



Fish Passage Center

Weekly Report #12 - 26

September 7, 2012

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 1% and 33% of average at individual sub-basins over August. Precipitation above The Dalles has been 21% of average for August 1-27. Over the 2012 water year, precipitation has ranged between 87% and 119% of average.

Table 1. Summary of August precipitation and cumulative October through August 27, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2012 August 1-27, 2012		Water Year 2012 October 1, 2011 to August 27, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.43	29	27.52	116
Snake River Above Ice Harbor	0.09	13	15.88	95
Columbia Above The Dalles	0.21	21	23.76	108
Kootenai	0.49	33	29.05	119
Clark Fork	0.19	17	16.97	103
Flathead	0.43	31	24.64	113
Pend Oreille/ Spokane	0.13	12	34.32	115
Central Washington	0.02	5	7.87	91
Snake River Plain	0.11	21	9.34	87
Salmon/Boise/ Payette	0.06	10	17.99	94
Clearwater	0.01	1	31.52	108
SW Washington Cascades/Cowlitz	0.02	2	69.33	102
Willamette Valley	0.03	3	62.17	108

Grand Coulee Reservoir is at 1282.0 feet (9-6-12) and refilled 2.4 feet over the last week. On August 31, 2012 Grand Coulee was drafted to elevation 1279.6 feet, slightly below the target end of August draft elevation of approximately 1279.7 feet. Outflows at Grand Coulee have ranged between 74.1 and 117.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2451.1 feet (9-6-12) and has drafted 0.6 feet over the last week. Outflows at Libby Dam have ranged between 8-12 Kcfs last week.

Hungry Horse is currently at an elevation of 3552.6 feet (9-6-12) and has drafted 0.8 feet over the last week. Outflows at Hungry Horse have ranged between 2.0 and 2.3 Kcfs last week.

Dworshak is currently at an elevation of 1527.6 feet (9-6-12) and has drafted 6.9 feet over the last week for temperature and flow augmentation. On August 31, 2012, Dworshak drafted to 1534.5 feet, leaving approximately 200 Kaf of water for release in September. Outflows from Dworshak have ranged between 8.3 and 8.7 Kcfs the past week.

The Brownlee Reservoir drafted 1.8 feet over the past week with an elevation of 2054.9 feet on September 6th, 2012. Over the last week, outflows at Brownlee have ranged between 9.0 and 15.5 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 and.

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.

Spill:

The 2012 planned summer spill program ended at midnight on August 31st, 2012. Some spill has occurred over the past week at McNary and Bonneville dams as excess generation spill. The current spill priority list that took effect on September 1st assigns

excess generation spill to those projects in the lower Columbia River.

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.

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. Although subyearling Chinook dominated the collections, some of the SMP sites continue to collect a small number of spring migrants.

Subyearling Chinook numbers at BON decreased this week, with a daily average passage index of about 2,000 per day, compared to last week's daily average passage index of about 3,500. As with last week, sockeye were the only other species of salmonid collected at BON this week. Both pacific lamprey ammocoetes and pacific lamprey macrophthalmia were collected at BON this week, albeit 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 about 5,800 per day, compared to about 10,300 per day last week. 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 100 per day this week.

Passage of subyearling Chinook at MCN decreased this week. The daily average passage index for subyearling Chinook at MCN this week was about 7,000 per day, compared to about 10,700 per day last week. A small number of sockeye and yearling Chinook were collected at MCN this week. Daily average collections of pacific lamprey macrophthalmia decreased this week, when compared to last week. No pacific lamprey ammocoetes were collected at MCN this week. On the morning of September 3rd, sampling

at MCN was temporarily terminated and the facility was placed in primary bypass, due to high debris loads. Facility operations remained in primary bypass mode until the afternoon of September 6th, when normal sampling was resumed.

Subyearling Chinook passage at LGR decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at LGR this week was about 109 per day. Last week's daily average passage index for subyearling Chinook was about 174 per day. Some coho, sockeye, and steelhead juveniles were also collected at LGR this week, but in very small numbers. Dworshak Dam had voluntary spill of up to 3 Kcfs from July 10th through August 17th, which means that sockeye juveniles collected at LGR over this period may be kokanee from Dworshak reservoir. No pacific lamprey juveniles were sampled at LGR this week.

When compared to last week, passage of subyearling Chinook at LGS decreased while that for LMN remained very similar. The daily average passage index for subyearling Chinook at LGS this week was about 10 per day, compared to about 80 per day last week. This week's daily average passage index for subyearling Chinook at LMN was about 25 per day, compared to about 21 per day last week. Collections this week included a small number of sockeye and steelhead juveniles at LGS and yearling Chinook sockeye, and steelhead at LMN. Both pacific lamprey ammocoetes and macrophthalmia were collected at LGS this week while no lamprey juveniles were collected at LMN. Mortality of subyearling Chinook at LMN has been high for the past couple of weeks. Most of the mortalities seen in the past couple of weeks 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:

Counting of fall Chinook at Bonneville Dam (BON) began on August 1st. Daily counts for fall Chinook at BON have been increasing over last several weeks. Over the past week, daily counts of fall Chinook at BON have ranged from 9,967 to 14,015. The cumulative adult fall Chinook count for 2012 so far is 141,810, which is about 104% of the 2011 count at this time and about 84% of the 10-year average count. Fall Chinook jack counts at BON have also been increasing. Daily counts of fall Chinook jacks at BON have ranged between 2,292 to 3,078 this week. The cumulative fall Chinook jack count at BON for 2012 so far is 31,427, which is about 154% of the 2011 count at this time and 174% of the 10-year average count. Counting for fall Chinook at McNary Dam (MCN) began on August 9th. The cumulative adult fall Chinook count at MCN for 2012 so far is 37,335 which is about 165% of the 2011 count and 138% of the 10-year average. The cumulative fall Chinook jack count for 2012 is 6,614 at MCN, which is about 161% of the 2011 count and about 137% of 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, particularly in the Snake River. These higher steelhead counts at upstream sites are due to the fact that some steelhead adults over-winter in the mainstem, for instance between Ice Harbor and Lower Granite, and then resume their migration upstream the following year. This week's daily steelhead counts at BON have remained similar to last week's daily counts. Daily steelhead counts at BON have ranged from 1,727 to 2,655 per day. The cumulative adult steelhead count at BON for 2012 is 185,055, which is about 61% of the 2011 count and 61% of the 10-year average count. The 2012 cumulative wild adult steelhead count at BON is 71,714, which is about 63% of the 2011 count and 72% of the 10 year average count. The cumulative adult steelhead count at Lower Granite Dam (LGR) is 14,261, which is about 25% of the 2011

count and 47% of the 10 year average count. For wild steelhead, the 2012 cumulative count at LGR is 6,196, which is 30% of the 2011 count and nearly 63% of the 10 year average count. At Willamette Falls Dam, the cumulative 2012 count for steelhead so far is 28,938, as of August 26th. The 2012 steelhead count is about 106% of the 2011 and 10-year average counts.

Adult sockeye returns for 2012 are virtually over for the Columbia River basin. Over the past week, only two sockeye adults have been counted at BON. The cumulative adult sockeye count at BON is 515,670, which is 278% of the 2011 count and 394% times of the 10-year average count. The vast majority of returning sockeye adults are destined to spawn in the Upper Columbia, mainly in Lake Wenatchee and Osoyoos Lake. The 2012 cumulative adult sockeye count at Rock Island Dam (RIS) as of September 3rd is 410,588, which is 281% of the 2011 count and 355% of the 10-year average. Some of the returning sockeye adults are of Snake River origin, from the Stanley Basin in Idaho. The cumulative 2012 adult sockeye count at LGR is 460, which is 31% of the 2011 count and 80% of the 10-year average count.

Coho adults began arriving at BON in late July. When compared to last week, the daily counts of adult coho at BON have increased this week. This week's daily adult coho counts have ranged from 1,626 to 2,528. So far, 18,298 adult coho have been counted at BON in 2012. This cumulative count is 42% of the 2011 count and 61% of the 10-year average. The cumulative count for coho jacks at BON is 1,134, which is about 91% of the 2011 count and 73% of the 10-year average count. Finally, the 2012 cumulative shad count at BON is 2,432,394. This year's cumulative shad count is 257% of the 2011 count and 83% of the 10-year average count.

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
08/24/2012	142.3	0.1	132.6	0.0	137.2	1.9	139.4	0.7	145.3	0.0	154.3	5.3	150.8	17.3
08/25/2012	134.3	0.1	130.5	0.0	132.3	0.0	133.1	0.0	138.9	0.0	151.7	2.0	146.7	7.4
08/26/2012	114.3	0.1	112.9	0.0	119.5	0.0	126.5	0.0	126.1	0.0	147.5	1.9	143.9	7.4
08/27/2012	125.1	0.1	119.1	0.0	119.5	0.0	117.2	0.0	120.2	0.0	137.2	1.3	135.5	6.3
08/28/2012	134.6	0.1	135.9	0.0	132.3	0.0	133.0	0.0	135.5	0.0	135.4	1.6	128.2	6.9
08/29/2012	146.6	0.1	143.2	0.0	135.9	5.7	133.7	0.0	138.3	0.0	134.7	1.9	129.6	7.0
08/30/2012	154.9	0.1	146.9	0.0	147.4	12.6	143.8	0.0	147.0	0.0	150.9	11.4	143.3	7.5
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

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

Date	Dworshak		Brownlee Canyon		Hells Granite		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/24/2012	9.6	0.0	9.1	9.6	24.2	11.4	24.1	9.3	23.2	10.5	25.4	15.3		
08/25/2012	9.6	0.0	9.0	9.2	24.2	11.4	27.1	9.3	26.1	13.4	26.4	16.2		
08/26/2012	9.6	0.0	9.7	9.3	23.9	11.3	26.4	9.3	25.1	12.4	26.4	15.9		
08/27/2012	8.7	0.0	9.7	10.3	23.4	10.8	23.8	9.3	23.8	11.1	25.3	15.1		
08/28/2012	8.7	0.0	10.1	11.2	22.9	10.2	23.4	8.5	23.3	10.8	23.9	13.8		
08/29/2012	8.7	0.0	10.0	9.7	23.4	10.7	24.5	7.5	23.0	10.4	24.2	14.0		
08/30/2012	8.7	0.0	9.9	9.4	25.2	12.5	27.2	7.6	27.6	14.0	28.7	18.3		
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	---	---	32.3	0.0	33.3	0.0	37.1	0.0	36.5	0.0		

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
08/24/2012	191.8	96.1	197.0	59.1	183.0	73.2	189.9	92.0	24.4	61.1
08/25/2012	188.2	94.2	180.8	54.5	169.6	67.7	184.3	92.2	14.4	65.3
08/26/2012	171.7	86.0	150.6	45.0	139.1	55.6	162.1	91.4	1.0	57.3
08/27/2012	184.8	92.5	180.5	54.3	165.5	66.1	183.1	91.2	47.1	32.4
08/28/2012	159.0	79.5	142.1	42.6	134.3	53.7	155.6	90.6	17.8	34.8
08/29/2012	168.6	84.4	171.7	51.4	157.9	63.2	163.3	91.1	26.2	33.6
08/30/2012	173.1	86.8	157.9	47.3	148.8	59.4	155.1	91.1	9.9	41.7
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

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	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		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/24	105.5	105.8	106.0	24	112.6	113.1	114.1	19	111.9	112.2	112.8	24	110.4	111.0	111.8	19	110.6	110.9	111.1	24
8/25	105.0	105.2	105.6	24	111.8	112.0	112.3	21	111.8	112.2	112.8	23	110.4	111.2	111.9	21	110.6	110.8	111.0	24
8/26	104.9	105.4	105.7	24	111.7	111.9	112.3	22	112.0	112.6	113.3	24	110.2	110.7	111.4	22	111.3	111.7	112.0	24
8/27	104.7	105.1	105.7	24	111.2	111.4	111.6	22	111.5	111.9	112.2	24	110.2	110.7	111.2	22	110.7	111.0	111.3	24
8/28	104.2	104.5	105.0	24	111.7	111.8	112.5	19	111.0	111.3	111.6	24	109.7	110.3	111.1	19	110.2	110.7	111.2	22
8/29	104.1	104.8	105.3	24	111.1	111.6	112.6	23	110.9	111.2	111.7	24	109.4	109.9	110.5	23	109.7	109.9	110.1	18
8/30	103.7	104.2	104.7	24	110.9	111.2	111.3	23	110.5	111.1	114.4	24	109.2	109.7	110.1	23	109.3	109.4	109.7	24
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	109.5	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	108.1	108.7	109.2	24	108.1	108.5	109.2	20	108.8	109.1	109.2	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	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		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/24	109.4	109.8	110.1	24	109.4	109.8	110.3	24	110.2	111.5	116.4	24	115.4	116.4	116.7	24	114.5	115.4	118.1	24
8/25	109.4	109.9	110.3	24	110.2	111.0	111.9	24	110.0	111.1	111.9	24	111.1	111.5	112.5	24	110.4	110.9	112.3	24
8/26	110.2	110.8	111.3	24	110.8	111.6	112.4	24	110.6	111.5	112.4	24	108.7	109.1	109.5	24	108.1	108.5	109.1	24
8/27	109.6	110.1	110.5	24	110.1	110.6	111.2	24	109.9	110.5	111.1	24	108.4	108.6	109.0	24	107.5	107.7	108.0	24
8/28	109.1	109.8	110.4	22	110.0	110.6	111.2	24	109.8	110.6	111.2	24	108.2	108.3	108.5	24	107.4	107.6	107.7	24
8/29	108.7	109.0	109.2	18	108.8	109.2	109.6	24	109.5	110.6	112.8	24	107.7	107.9	108.1	24	106.9	107.2	107.4	24
8/30	108.2	108.7	109.1	24	109.4	109.8	110.4	24	111.3	113.3	115.0	24	107.8	108.3	108.7	24	107.0	107.5	107.9	24
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

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	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		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/24	114.3	115.3	116.0	24	114.0	115.0	115.5	24	108.0	108.5	108.9	24	108.3	109.1	110.1	24	107.3	107.6	107.9	24
8/25	111.5	111.9	112.9	24	111.3	111.6	112.9	24	110.7	111.7	112.2	24	111.2	112.3	112.5	24	108.0	108.4	108.8	24
8/26	108.6	109.0	110.5	24	108.6	109.0	110.5	24	113.0	113.8	114.4	24	113.0	113.6	113.9	24	110.4	111.3	112.2	24
8/27	107.4	107.9	108.3	24	103.9	107.2	107.8	24	111.5	112.1	113.5	24	111.1	111.5	112.6	24	110.1	110.4	110.5	24
8/28	133.5	148.0	148.2	24	106.6	107.7	108.2	24	108.8	109.3	110.0	24	108.8	109.3	110.1	24	109.1	109.5	109.9	24
8/29	125.1	142.6	147.8	24	106.8	107.5	107.9	24	106.1	106.5	107.1	24	106.2	106.5	107.1	24	106.9	107.1	107.3	24
8/30	107.1	107.6	108.0	24	107.1	107.6	107.8	24	106.5	107.2	107.7	24	106.9	107.9	109.3	24	105.9	106.3	106.4	24
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	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwtr-Peck</u>			#	<u>Anatone</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>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>		
8/24	109.0	109.9	110.9	24	107.0	107.8	108.2	24	100.8	101.1	101.4	24	98.0	98.0	98.7	11	100.4	101.5	102.6	24
8/25	109.2	110.0	110.4	24	107.0	107.8	108.3	24	101.2	101.7	102.1	24	98.9	99.2	99.8	14	101.2	102.7	104.0	24
8/26	111.6	111.9	112.2	24	107.2	108.0	108.6	24	101.4	101.6	101.8	24	98.4	99.1	99.5	24	101.2	102.2	103.3	24
8/27	111.3	111.6	112.0	24	107.4	108.5	109.0	24	100.8	101.0	101.4	24	97.6	97.7	98.2	16	100.8	102.0	103.2	24
8/28	109.8	110.3	110.6	24	108.1	108.9	109.7	24	100.9	101.3	101.7	24	96.8	96.8	97.4	3	101.2	102.4	103.6	24
8/29	107.3	107.7	108.1	24	106.4	106.9	107.1	24	100.6	100.9	101.2	24	96.3	96.3	96.3	1	100.8	102.0	103.3	24
8/30	106.6	107.0	107.3	24	105.9	106.5	107.0	24	100.6	100.9	101.2	24	102.7	102.9	103.9	14	101.9	103.6	105.3	24
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	---	---	---	0	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

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwtr-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>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>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>		
8/24	102.0	103.7	105.0	23	101.2	101.4	101.7	24	112.9	113.7	114.3	24	111.3	111.9	112.4	24	106.7	107.3	107.7	24
8/25	102.2	104.1	105.4	24	101.8	102.0	102.4	24	113.1	113.6	114.1	24	108.9	109.2	109.4	24	107.5	107.8	108.2	24
8/26	102.0	103.2	104.2	23	101.7	101.8	102.0	24	113.4	113.8	114.1	24	108.0	108.3	108.6	24	106.5	107.0	107.6	24
8/27	102.0	103.9	105.2	24	100.5	100.6	101.2	24	112.3	113.0	113.5	24	108.2	108.3	108.4	24	106.3	106.8	108.1	24
8/28	102.4	104.0	105.5	23	99.8	100.0	100.3	24	111.9	112.9	114.1	24	107.5	107.7	108.0	24	105.8	106.1	106.2	24
8/29	102.1	103.7	105.2	24	99.7	100.0	100.3	24	112.5	114.3	116.2	24	106.8	106.9	107.0	24	105.7	106.3	106.9	24
8/30	102.3	104.1	105.8	23	99.9	100.4	100.7	24	114.9	115.7	116.6	24	105.8	106.1	106.3	24	107.7	109.1	111.0	24
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

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>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>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>		
8/24	106.3	106.6	106.7	24	112.5	112.8	113.2	24	109.0	109.2	109.6	24	110.7	111.5	113.1	24	---	---	---	0
8/25	106.0	106.2	106.3	24	113.9	115.0	115.9	24	109.4	109.6	109.8	24	111.2	112.2	113.1	24	---	---	---	0
8/26	106.9	107.1	107.2	24	113.3	113.6	114.0	24	109.8	109.9	110.0	24	111.5	112.7	113.6	24	---	---	---	0
8/27	106.3	106.4	106.5	24	112.9	113.2	113.6	24	108.7	108.8	109.3	24	110.7	111.4	112.0	24	---	---	---	0
8/28	105.9	106.2	106.3	24	112.8	113.2	113.6	24	108.4	108.5	108.7	24	110.3	110.8	111.5	24	---	---	---	0
8/29	105.2	105.4	105.4	24	112.5	113.0	115.2	24	108.1	108.3	108.5	24	110.2	110.9	111.6	24	---	---	---	0
8/30	105.3	105.5	105.7	24	114.5	115.9	116.7	24	108.5	108.9	109.1	24	111.6	112.5	113.3	24	---	---	---	0
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

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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
8/24	105.9	106.3	106.8	24	115.7	116.3	116.9	24	103.3	103.7	104.4	24	113.0	113.3	113.6	24	104.8	105.7	107.4	24
8/25	107.2	107.7	108.4	24	115.9	116.5	117.1	24	104.3	104.9	105.6	24	112.9	113.4	113.9	24	108.0	108.2	108.5	24
8/26	107.1	107.5	108.3	24	114.6	114.9	115.2	24	104.5	104.8	105.1	24	113.1	113.7	114.3	24	107.8	108.5	108.7	24
8/27	106.5	106.8	107.4	24	115.2	115.6	116.2	24	103.4	103.6	103.9	24	112.8	113.3	113.6	24	106.0	106.2	106.6	24
8/28	106.4	106.7	106.9	24	114.7	115.0	115.4	24	103.4	103.6	103.9	24	112.8	113.4	113.9	24	106.9	107.2	107.3	24
8/29	105.1	105.5	106.1	24	114.7	115.2	116.3	24	103.2	103.5	103.7	24	113.2	113.6	114.1	24	105.7	106.0	106.5	24
8/30	106.6	107.4	108.0	24	115.6	116.1	116.6	24	104.3	105.0	105.3	24	113.2	113.9	114.2	24	107.3	107.6	107.7	24
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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
8/24	112.3	113.2	113.7	24	105.5	106.0	106.6	24	113.8	115.6	117.0	24	109.9	112.8	115.1	24	116.6	117.1	120.4	17
8/25	114.2	115.2	116.0	24	107.7	108.3	109.8	24	114.5	115.6	117.0	24	111.0	112.5	113.9	24	117.1	118.6	120.3	23
8/26	113.5	114.3	115.0	24	110.7	111.2	111.4	24	115.7	116.6	118.0	24	111.4	113.1	114.5	24	116.1	116.5	120.9	16
8/27	112.8	113.8	114.3	24	107.9	108.2	109.0	24	113.9	116.6	118.3	24	112.8	115.0	117.0	24	117.2	119.0	120.8	24
8/28	113.2	113.8	114.5	24	107.4	107.7	107.9	24	114.2	115.1	116.9	24	112.1	113.8	115.1	24	116.6	118.4	119.8	24
8/29	112.9	113.4	114.1	24	107.4	107.7	108.0	24	114.8	116.2	117.0	24	112.5	114.6	116.4	24	116.6	118.6	120.2	24
8/30	113.9	114.8	115.2	24	108.5	109.2	109.5	24	115.8	116.5	117.3	24	113.3	114.9	116.0	24	117.0	119.3	121.7	24
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

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)	
08/24/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/25/2012	*	---	---	---	---	0	0	0	0	0	---	0
08/26/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/27/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/28/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/29/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/30/2012	*	---	---	---	---	0	0	0	0	0	0	0
08/31/2012	*	---	---	---	---	0	0	2	0	0	0	0
09/01/2012	*	---	---	---	---	0	0	0	---	0	0	0
09/02/2012	*	---	---	---	---	0	0	0	---	27	0	0
09/03/2012	*	---	---	---	---	0	0	0	---	0	0	0
09/04/2012	*	---	---	---	---	0	0	0	---	0	0	0
09/05/2012	*	---	---	---	---	0	0	0	---	---	0	0
09/06/2012	*	---	---	---	---	---	0	---	---	---	0	0
09/07/2012		---	---	---	---	---	---	---	---	---	0	---
Total:		0	0	0	0	0	0	2	0	27	0	0
# Days:		0	0	0	0	13	14	13	8	12	14	14
Average:		0	0	0	0	0	0	0	0	2	0	0
YTD		58,098	10,922	26,417	13,494	4,042,662	2,266,006	754,590	25,797	2,179,400	4,290,562	2,538,937

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)	
08/24/2012	*	---	---	---	---	283	204	14	55	15,065	7,280	3,348
08/25/2012	*	---	---	---	---	211	95	15	31	3,393	---	3,509
08/26/2012	*	---	---	---	---	182	72	17	23	10,480	19,089	4,730
08/27/2012	*	---	---	---	---	227	72	22	34	7,623	12,025	4,756
08/28/2012	*	---	---	---	---	126	74	15	41	19,448	8,475	3,175
08/29/2012	*	---	---	---	---	93	21	31	67	7,790	7,307	3,332
08/30/2012	*	---	---	---	---	149	12	20	47	11,293	7,704	1,822
08/31/2012	*	---	---	---	---	232	31	26	46	8,705	9,094	2,515
09/01/2012	*	---	---	---	---	138	17	23	---	14,294	7,045	2,015
09/02/2012	*	---	---	---	---	68	10	13	---	7,405	8,664	2,048
09/03/2012	*	---	---	---	---	55	4	35	---	3,475	5,191	1,768
09/04/2012	*	---	---	---	---	72	1	20	---	700	4,269	2,045
09/05/2012	*	---	---	---	---	90	6	33	---	---	3,713	1,666
09/06/2012	*	---	---	---	---	---	5	---	---	---	2,658	2,186
09/07/2012		---	---	---	---	---	---	---	---	---	2,868	---
Total:		0	0	0	0	1,926	624	284	344	109,671	105,382	38,915
# Days:		0	0	0	0	13	14	13	8	12	14	14
Average:		0	0	0	0	148	45	22	43	9,139	7,527	2,780
YTD		0	5	67	327	1,063,322	1,049,100	375,977	28,725	3,245,571	3,950,912	5,565,969

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
08/24/2012 *	---	---	---	---	6	0	0	0	0	0	0
08/25/2012 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2012 *	---	---	---	---	0	0	0	0	0	0	0
08/27/2012 *	---	---	---	---	2	0	0	0	0	0	0
08/28/2012 *	---	---	---	---	4	0	0	0	0	0	0
08/29/2012 *	---	---	---	---	0	0	0	0	0	0	0
08/30/2012 *	---	---	---	---	2	0	0	0	0	0	0
08/31/2012 *	---	---	---	---	2	0	0	0	0	0	0
09/01/2012 *	---	---	---	---	0	0	0	---	0	0	0
09/02/2012 *	---	---	---	---	0	0	0	---	0	0	0
09/03/2012 *	---	---	---	---	1	0	0	---	0	0	0
09/04/2012 *	---	---	---	---	2	0	0	---	0	0	0
09/05/2012 *	---	---	---	---	0	0	0	---	---	0	0
09/06/2012 *	---	---	---	---	---	0	---	---	---	0	0
09/07/2012	---	---	---	---	---	---	---	---	---	0	---
Total:	0	0	0	0	19	0	0	0	0	0	0
# Days:	0	0	0	0	13	14	13	8	12	14	14
Average:	0	0	0	0	1	0	0	0	0	0	0
YTD	0	0	0	80	69,818	78,637	19,963	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)
08/24/2012 *	---	---	---	---	0	2	0	2	0	0	0
08/25/2012 *	---	---	---	---	0	5	0	0	0	---	0
08/26/2012 *	---	---	---	---	0	2	0	0	0	0	0
08/27/2012 *	---	---	---	---	0	2	0	0	0	0	0
08/28/2012 *	---	---	---	---	2	5	0	0	0	0	0
08/29/2012 *	---	---	---	---	0	3	0	0	0	0	0
08/30/2012 *	---	---	---	---	2	0	2	3	0	0	0
08/31/2012 *	---	---	---	---	0	0	0	1	0	0	0
09/01/2012 *	---	---	---	---	0	0	0	---	0	0	0
09/02/2012 *	---	---	---	---	0	1	0	---	0	0	0
09/03/2012 *	---	---	---	---	0	0	0	---	0	0	0
09/04/2012 *	---	---	---	---	1	1	0	---	0	0	0
09/05/2012 *	---	---	---	---	4	1	0	---	---	0	0
09/06/2012 *	---	---	---	---	---	1	---	---	---	0	0
09/07/2012	---	---	---	---	---	---	---	---	---	0	---
Total:	0	0	0	0	9	23	2	6	0	0	0
# Days:	0	0	0	0	13	14	13	8	12	14	14
Average:	0	0	0	0	1	2	0	1	0	0	0
YTD	2,722	21,616	2,065	2,311	3,538,999	1,490,310	611,059	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)
08/24/2012 *	---	---	---	---	2	5	0	2	0	0	0
08/25/2012 *	---	---	---	---	4	5	2	3	0	---	0
08/26/2012 *	---	---	---	---	2	3	0	3	0	96	38
08/27/2012 *	---	---	---	---	4	0	0	0	0	96	0
08/28/2012 *	---	---	---	---	2	0	0	2	0	0	0
08/29/2012 *	---	---	---	---	2	0	0	3	0	0	30
08/30/2012 *	---	---	---	---	8	0	0	3	52	0	17
08/31/2012 *	---	---	---	---	6	3	0	7	0	0	0
09/01/2012 *	---	---	---	---	11	3	0	---	0	66	0
09/02/2012 *	---	---	---	---	5	1	1	---	27	0	0
09/03/2012 *	---	---	---	---	6	4	0	---	0	0	0
09/04/2012 *	---	---	---	---	2	3	0	---	0	25	0
09/05/2012 *	---	---	---	---	4	2	0	---	---	0	11
09/06/2012 *	---	---	---	---	---	0	---	---	---	20	0
09/07/2012	---	---	---	---	---	---	---	---	---	0	---
Total:	0	0	0	0	58	29	3	23	79	303	96
# Days:	0	0	0	0	13	14	13	8	12	14	14
Average:	0	0	0	0	4	2	0	3	7	22	7
YTD	5	0	0	475	43,400	37,200	18,246	46,856	1,135,846	850,982	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)
08/24/2012 *	---	---	---	---	0	1	0	0	100	17	14
08/25/2012 *	---	---	---	---	0	0	0	0	0	---	0
08/26/2012 *	---	---	---	---	0	1	0	0	2	134	10
08/27/2012 *	---	---	---	---	2	1	0	0	50	67	10
08/28/2012 *	---	---	---	---	0	1	0	1	50	100	0
08/29/2012 *	---	---	---	---	0	2	0	0	25	75	0
08/30/2012 *	---	---	---	---	0	4	1	1	0	50	4
08/31/2012 *	---	---	---	---	0	5	0	0	25	100	0
09/01/2012 *	---	---	---	---	0	12	0	---	25	25	4
09/02/2012 *	---	---	---	---	0	8	0	---	25	33	0
09/03/2012 *	---	---	---	---	0	4	0	---	0	67	0
09/04/2012 *	---	---	---	---	0	2	0	---	0	25	0
09/05/2012 *	---	---	---	---	0	3	0	---	---	0	4
09/06/2012 *	---	---	---	---	---	5	---	---	---	20	0
09/07/2012	---	---	---	---	---	---	---	---	---	20	---
Total:	0	0	0	0	2	49	1	2	302	733	46
# Days:	0	0	0	0	13	14	13	8	12	14	14
Average:	0	0	0	0	0	4	0	0	25	52	3
YTD	6	0	0	0	6,994	6,471	2,209	135	121,312	502,772	31,887

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 = 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.

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

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

9/7/12 9:24 AM

08/24/12 TO 09/07/12

		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	1,158			11	7	39	1,215
	Sum of NumberBarged	0			0	0	0	0
	Sum of NumberBypassed	1			0	1	1	3
	Sum of Numbertrucked	1,360			10	6	29	1,405
	Sum of SampleMorts	15			1	1	12	29
	Sum of FacilityMorts	0			0	0	0	0
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	15			1	1	12	29
LGS	Sum of NumberCollected	403				15	22	440
	Sum of NumberBarged	0				0	0	0
	Sum of NumberBypassed	0				0	0	0
	Sum of Numbertrucked	801				17	23	841
	Sum of SampleMorts	8				0	1	9
	Sum of FacilityMorts	3				0	0	3
	Sum of ResearchMorts	0				0	0	0
	Sum of TotalProjectMorts	11				0	1	12
LMN	Sum of NumberCollected	194	1				2	197
	Sum of NumberBarged	0	0				0	0
	Sum of NumberBypassed	0	0				0	0
	Sum of Numbertrucked	148	1				2	151
	Sum of SampleMorts	58	0				0	58
	Sum of FacilityMorts	0	0				0	0
	Sum of ResearchMorts	0	0				0	0
	Sum of TotalProjectMorts	58	0				0	58
MCN	Sum of NumberCollected	59,800	25				50	59,875
	Sum of NumberBarged	0	0				0	0
	Sum of NumberBypassed	3,444	0				0	3,444
	Sum of Numbertrucked	55,936	25				50	56,011
	Sum of SampleMorts	13	0				0	13
	Sum of FacilityMorts	407	0				0	407
	Sum of ResearchMorts	0	0				0	0
	Sum of TotalProjectMorts	420	0				0	420
Total Sum of NumberCollected		61,555	26		11	22	113	61,727
Total Sum of NumberBarged		0	0		0	0	0	0
Total Sum of NumberBypassed		3,445	0		0	1	1	3,447
Total Sum of Numbertrucked		58,245	26		10	23	104	58,408
Total Sum of SampleMorts		94	0		1	1	13	109
Total Sum of FacilityMorts		410	0		0	0	0	410
Total Sum of ResearchMorts		0	0		0	0	0	0
Total Sum of TotalProjectMorts		504	0		1	1	13	519

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/7/12 9:24 AM

TO: 09/07/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	668,976	2,693,485	47,662	30,638	2,353,376	5,794,137
	Sum of NumberBarged	652,812	989,041	39,447	29,087	949,611	2,659,998
	Sum of NumberBypassed	11,456	1,702,758	8,165	1,429	1,403,473	3,127,281
	Sum of NumberTrucked	2,497	2	13	35	13	2,560
	Sum of SampleMorts	391	180	4	24	62	661
	Sum of FacilityMorts	1,820	1,429	33	63	182	3,527
	Sum of ResearchMorts	0	75	0	0	35	110
	Sum of TotalProjectMorts	2,211	1,684	37	87	279	4,298
LGS	Sum of NumberCollected	662,869	1,498,495	53,313	25,759	971,262	3,211,698
	Sum of NumberBarged	659,750	1,109,499	51,706	25,027	683,534	2,529,516
	Sum of NumberBypassed	121	388,249	1,601	691	287,507	678,169
	Sum of NumberTrucked	2,084	1	4	32	32	2,153
	Sum of SampleMorts	157	30	0	3	15	205
	Sum of FacilityMorts	752	716	2	6	173	1,649
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	909	746	2	9	188	1,854
LMN	Sum of NumberCollected	249,854	543,399	14,386	13,398	438,638	1,259,675
	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	9,827	34,382
	Sum of NumberTrucked	215	1	1	2	0	219
	Sum of SampleMorts	170	60	0	3	37	270
	Sum of FacilityMorts	538	472	10	8	150	1,178
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	708	532	10	11	187	1,448
MCN	Sum of NumberCollected	1,340,690	1,040,162	72,876	555,759	247,889	3,257,376
	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	161,133	25	0	149	0	161,307
	Sum of SampleMorts	192	43	0	28	10	273
	Sum of FacilityMorts	1,182	135	0	48	17	1,382
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,374	178	0	76	27	1,655
Total Sum of NumberCollected		2,922,389	5,775,541	188,237	625,554	4,011,165	13,522,886
Total Sum of NumberBarged		1,548,552	2,629,824	105,509	67,486	2,061,472	6,412,843
Total Sum of NumberBypassed		1,202,701	3,142,548	82,661	557,667	1,948,669	6,934,246
Total Sum of NumberTrucked		165,929	29	18	218	45	166,239
Total Sum of SampleMorts		910	313	4	58	124	1,409
Total Sum of FacilityMorts		4,292	2,752	45	125	522	7,736
Total Sum of ResearchMorts		0	75	0	0	35	110
Total Sum of TotalProjectMorts		5,202	3,140	49	183	681	9,255

Cumulative Adult Passage at Mainstem Dams Through: 09/07

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	09/06	158075	7591	167097	50945	152015	20110	81663	12235	108279	51451	92437	17241	141810	31427	136740	20424	169398	18061
TDA	09/06	117071	7173	124164	40146	112195	16495	69222	10392	81123	39845	79218	13523	71682	20866	64561	12870	72686	11159
JDA	09/06	107655	6755	103401	39823	94492	15370	60814	10415	75375	35544	72273	14191	46482	15508	38375	8723	43802	8645
MCN	09/06	102763	4787	101246	31750	86252	13687	64428	5104	74621	28165	68072	11090	37335	6614	22684	4112	27014	4832
IHR	09/06	71957	2905	69306	18161	60108	8392	14182	1481	26758	12378	18923	4410	10001	2817	6429	1610	5646	1865
LMN	09/06	68608	2891	69832	18094	58469	7193	15150	1611	31176	13730	19948	4267	7444	2423	4505	1057	4234	1731
LGS	09/06	68247	3449	67321	23492	54053	8198	14748	1613	42211	18214	18393	5041	5276	1951	4597	894	3281	924
LGR	09/06	66366	3525	59342	22063	54084	9639	13163	1717	36764	16425	17083	5652	3841	1311	3631	718	2322	949
PRD	09/04	19495	1015	15246	6030	16630	1325	50667	1994	50865	4223	58386	2526	4570	2599	5438	1459	5725	1419
RIS	09/03	19881	800	13089	8394	14658	2236	52184	3343	44432	14299	54861	5446	2554	1652	2981	1951	2524	800
RRH	09/03	6641	459	6989	3491	5643	822	45528	2775	38861	8131	42042	4317	2080	880	2802	1274	2043	564
WEL	09/05	5311	700	4153	3969	4833	817	38588	3271	29821	8465	31187	2517	974	207	847	455	953	334
WFA	08/26	35899	1314	43748	1399	50770	1108	-	-	-	-	-	-	87	17	92	13	56	10

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	18298	1134	43872	1252	30147	1562	515670	185796	130981	185055	302814	302915	70714	112010	98517
TDA	8747	1304	11950	1331	5418	760	410099	138290	109313	123431	206237	153864	49499	80357	53898
JDA	6572	1268	4799	673	3060	563	394153	143603	113828	78562	148876	121403	34012	61261	41962
MCN	1473	158	1575	423	708	147	364136	113942	93284	63596	124926	81323	24880	46106	27472
IHR	42	2	80	37	33	3	453	1140	390	18700	78347	48203	5550	22106	12851
LMN	15	4	29	5	10	0	486	1394	486	15756	68901	41592	5731	21348	12447
LGS	8	2	11	7	1	0	451	1435	467	11407	56800	29385	5174	19586	9298
LGR	0	0	4	0	0	0	460	1502	573	14261	56099	30121	6196	20438	9817
PRD	26	7	203	64	116	14	408257	145070	118727	9517	12542	10852	-	-	-
RIS	3	0	34	6	8	6	410588	146100	115766	8218	10136	8445	3716	5181	4416
RRH	0	0	1	0	0	0	363263	132095	94731	6754	7145	6233	3093	3517	2994
WEL	0	0	1	0	0	0	326042	111502	92036	4574	4714	4122	2113	2101	1963
WFA	19	67	75	137	13	21	-	-	-	28938	27405	27202	-	-	-

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: 09/07/12

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

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											
Lower Monumental Dam											
McNary Dam											
	08/27/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/30/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	08/25/12	Chinook + Steelhead	46	0	0	0.00%	0.00%	0	0	0	0
	08/28/12	Chinook + Steelhead	41	1	1	2.44%	0.00%	1	0	0	0
Rock Island Dam											