	24	106.9	107.3	107.7	22	106.2	106.5	107.0	22	105.2	105.8	106.0	24
9/9	105.0	105.4	105.7	24	104.5	105.0	105.6	24	106.1	106.6	107.1	24	105.1	105.6	106.4	24	104.7	105.1	105.8	24
9/10	103.8	104.1	104.4	24	103.2	103.4	103.6	24	104.1	104.4	104.9	24	103.3	103.6	103.8	24	102.5	103.0	103.7	24
9/11	102.7	102.8	103.0	24	104.8	107.3	109.6	24	102.7	102.9	103.2	24	101.8	102.3	102.6	24	101.0	101.2	101.4	24
9/12	101.6	102.1	102.6	24	107.3	108.6	109.8	24	101.6	102.0	102.8	23	100.9	101.3	101.6	23	101.0	101.2	101.4	23
9/13	100.6	101.2	101.7	24	100.5	100.9	101.9	24	101.2	101.7	102.2	24	100.8	101.3	101.7	24	101.1	101.4	101.7	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>CamasWashougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
8/31	114.2	114.8	115.6	24	108.8	109.1	109.3	24	115.8	117.3	118.7	24	112.7	114.3	115.7	24	117.6	119.8	121.5	24
9/1	106.9	108.8	113.1	24	106.5	106.6	107.1	24	111.0	113.1	116.7	24	110.8	111.9	113.2	24	111.4	113.5	120.7	24
9/2	104.0	104.4	104.9	24	105.6	105.8	105.9	24	108.8	109.4	110.1	24	108.2	109.5	113.0	24	108.7	109.6	111.5	24
9/3	102.8	103.2	103.3	24	105.3	105.4	105.5	24	109.9	110.1	110.3	24	171.3	173.3	174.8	24	109.3	110.9	112.6	24
9/4	102.8	103.2	103.6	24	103.3	103.7	104.6	24	108.1	109.5	110.1	24	170.4	172.6	175.3	24	108.5	110.2	111.3	24
9/5	103.8	104.6	104.9	24	103.6	104.0	104.2	24	107.7	108.5	108.8	24	166.8	166.8	172.6	9	110.1	111.6	113.5	24
9/6	104.0	104.4	104.7	24	103.2	103.4	103.8	24	106.2	106.4	106.6	24	---	---	---	0	108.8	109.6	110.5	24
9/7	104.3	105.1	105.7	24	102.6	102.9	103.0	24	106.6	107.8	108.3	24	---	---	---	0	107.7	108.7	110.0	23
9/8	105.1	105.7	106.1	24	102.9	103.0	103.2	24	107.0	107.8	109.1	24	---	---	---	0	107.2	108.2	108.9	24
9/9	104.6	104.9	105.2	24	102.4	102.6	102.9	24	106.3	107.6	108.9	24	---	---	---	0	106.7	107.8	109.2	24
9/10	102.6	103.1	103.6	24	101.3	101.7	102.1	24	103.7	104.8	105.4	24	---	---	---	0	106.5	107.5	108.4	23
9/11	101.4	101.7	102.1	24	100.6	100.8	100.9	24	105.1	105.5	106.7	24	---	---	---	0	105.7	107.0	108.6	24
9/12	101.4	101.8	102.4	23	100.7	100.9	101.2	23	104.6	105.0	105.6	24	---	---	---	0	105.0	105.7	106.1	24
9/13	101.6	102.2	102.6	24	100.7	100.9	101.1	24	104.1	104.7	105.1	24	---	---	---	0	105.0	105.4	105.8	18

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/31/2012	*	---	---	---	---	0	0	2	0	0	0
09/01/2012	*	---	---	---	---	0	0	0	---	0	0
09/02/2012	*	---	---	---	---	0	0	0	---	27	0
09/03/2012	*	---	---	---	---	0	0	0	---	0	0
09/04/2012	*	---	---	---	---	0	0	0	---	0	0
09/05/2012	*	---	---	---	---	0	0	0	---	---	0
09/06/2012	*	---	---	---	---	0	0	0	---	---	0
09/07/2012	*	---	---	---	---	0	0	0	---	0	0
09/08/2012	*	---	---	---	---	0	0	0	---	25	0
09/09/2012	*	---	---	---	---	0	0	2	---	0	0
09/10/2012	*	---	---	---	---	0	0	0	---	0	0
09/11/2012	*	---	---	---	---	0	0	2	---	0	0
09/12/2012	*	---	---	---	---	0	0	0	---	0	0
09/13/2012	*	---	---	---	---	0	0	1	---	0	---
09/14/2012	*	---	---	---	---	---	0	---	---	---	---
Total:		0	0	0	0	0	7	0	52	0	0
# Days:		0	0	0	0	14	15	14	1	12	15
Average:		0	0	0	0	0	0	1	0	4	0
YTD		58,098	10,922	26,417	13,494	4,042,662	2,266,021	754,595	25,797	2,179,425	4,290,562

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/31/2012	*	---	---	---	---	232	31	26	46	8,705	9,094
09/01/2012	*	---	---	---	---	138	17	23	---	14,294	7,045
09/02/2012	*	---	---	---	---	68	10	13	---	7,405	8,664
09/03/2012	*	---	---	---	---	55	4	35	---	3,475	5,191
09/04/2012	*	---	---	---	---	72	1	20	---	700	4,269
09/05/2012	*	---	---	---	---	90	6	33	---	---	3,713
09/06/2012	*	---	---	---	---	74	5	56	---	---	2,658
09/07/2012	*	---	---	---	---	78	20	116	---	9,454	2,868
09/08/2012	*	---	---	---	---	64	11	115	---	3,050	4,171
09/09/2012	*	---	---	---	---	125	15	247	---	3,639	3,208
09/10/2012	*	---	---	---	---	284	20	307	---	4,700	3,094
09/11/2012	*	---	---	---	---	251	19	459	---	3,350	5,317
09/12/2012	*	---	---	---	---	230	6	153	---	6,426	3,632
09/13/2012	*	---	---	---	---	203	7	92	---	2,763	1,996
09/14/2012	*	---	---	---	---	---	2	---	---	---	1,141
Total:		0	0	0	0	1,964	174	1,695	46	67,961	66,061
# Days:		0	0	0	0	14	15	14	1	12	15
Average:		0	0	0	0	140	12	121	46	5,663	4,404
YTD		0	5	67	327	1,064,631	1,049,200	377,522	28,725	3,278,953	3,973,471

Two-Week Summary of Passage Indices

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/31/2012	*	---	---	---	---	2	0	0	0	0	0	
09/01/2012	*	---	---	---	---	0	0	0	---	0	0	
09/02/2012	*	---	---	---	---	0	0	0	---	0	0	
09/03/2012	*	---	---	---	---	1	0	0	---	0	0	
09/04/2012	*	---	---	---	---	2	0	0	---	0	0	
09/05/2012	*	---	---	---	---	0	0	0	---	---	0	
09/06/2012	*	---	---	---	---	1	0	0	---	---	0	
09/07/2012	*	---	---	---	---	1	0	0	---	0	0	
09/08/2012	*	---	---	---	---	1	1	0	---	0	0	
09/09/2012	*	---	---	---	---	0	0	0	---	0	0	
09/10/2012	*	---	---	---	---	1	1	0	---	0	0	
09/11/2012	*	---	---	---	---	1	0	1	---	0	0	
09/12/2012	*	---	---	---	---	1	0	0	---	0	0	
09/13/2012		---	---	---	---	1	0	0	---	0	---	
09/14/2012		---	---	---	---	---	0	---	---	0	---	
Total:		0	0	0	0	12	2	1	0	0	0	
# Days:		0	0	0	0	14	15	14	1	12	13	
Average:		0	0	0	0	1	0	0	0	0	0	
YTD		0	0	0	80	69,825	78,639	19,964	49,618	145,764	287,512	689,839

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
08/31/2012	*	---	---	---	---	0	0	0	1	0	0	
09/01/2012	*	---	---	---	---	0	0	0	---	0	0	
09/02/2012	*	---	---	---	---	0	1	0	---	0	0	
09/03/2012	*	---	---	---	---	0	0	0	---	0	0	
09/04/2012	*	---	---	---	---	1	1	0	---	0	0	
09/05/2012	*	---	---	---	---	4	1	0	---	---	0	
09/06/2012	*	---	---	---	---	1	1	0	---	---	0	
09/07/2012	*	---	---	---	---	0	1	0	---	0	0	
09/08/2012	*	---	---	---	---	0	1	0	---	0	0	
09/09/2012	*	---	---	---	---	1	0	0	---	0	0	
09/10/2012	*	---	---	---	---	0	1	1	---	0	0	
09/11/2012	*	---	---	---	---	0	1	1	---	0	0	
09/12/2012	*	---	---	---	---	1	0	1	---	0	0	
09/13/2012		---	---	---	---	1	0	0	---	0	---	
09/14/2012		---	---	---	---	---	0	---	---	0	---	
Total:		0	0	0	0	9	8	3	1	0	0	
# Days:		0	0	0	0	14	15	14	1	12	13	
Average:		0	0	0	0	1	1	0	1	0	0	
YTD		2,722	21,616	2,065	2,311	3,539,003	1,490,314	611,062	17,329	543,078	2,834,971	296,204

Two-Week Summary of Passage Indices

COMBINED SOCKEYE												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
8/31/2012	*	---	---	---	6	3	0	7	0	0	0	
9/01/2012	*	---	---	---	11	3	0	---	0	66	0	
9/02/2012	*	---	---	---	5	1	1	---	27	0	0	
9/03/2012	*	---	---	---	6	4	0	---	0	0	0	
9/04/2012	*	---	---	---	2	3	0	---	0	25	0	
9/05/2012	*	---	---	---	4	2	0	---	---	0	11	
9/06/2012	*	---	---	---	1	0	0	---	---	20	0	
9/07/2012	*	---	---	---	1	0	0	---	0	0	0	
9/08/2012	*	---	---	---	4	5	0	---	0	0	0	
9/09/2012	*	---	---	---	3	3	0	---	0	20	0	
9/10/2012	*	---	---	---	1	0	1	---	0	0	0	
9/11/2012	*	---	---	---	1	7	0	---	0	17	0	
9/12/2012	*	---	---	---	1	7	0	---	0	0	0	
9/13/2012		---	---	---	2	1	2	---	0	0	---	
9/14/2012		---	---	---	---	1	---	---	---	0	---	
<hr/>												
total:		0	0	0	48	40	4	7	27	148	11	
Days:		0	0	0	14	15	14	1	12	15	13	
verage:		0	0	0	3	3	0	7	2	10	1	
TD		5	0	0	475	43,414	37,224	18,249	46,856	1,135,846	851,019	778,777

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR† (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
8/31/2012	*	---	---	---	0	5	0	0	25	100	0
9/01/2012	*	---	---	---	0	12	0	---	25	25	4
9/02/2012	*	---	---	---	0	8	0	---	25	33	0
9/03/2012	*	---	---	---	0	4	0	---	0	67	0
9/04/2012	*	---	---	---	0	2	0	---	0	25	0
9/05/2012	*	---	---	---	0	3	0	---	---	0	4
9/06/2012	*	---	---	---	2	5	0	---	---	20	0
9/07/2012	*	---	---	---	0	0	0	---	25	20	0
9/08/2012	*	---	---	---	0	2	0	---	0	0	0
9/09/2012	*	---	---	---	0	3	0	---	25	20	12
9/10/2012	*	---	---	---	1	0	0	---	50	20	0
9/11/2012	*	---	---	---	0	7	1	---	50	83	4
9/12/2012	*	---	---	---	0	2	0	---	50	0	0
9/13/2012		---	---	---	0	9	0	---	50	17	---
9/14/2012		---	---	---	---	3	---	---	---	29	---
<hr/>											
total:		0	0	0	3	65	1	0	325	459	24
Days:		0	0	0	14	15	14	1	12	15	13
verage:		0	0	0	0	4	0	0	27	31	2
TD		6	0	0	6,997	6,497	2,210	135	121,562	502,941	31,903

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 macrophthalmia, and unidentified lamprey species.

† 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 = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

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.

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

9/14/12 9:50 AM

		08/31/12	TO	09/14/12				
		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	1,804			11	9	41	1,865
	Sum of NumberBarged	0			0	0	0	0
	Sum of NumberBypassed	461			0	0	0	461
	Sum of Numbertrucked	1,324			11	8	26	1,369
	Sum of SampleMorts	19			0	1	14	34
	Sum of FacilityMorts	0			0	0	1	1
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	19			0	1	15	35
LGS	Sum of NumberCollected	158			2	8	37	205
	Sum of NumberBarged	0			0	0	0	0
	Sum of NumberBypassed	0			0	0	0	0
	Sum of Numbertrucked	156			2	8	34	200
	Sum of SampleMorts	2			0	0	1	3
	Sum of FacilityMorts	0			0	0	2	2
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	2			0	0	3	5
LMN	Sum of NumberCollected	1,671		6	1	3	4	1,685
	Sum of NumberBarged	0		0	0	0	0	0
	Sum of NumberBypassed	0		0	0	3	0	3
	Sum of Numbertrucked	1,406		6	1	0	4	1,417
	Sum of SampleMorts	265		0	0	0	0	265
	Sum of FacilityMorts	0		0	0	0	0	0
	Sum of ResearchMorts	0		0	0	0	0	0
	Sum of TotalProjectMorts	265		0	0	0	0	265
MCN	Sum of NumberCollected	52,950		50			25	53,025
	Sum of NumberBarged	0		0			0	0
	Sum of NumberBypassed	3,444		0			0	3,444
	Sum of Numbertrucked	48,906		49			25	48,980
	Sum of SampleMorts	17		0			0	17
	Sum of FacilityMorts	583		1			0	584
	Sum of ResearchMorts	0		0			0	0
	Sum of TotalProjectMorts	600		1			0	601
Total Sum of NumberCollected		56,583		56	14	20	107	56,780
Total Sum of NumberBarged		0		0	0	0	0	0
Total Sum of NumberBypassed		3,905		0	0	3	0	3,908
Total Sum of Numbertrucked		51,792		55	14	16	89	51,966
Total Sum of SampleMorts		303		0	0	1	15	319
Total Sum of FacilityMorts		583		1	0	0	3	587
Total Sum of ResearchMorts		0		0	0	0	0	0
Total Sum of TotalProjectMorts		886		1	0	1	18	906

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/14/12 9:50 AM

TO: 09/14/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	670,285	2,693,485	47,669	30,652	2,353,380	5,795,471
	Sum of NumberBarged	652,812	989,041	39,447	29,087	949,611	2,659,998
	Sum of NumberBypassed	11,916	1,702,758	8,165	1,429	1,403,473	3,127,741
	Sum of NumberTrucked	3,329	2	20	41	17	3,409
	Sum of SampleMorts	408	180	4	31	62	685
	Sum of FacilityMorts	1,820	1,429	33	64	182	3,528
	Sum of ResearchMorts	0	75	0	0	35	110
	Sum of TotalProjectMorts	2,228	1,684	37	95	279	4,323
LGS	Sum of NumberCollected	662,967	1,498,505	53,315	25,782	971,266	3,211,835
	Sum of NumberBarged	659,750	1,109,509	51,706	25,027	683,534	2,529,526
	Sum of NumberBypassed	121	388,249	1,601	691	287,507	678,169
	Sum of NumberTrucked	2,185	1	6	53	37	2,282
	Sum of SampleMorts	159	30	0	3	15	207
	Sum of FacilityMorts	752	716	2	8	173	1,651
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	911	746	2	11	188	1,858
LMN	Sum of NumberCollected	251,399	543,404	14,387	13,401	438,641	1,261,232
	Sum of NumberBarged	235,990	531,284	14,356	13,372	428,327	1,223,329
	Sum of NumberBypassed	12,941	11,582	19	13	9,830	34,385
	Sum of NumberTrucked	1,540	6	2	5	0	1,553
	Sum of SampleMorts	390	60	0	3	37	490
	Sum of FacilityMorts	538	472	10	8	150	1,178
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	928	532	10	11	187	1,668
MCN	Sum of NumberCollected	1,370,290	1,040,187	72,876	555,759	247,889	3,287,001
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,178,183	1,039,959	72,876	555,534	247,862	3,094,414
	Sum of NumberTrucked	190,368	49	0	149	0	190,566
	Sum of SampleMorts	201	43	0	28	10	282
	Sum of FacilityMorts	1,538	136	0	48	17	1,739
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,739	179	0	76	27	2,021
Total Sum of NumberCollected		2,954,941	5,775,581	188,247	625,594	4,011,176	13,555,539
Total Sum of NumberBarged		1,548,552	2,629,834	105,509	67,486	2,061,472	6,412,853
Total Sum of NumberBypassed		1,203,161	3,142,548	82,661	557,667	1,948,672	6,934,709
Total Sum of NumberTrucked		197,422	58	28	248	54	197,810
Total Sum of SampleMorts		1,158	313	4	65	124	1,664
Total Sum of FacilityMorts		4,648	2,753	45	128	522	8,096
Total Sum of ResearchMorts		0	75	0	0	35	110
Total Sum of TotalProjectMorts		5,806	3,141	49	193	681	9,870

Cumulative Adult Passage at Mainstem Dams Through: 09/14

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	09/13	158075	7591	167097	50945	152015	20110	81663	12235	108279	51451	92437	17241	225817	55316	249588	38006	271867	28621
TDA	09/13	117071	7173	124164	40146	112195	16495	69222	10392	81123	39845	79218	13523	121201	39244	113982	25130	123667	19901
JDA	09/13	107655	6755	103401	39823	94492	15370	60814	10415	75375	35544	72273	14191	83485	32261	78062	18904	80440	16059
MCN	09/13	102763	4787	101246	31750	86252	13687	64428	5104	74621	28165	68072	11090	72888	13429	52223	10038	53072	10217
IHR	09/13	71957	2905	69306	18161	60108	8392	14182	1481	26758	12378	18923	4410	19765	7293	13346	4754	10572	4485
LMN	09/13	68608	2891	69832	18094	58469	7193	15150	1611	31176	13730	19948	4267	15423	8314	9996	2925	8588	3667
LGS	09/13	68247	3449	67321	23492	54053	8198	14748	1613	42211	18214	18393	5041	12937	5960	8912	2294	7159	2370
LGR	09/12	66366	3525	59342	22063	54084	9639	13163	1717	36764	16425	17083	5652	11375	4243	7024	1946	5241	2252
PRD	09/11	19495	1015	15246	6030	16630	1325	50667	1994	50865	4223	58386	2526	8310	3421	8491	1979	10306	2082
RIS	09/09	19881	800	13089	8394	14658	2236	52184	3343	44432	14299	54861	5446	3180	2177	3481	2340	3716	1071
RRH	09/09	6641	459	6989	3491	5643	822	45528	2775	38861	8131	42042	4317	2530	1156	3252	1576	2806	789
WEL	09/12	5311	700	4153	3969	4833	817	38588	3271	29821	8465	31187	2517	1542	382	1290	815	1662	598
WFA	09/12	35899	1314	43748	1399	50770	1108	-	-	-	-	-	-	522	120	351	111	309	35

DAM	Coho						Sockeye			Steelhead						
	2012		2011		10-Yr Avg.		2012	2011	10-Yr Avg.	2012	2011	10-Yr Avg.	Wild 2012	Wild 2011	Wild 10-Yr	
	Adult	Jack	Adult	Jack	Adult	Jack										
BON	24929	1482	73216	1986	50869	2617	515670	185796	130981	196268	326615	329937	73988	118041	104490	
TDA	15871	1797	20648	2151	11122	1521	410099	138293	109313	140018	221818	189752	53343	83765	62403	
JDA	15044	2348	12114	1223	7726	1239	394162	143605	113830	93828	163846	154599	38690	64912	50396	
MCN	5721	399	6288	761	3024	402	364142	113946	93284	77824	140693	108976	29107	50018	34468	
IHR	439	32	513	133	219	22	453	1141	390	37134	95382	69471	10190	26104	17841	
LMN	212	35	180	32	118	8	486	1395	486	31789	82536	59761	10021	24385	16778	
LGS	182	66	166	93	76	17	451	1435	467	23305	69160	45073	8619	22441	12903	
LGR	38	1	38	4	7	1	461	1502	573	20697	67473	41135	8197	23257	12634	
PRD	1674	437	522	155	292	44	408258	145070	118727	11636	14707	13292	-	-	-	
RIS	79	2	150	31	70	27	410607	146110	115768	9376	11953	10540	4230	5914	5293	
RRH	4	1	16	1	3	1	363286	132096	94735	7609	8359	7652	3399	3972	3535	
WEL	12	0	7	0	0	0	326071	111507	92048	5350	6125	5506	2455	2615	2503	
WFA	153	319	165	272	520	100	-	-	-	29074	27506	27434	-	-	-	

PRD and WFA do 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: 09/14/12

BON counts from January 1, 2012 to March 14, 2012 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2012	12	1	1,471	497
2011	47	0	1,370	580