



Fish Passage Center

Weekly Report #11 - 29

October 14, 2011

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Summary of Events:

This is the Final weekly report for the 2011 season.

Water Supply: Precipitation throughout the Columbia Basin has varied between 133% and 464% of average at individual sub-basins over the first ten days of October. Precipitation above The Dalles has been 239% of average over October.

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

Location	Water Year 2012	
	October 1-10, 2011	
	Observed (inches)	% Average
Columbia Above Coulee	1.22	204
SNAKE RIVER ABOVE ICE HARBOR	1.39	359
Columbia Above The Dalles	1.28	239
Kootenai	1.26	211
Clark Fork	0.98	257
Flathead	1.19	220
Pend Oreille/Spokane	1.20	174
Central Washington	0.50	253
SNAKE RIVER PLAIN	1.29	464
Salmon/Boise/Payette	1.60	400
Clearwater	1.59	228
SW Washington Cascades/Cowlitz	2.38	133
Willamette Valley	2.24	162

Grand Coulee Reservoir is currently at 1285.9 feet (10-13-11) and drafted 0.3 feet over the last week. Outflows at Grand Coulee have ranged between 65.6 and 94.3 Kcfs.

The Libby Reservoir is currently at elevation 2447.7 feet (10-13-11) and has refilled 0.6 feet over the last week. Outflows at Libby Dam have been 4.0 Kcfs.

Hungry Horse is currently at an elevation of 3549.3 feet (10-13-11) and has drafted 0.2 feet over the last week. Outflows at Hungry Horse have been about 1.4-2.0 Kcfs over the last week.

Dworshak is currently at an elevation of 1519.2 feet on October 13th, 2011 and refilled 0.4 feet over the last week. Outflows from Dworshak have been reduced to the 1.6 – 1.7 Kcfs minimum.

The Brownlee Reservoir was at an elevation of 2020.8 feet on October 13th, 2011, refilling 6.2 feet over the last week. Brownlee has been refilling to store inflow in excess of that needed for fall Chinook spawning flows. Outflows from Brownlee have ranged between 13.0-21.8 Kcfs over the last week.

Smolt Monitoring:

Sampling is ongoing at three SMP monitoring sites at dams. Sampling ended at Lower Monumental and McNary Dams October 1. Subyearling Chinook continued to predominate in the collections at all dams over the past week. Overall subyearling Chinook passage indices were similar over the past two weeks at the sites that continue to sample; Lower Granite, Little Goose and Bonneville dams.

Subyearling Chinook juvenile salmon numbers decreased slightly over the past week at Lower Granite Dam where the passage index averaged over 340 per day over the past week compared 420 per day the previous week. Small numbers of all spring migrants continue to be collected sporadically.

Little Goose Dam also had subyearling Chinook predominating in the indices. Disease and mortality have been an issue at Little Goose over the past two weeks. Mortality rates have ranged up to 9% on October 12. Also there were a few days near zero. So mortality rates have been variable. Disease rates have varied between 30% and 60% over the past week with columnaris confirmed and BKD also suspected.

At Bonneville Dam subyearling indices have been relatively consistent on average over the past two weeks despite powerhouse priority shifting from powerhouse 2 to powerhouse 1 on October 11. Indices for subyearling Chinook averaged nearly 325 over each of the past two weeks.

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 releases scheduled to begin in this zone this week. However, releases of approximately 225,000 spring Chinook pre-smolts to the Clearwater Basin that were scheduled to begin earlier this month are scheduled to end by mid-October. These spring Chinook pre-smolts are 100% unclipped but are tagged with coded-wire-tags and are not expected to out-migrate until spring of 2012.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. There were no scheduled releases of juvenile salmonids to this zone this week. Approximately 200,000 sockeye juveniles are scheduled for release into Lake Wenatchee, beginning on or around October 24th. These sockeye juveniles are 100% adipose clipped and are not expected to out-migrate until spring of 2012. There are no other releases of juvenile salmonids scheduled for 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. There were no scheduled releases to this zone this week. Also, there are no new releases of juvenile salmonids scheduled for this zone over the next two weeks.

Adult Passage:

Daily counts of fall Chinook at Bonneville Dam ranged from 1,001 to 2,528. The 2011 adult fall Chinook count of 393,070 is about 85.1% of the 2010 count and 99.8% of the 10 year average count. The 2011 Bonneville Dam fall Chinook jack count of 80,717 is about 1.27 times greater than the 2010 count

and 1.59 times greater than the 10 year average. The 2011 McNary Dam adult fall Chinook count of 149,318 is about 77.9% of the 2010 count and about 1.21 times greater than the 10 year average. The 2011 fall Chinook jack McNary Dam jack count of 39,170 is about 1.48 times greater than the 2010 count and about 1.46 times greater than the 10 year average.

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 start 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 2011 B-run adult steelhead count at Bonneville of 101,311 is about 95.9% of the 2010 count of 105,611 and 74.1% of the 10 year average count of 136,691.

The Bonneville Dam 2011 steelhead count of 363,753 is about 88.9% of the 2010 count of 409,713 and about 89.5% of the 10 year average count of 406,296. In the Snake River, this year's Lower Granite steelhead count of 157,478 is about 90.8% of the 2010 count and has 237 more fish than the 10 year average count. The 2011 LGR wild steelhead count as of October 13th was 41,837. The 2011 Rock Island Dam adult steelhead count of 18,256 is about 84.4% of the 2010 count and about 99.4% of the 10 year average. At Willamette Falls Dam, the 2011 count for steelhead was 27,724, as of October 11th. This year's steelhead count is about 85.8% of the 2010 count and about 96.4% of the 10 year average.

The 2011 Bonneville Dam adult coho salmon count of 137,935 is about 1.43 times greater than the 2010 count of 96,163 and 1.20 times greater than the 10 year average count of 114,828. The 2011 Bonneville Dam coho jack count of 4,279 is about 66.7% of the 2010 count and 68.3% of the 10 year average count.

Hatchery Releases Last Two Weeks

From:		Hatchery Release Summary							
		9/30/2011	to	10/13/11					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2012	75,000	10-03-11	10-17-11	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2012	150,000	10-04-11	10-18-11	Lolo Creek	Clearwater River M F
Nez Perce Tribe									
Total					225,000				
Grand Total					225,000				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	10/14/2011	to	10/27/2011						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2012	75,000	10-03-11	10-17-11	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2012	150,000	10-04-11	10-18-11	Lolo Creek	Clearwater River M F
Nez Perce Tribe Total					225,000				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	SO	UN	2012	200,000	10-24-11	10-24-11	Lake Wenatchee	Wenatchee River
Washington Dept. of Fish and Wildlife Total					200,000				
Grand Total					425,000				

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

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>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>	#		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>
9/30	---	---	---	0	103.0	103.5	103.9	21	103.5	104.0	104.4	24	102.3	102.8	103.3	21	102.6	102.8	103.1	24
10/1	---	---	---	0	103.6	103.9	104.3	21	103.5	103.6	103.9	24	102.4	102.7	103.6	21	102.7	103.0	103.3	24
10/2	---	---	---	0	103.0	103.2	103.6	20	102.9	103.0	103.3	24	101.3	101.7	102.7	20	102.7	103.1	103.6	24
10/3	---	---	---	0	103.2	103.6	103.9	22	103.2	103.3	103.6	24	102.1	102.4	102.9	22	102.5	102.7	102.9	24
10/4	---	---	---	0	103.3	103.5	103.8	20	103.6	103.7	103.9	24	102.0	102.3	102.7	20	102.5	102.8	103.0	24
10/5	---	---	---	0	103.2	103.3	103.4	21	104.0	104.2	104.2	24	102.2	102.5	103.2	21	102.8	103.0	103.2	24
10/6	---	---	---	0	102.6	102.8	103.1	22	103.0	103.2	103.5	24	101.2	101.4	102.1	22	102.7	103.0	103.6	24
10/7	---	---	---	0	102.7	103.0	103.4	20	102.1	102.4	102.8	24	100.3	100.5	100.8	20	101.2	101.6	101.9	24
10/8	---	---	---	0	102.4	103.1	103.8	20	101.2	101.3	101.5	24	99.2	99.5	100.5	20	100.1	100.4	100.9	24
10/9	---	---	---	0	102.9	103.5	103.9	22	101.5	101.7	102.1	24	99.5	99.9	100.5	22	100.5	100.8	101.1	24
10/10	---	---	---	0	103.8	104.1	104.3	17	102.6	102.9	103.2	24	100.6	100.8	101.4	17	101.3	101.5	101.7	24
10/11	---	---	---	0	103.8	103.9	104.4	18	102.3	102.7	102.9	24	100.5	100.8	101.1	18	100.9	101.3	101.6	24
10/12	---	---	---	0	103.0	103.2	103.4	20	100.8	101.0	101.6	24	98.7	98.9	99.6	20	99.7	99.9	100.2	24
10/13	---	---	---	0	102.8	103.3	103.7	23	100.4	100.5	100.7	23	98.3	98.7	99.3	23	99.3	99.6	100.3	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>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>	#		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>
9/30	99.9	100.4	100.9	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/1	100.0	100.5	101.0	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/2	99.8	100.4	101.1	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/3	99.7	100.4	101.3	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/4	97.0	98.6	99.5	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/5	96.8	96.8	98.3	12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/6	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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>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>	#		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>
9/30	---	---	---	0	---	---	---	0	102.6	104.0	104.6	24	102.7	103.1	103.3	24	102.1	102.9	103.4	24
10/1	---	---	---	0	---	---	---	0	102.0	102.7	104.1	24	103.0	103.2	103.4	24	102.0	102.4	102.6	24
10/2	---	---	---	0	---	---	---	0	101.5	102.5	103.2	24	102.3	102.4	102.6	24	101.6	102.2	102.7	24
10/3	---	---	---	0	---	---	---	0	101.6	102.0	102.3	24	102.4	102.6	102.7	24	101.5	101.9	102.4	24
10/4	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
10/5	---	---	---	0	---	---	---	0	101.4	101.8	102.1	24	101.9	102.3	102.7	24	101.6	102.0	102.1	24
10/6	---	---	---	0	---	---	---	0	99.5	100.0	100.5	24	100.4	100.6	101.1	24	99.4	99.8	100.1	24
10/7	---	---	---	0	---	---	---	0	98.6	98.8	98.8	24	99.8	100.1	100.3	24	97.9	98.1	98.4	24
10/8	---	---	---	0	---	---	---	0	98.8	99.7	100.2	24	99.2	99.4	99.7	24	97.9	98.6	99.3	24
10/9	---	---	---	0	---	---	---	0	98.9	99.6	100.1	24	100.2	100.4	100.9	24	99.3	100.1	100.6	24
10/10	---	---	---	0	---	---	---	0	100.1	100.4	100.7	24	100.7	101.0	101.4	24	100.6	101.1	101.4	24
10/11	---	---	---	0	---	---	---	0	99.0	99.5	99.7	24	100.8	101.1	101.3	24	99.2	99.7	100.3	24
10/12	---	---	---	0	---	---	---	0	98.8	99.0	99.1	24	99.5	99.7	100.0	24	98.5	99.1	99.4	24
10/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clwrtr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
9/30	103.1	103.7	103.8	24	---	---	---	0	106.3	108.1	110.0	24	103.6	106.1	107.5	24	---	---	---	0
10/1	103.5	103.8	104.3	24	---	---	---	0	104.7	105.5	106.3	24	103.0	104.9	106.6	24	---	---	---	0
10/2	102.8	103.0	103.4	24	---	---	---	0	104.8	105.3	106.2	24	102.6	104.6	106.2	23	---	---	---	0
10/3	103.0	103.3	103.7	24	---	---	---	0	105.2	105.8	107.0	24	102.8	104.5	106.2	24	---	---	---	0
10/4	---	---	---	0	---	---	---	0	105.3	105.6	106.1	24	102.4	104.1	105.3	23	---	---	---	0
10/5	102.8	103.2	103.4	24	---	---	---	0	105.2	105.9	107.0	24	102.2	103.6	105.6	24	---	---	---	0
10/6	100.9	101.3	101.8	24	---	---	---	0	104.1	104.6	105.2	24	100.9	102.1	102.9	22	---	---	---	0
10/7	100.1	100.4	100.9	24	---	---	---	0	103.7	104.1	105.0	24	101.2	101.8	102.5	21	---	---	---	0
10/8	99.9	100.1	100.3	24	---	---	---	0	104.0	104.6	105.5	24	101.4	102.7	103.9	23	---	---	---	0
10/9	100.9	101.3	101.9	24	---	---	---	0	104.6	105.1	106.0	24	101.9	103.2	104.0	22	---	---	---	0
10/10	101.7	102.0	102.3	24	---	---	---	0	105.5	106.7	111.2	24	102.0	102.9	103.3	24	---	---	---	0
10/11	100.5	100.9	101.5	24	---	---	---	0	105.6	106.0	106.4	24	101.9	102.7	103.4	24	---	---	---	0
10/12	100.0	100.4	100.9	24	---	---	---	0	106.6	107.1	107.9	24	101.8	102.7	103.6	24	---	---	---	0
10/13	---	---	---	0	---	---	---	0	106.9	107.7	109.1	24	102.0	102.8	103.4	24	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
9/30	---	---	---	0	---	---	---	0	106.4	111.6	119.0	24	---	---	---	0	98.5	99.0	99.4	24
10/1	---	---	---	0	---	---	---	0	99.0	99.7	102.9	24	---	---	---	0	98.4	98.9	99.1	24
10/2	---	---	---	0	---	---	---	0	98.5	98.8	99.2	24	---	---	---	0	98.0	98.7	99.0	24
10/3	---	---	---	0	---	---	---	0	99.3	99.7	100.7	24	---	---	---	0	98.6	98.9	99.2	24
10/4	---	---	---	0	---	---	---	0	101.0	102.9	113.7	24	---	---	---	0	98.9	99.3	100.1	24
10/5	---	---	---	0	---	---	---	0	101.4	102.4	106.4	24	---	---	---	0	98.7	99.1	99.4	24
10/6	---	---	---	0	---	---	---	0	100.6	102.3	109.2	24	---	---	---	0	97.2	97.4	97.8	24
10/7	---	---	---	0	---	---	---	0	98.5	99.8	106.5	24	---	---	---	0	96.5	96.8	97.0	24
10/8	---	---	---	0	---	---	---	0	96.5	97.3	102.5	24	---	---	---	0	95.5	95.7	95.8	24
10/9	---	---	---	0	---	---	---	0	96.3	96.4	96.6	24	---	---	---	0	95.6	96.0	96.3	24
10/10	---	---	---	0	---	---	---	0	96.7	96.9	97.0	24	---	---	---	0	96.2	96.6	97.2	24
10/11	---	---	---	0	---	---	---	0	96.3	96.7	97.4	24	---	---	---	0	95.6	96.0	96.3	24
10/12	---	---	---	0	---	---	---	0	95.3	95.7	96.5	24	---	---	---	0	94.8	95.1	95.4	24
10/13	---	---	---	0	---	---	---	0	95.9	96.4	97.1	24	---	---	---	0	94.8	95.1	95.3	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
9/30	---	---	---	0	97.9	98.6	99.1	24	---	---	---	0	98.6	98.9	99.4	24	---	---	---	0
10/1	---	---	---	0	97.4	98.0	98.3	24	---	---	---	0	98.8	99.3	100.1	24	---	---	---	0
10/2	---	---	---	0	97.7	98.4	98.8	24	---	---	---	0	98.7	99.2	100.2	24	---	---	---	0
10/3	---	---	---	0	98.5	99.0	100.0	24	---	---	---	0	98.8	99.1	100.3	24	---	---	---	0
10/4	---	---	---	0	99.0	99.4	99.7	24	---	---	---	0	99.1	99.4	99.9	24	---	---	---	0
10/5	---	---	---	0	98.9	99.3	100.1	24	---	---	---	0	99.4	99.8	100.3	24	---	---	---	0
10/6	---	---	---	0	97.4	97.8	98.9	24	---	---	---	0	98.3	98.7	99.2	24	---	---	---	0
10/7	---	---	---	0	96.4	96.7	97.0	24	---	---	---	0	97.5	97.9	98.4	24	---	---	---	0
10/8	---	---	---	0	95.8	96.0	96.7	24	---	---	---	0	97.0	97.4	98.0	24	---	---	---	0
10/9	---	---	---	0	96.1	96.5	96.9	24	---	---	---	0	97.7	98.1	98.8	24	---	---	---	0
10/10	---	---	---	0	96.6	96.9	97.0	24	---	---	---	0	98.2	98.6	99.5	24	---	---	---	0
10/11	---	---	---	0	96.2	96.6	97.0	24	---	---	---	0	97.9	98.3	98.9	24	---	---	---	0
10/12	---	---	---	0	95.4	95.7	96.9	24	---	---	---	0	97.1	97.3	98.2	24	---	---	---	0
10/13	---	---	---	0	95.6	95.9	96.9	24	---	---	---	0	97.2	97.5	98.1	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>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>				
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
9/30	---	---	---	0	99.8	99.8	99.9	10	---	---	---	0	100.1	100.5	100.9	24	---	---	---	0
10/1	---	---	---	0	---	---	---	0	---	---	---	0	100.6	101.0	101.3	24	---	---	---	0
10/2	---	---	---	0	---	---	---	0	---	---	---	0	100.1	100.5	101.2	24	---	---	---	0
10/3	---	---	---	0	100.5	100.6	100.8	22	---	---	---	0	100.2	100.6	101.5	24	---	---	---	0
10/4	---	---	---	0	101.3	101.5	101.6	24	---	---	---	0	101.1	101.5	103.1	24	---	---	---	0
10/5	---	---	---	0	100.3	100.8	101.2	24	---	---	---	0	100.6	101.0	102.0	24	---	---	---	0
10/6	---	---	---	0	99.1	99.4	99.7	24	---	---	---	0	99.3	99.7	100.4	24	---	---	---	0
10/7	---	---	---	0	98.1	98.6	99.0	24	---	---	---	0	99.0	99.6	99.9	24	---	---	---	0
10/8	---	---	---	0	98.1	98.3	98.6	24	---	---	---	0	98.9	99.3	99.9	24	---	---	---	0
10/9	---	---	---	0	98.7	98.9	99.2	24	---	---	---	0	99.4	99.9	100.3	24	---	---	---	0
10/10	---	---	---	0	99.2	99.4	99.6	24	---	---	---	0	99.4	99.8	100.4	24	---	---	---	0
10/11	---	---	---	0	97.8	98.3	98.7	24	---	---	---	0	98.9	99.2	99.6	24	---	---	---	0
10/12	---	---	---	0	98.1	98.2	98.3	24	---	---	---	0	98.3	98.5	98.8	24	---	---	---	0
10/13	---	---	---	0	98.6	98.8	99.6	24	---	---	---	0	98.8	99.3	103.2	24	---	---	---	0

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>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</u>		<u>#</u>
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>
9/30	101.2	101.5	101.7	24	---	---	---	0	102.8	103.3	103.8	24	---	---	---	0	---	---	---	0
10/1	101.1	101.3	101.7	24	---	---	---	0	102.2	102.5	102.8	24	---	---	---	0	---	---	---	0
10/2	100.9	101.0	101.2	24	---	---	---	0	103.0	103.4	103.7	24	---	---	---	0	---	---	---	0
10/3	101.0	101.3	101.6	24	---	---	---	0	103.0	103.4	104.0	24	---	---	---	0	---	---	---	0
10/4	101.3	101.7	102.0	24	---	---	---	0	102.9	103.6	104.3	24	---	---	---	0	---	---	---	0
10/5	100.9	101.3	101.6	24	---	---	---	0	102.6	103.0	103.3	24	---	---	---	0	---	---	---	0
10/6	99.5	100.0	100.3	24	---	---	---	0	101.2	101.7	102.0	24	---	---	---	0	---	---	---	0
10/7	99.2	99.5	99.7	24	---	---	---	0	100.7	100.8	101.0	23	---	---	---	0	---	---	---	0
10/8	99.5	99.9	100.0	24	---	---	---	0	101.5	102.0	103.1	24	---	---	---	0	---	---	---	0
10/9	100.4	100.7	100.8	24	---	---	---	0	101.4	101.8	102.1	24	---	---	---	0	---	---	---	0
10/10	100.8	101.0	101.3	24	---	---	---	0	102.1	102.3	103.6	24	---	---	---	0	---	---	---	0
10/11	99.3	99.6	100.0	24	---	---	---	0	101.4	101.8	102.1	24	---	---	---	0	---	---	---	0
10/12	98.6	99.1	99.2	24	---	---	---	0	100.7	100.9	101.0	24	---	---	---	0	---	---	---	0
10/13	99.1	99.6	100.1	24	---	---	---	0	101.1	101.3	101.4	24	---	---	---	0	---	---	---	0

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
09/30/2011	82.4	0.1	77.6	0.0	77.7	0.0	77.6	0.0	81.5	0.0	80.2	1.9	74.1	1.1
10/01/2011	50.9	0.0	58.2	0.0	57.7	0.0	58.9	0.0	61.9	0.0	63.7	2.0	59.6	1.2
10/02/2011	53.1	0.0	51.3	0.0	59.4	0.0	59.4	0.0	60.8	0.0	82.2	1.9	83.3	1.1
10/03/2011	79.8	0.0	82.5	0.0	77.8	0.0	78.8	0.0	82.0	0.0	69.5	1.7	61.9	1.0
10/04/2011	66.2	0.0	66.3	0.0	69.2	0.0	71.6	0.0	73.7	0.0	86.2	1.9	84.4	1.1
10/05/2011	63.8	0.0	62.7	0.0	66.6	0.0	72.3	0.0	75.4	0.0	86.3	1.6	84.0	1.0
10/06/2011	66.4	0.0	65.6	0.0	65.0	0.0	66.1	0.0	68.7	0.0	70.9	1.5	65.4	0.9
10/07/2011	70.2	0.0	66.2	0.0	64.8	0.0	63.1	0.0	65.8	0.0	61.2	1.8	56.6	1.1
10/08/2011	73.1	0.0	77.2	0.0	79.3	0.0	80.2	0.0	83.5	0.0	91.3	2.0	88.2	1.1
10/09/2011	65.6	0.0	60.6	0.0	66.2	0.0	69.8	0.0	72.4	0.0	79.7	1.9	76.3	1.0
10/10/2011	74.4	0.0	77.2	0.0	76.9	0.0	77.8	0.0	81.3	0.0	90.8	1.6	91.9	1.7
10/11/2011	82.0	0.0	80.9	0.0	78.4	0.0	74.4	0.0	76.2	0.0	65.0	1.9	62.2	0.5
10/12/2011	94.3	0.0	94.0	0.0	94.7	0.0	95.1	0.0	96.9	0.0	101.5	2.2	90.9	1.1
10/13/2011	91.3	0.0	89.4	0.0	97.2	0.0	103.5	0.0	106.2	0.0	115.6	2.1	110.7	1.2

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
09/30/2011	1.7	0.0	17.8	24.9	26.0	0.0	30.0	0.0	31.7	0.0	36.1	0.0		
10/01/2011	1.8	0.0	18.8	26.9	30.9	0.0	25.6	0.0	27.0	0.0	25.4	0.0		
10/02/2011	1.8	0.0	18.9	26.2	34.9	0.0	31.8	0.0	30.8	0.0	28.6	0.0		
10/03/2011	1.8	0.0	18.6	23.4	35.6	0.0	34.1	0.0	33.4	0.0	32.0	0.0		
10/04/2011	1.8	0.0	18.9	21.1	30.7	0.0	29.2	0.0	30.9	0.0	32.6	0.0		
10/05/2011	1.8	0.0	19.6	21.9	27.5	0.0	28.1	0.0	29.5	0.0	28.4	0.0		
10/06/2011	1.8	0.0	20.5	21.0	33.1	0.0	32.1	0.0	32.9	0.0	33.4	0.0		
10/07/2011	1.7	0.0	21.5	21.1	31.3	0.0	30.3	0.0	30.4	0.0	30.4	0.0		
10/08/2011	1.6	0.0	21.6	22.5	32.4	0.0	31.7	0.0	31.5	0.0	33.0	0.0		
10/09/2011	1.6	0.0	22.0	21.5	34.9	0.0	30.8	0.0	32.2	0.0	30.9	0.0		
10/10/2011	1.7	0.0	20.6	14.3	31.3	0.0	29.8	0.0	31.1	0.0	30.5	0.0		
10/11/2011	1.7	0.0	21.6	14.4	21.2	0.0	20.8	0.0	22.2	0.0	22.9	0.0		
10/12/2011	1.7	0.0	21.1	14.2	26.9	0.0	27.0	0.0	28.5	0.0	27.5	0.0		
10/13/2011	1.7	0.0	---	---	30.4	0.0	26.3	0.0	25.5	0.0	24.3	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
09/30/2011	106.1	0.0	103.0	0.8	105.7	0.0	109.8	0.6	33.7	69.0
10/01/2011	105.8	0.0	76.4	0.8	78.4	0.0	90.3	0.6	14.8	68.4
10/02/2011	102.6	0.0	78.8	0.8	80.7	0.0	88.7	0.6	14.3	67.3
10/03/2011	111.3	0.3	87.7	1.1	90.3	0.0	100.8	0.6	27.0	66.7
10/04/2011	104.2	0.0	98.2	0.8	100.0	0.0	101.1	0.6	25.9	68.1
10/05/2011	117.5	0.0	107.6	1.1	108.3	0.0	117.0	0.6	42.9	67.0
10/06/2011	117.8	0.0	116.6	0.8	117.2	0.0	121.8	0.6	45.1	69.7
10/07/2011	91.4	0.0	95.8	0.8	96.9	0.0	101.3	0.6	27.4	66.8
10/08/2011	105.6	0.0	89.7	0.8	93.9	0.0	113.3	0.6	34.0	72.2
10/09/2011	111.3	0.0	93.6	0.8	94.1	0.0	104.2	0.6	28.1	69.0
10/10/2011	128.8	0.0	128.2	0.8	129.5	0.0	127.1	0.6	46.0	74.0
10/11/2011	107.7	0.0	111.5	0.8	114.4	0.0	125.2	0.6	77.8	40.3
10/12/2011	92.4	0.0	98.4	0.7	100.4	0.0	109.9	0.6	84.6	18.3
10/13/2011	119.8	0.0	113.4	0.8	114.0	0.0	121.0	0.6	83.2	30.8

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)	
09/30/2011	---	---	---	---	2	0	0	---	0	---	0	
10/01/2011	*	---	---	---	0	0	0	---	---	---	11	
10/02/2011	---	---	---	---	0	0	---	---	---	---	0	
10/03/2011	---	---	---	---	0	0	---	---	---	---	0	
10/04/2011	---	---	---	---	0	0	---	---	---	---	0	
10/05/2011	---	---	---	---	1	0	---	---	---	---	0	
10/06/2011	---	---	---	---	0	0	---	---	---	---	0	
10/07/2011	---	---	---	---	1	0	---	---	---	---	0	
10/08/2011	---	---	---	---	0	0	---	---	---	---	0	
10/09/2011	---	---	---	---	0	0	---	---	---	---	0	
10/10/2011	---	---	---	---	0	0	---	---	---	---	0	
10/11/2011	---	---	---	---	1	0	---	---	---	---	0	
10/12/2011	---	---	---	---	0	0	---	---	---	---	0	
10/13/2011	---	---	---	---	---	0	---	---	---	---	0	
10/14/2011	---	---	---	---	---	---	---	---	---	---	---	
Total:	0	0	0	0	5	0	0	0	0	0	11	
# Days:	0	0	0	0	13	14	2	0	1	0	14	
Average:	0	0	0	0	0	0	0	0	0	0	1	
YTD	31,090	30,210	12,492	18,836	3,831,101	2,528,608	1,236,927	26,463	1,979,496	2,936,472	1,322,343	

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)	
09/30/2011	---	---	---	---	862	306	52	---	2,150	---	272	
10/01/2011	*	---	---	---	619	110	116	---	---	---	308	
10/02/2011	---	---	---	---	382	45	---	---	---	---	167	
10/03/2011	---	---	---	---	286	35	---	---	---	---	401	
10/04/2011	---	---	---	---	267	135	---	---	---	---	452	
10/05/2011	---	---	---	---	256	232	---	---	---	---	351	
10/06/2011	---	---	---	---	259	93	---	---	---	---	332	
10/07/2011	---	---	---	---	309	167	---	---	---	---	260	
10/08/2011	---	---	---	---	252	130	---	---	---	---	147	
10/09/2011	---	---	---	---	159	83	---	---	---	---	229	
10/10/2011	---	---	---	---	121	55	---	---	---	---	270	
10/11/2011	---	---	---	---	167	52	---	---	---	---	286	
10/12/2011	---	---	---	---	154	79	---	---	---	---	316	
10/13/2011	---	---	---	---	---	153	---	---	---	---	138	
10/14/2011	---	---	---	---	---	---	---	---	---	---	---	
Total:	0	0	0	0	4,093	1,675	168	0	2,150	0	3,929	
# Days:	0	0	0	0	13	14	2	0	1	0	14	
Average:	0	0	0	0	315	120	84	0	2,150	0	281	
YTD	9	38	12	163	1,174,845	1,364,641	373,456	31,133	5,826,494	3,296,670	5,214,601	

Two-Week Summary of Passage Indices

Date	COMBINED COHO										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
09/30/2011	---	---	---	---	0	4	0	---	0	---	0
10/01/2011	*	---	---	---	0	3	0	---	---	---	0
10/02/2011	---	---	---	---	1	5	---	---	---	---	0
10/03/2011	---	---	---	---	1	1	---	---	---	---	0
10/04/2011	---	---	---	---	0	1	---	---	---	---	6
10/05/2011	---	---	---	---	2	1	---	---	---	---	0
10/06/2011	---	---	---	---	0	2	---	---	---	---	0
10/07/2011	---	---	---	---	0	0	---	---	---	---	0
10/08/2011	---	---	---	---	0	1	---	---	---	---	0
10/09/2011	---	---	---	---	2	3	---	---	---	---	0
10/10/2011	---	---	---	---	0	0	---	---	---	---	0
10/11/2011	---	---	---	---	1	1	---	---	---	---	0
10/12/2011	---	---	---	---	2	1	---	---	---	---	0
10/13/2011	---	---	---	---	---	1	---	---	---	---	0
10/14/2011	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	9	24	0	0	0	0	6
# Days:	0	0	0	0	13	14	2	0	1	0	14
Average:	0	0	0	0	1	2	0	0	0	0	0
YTD	0	0	0	218	83,943	81,904	19,964	46,400	188,209	477,004	439,952

Date	COMBINED STEELHEAD										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
09/30/2011	---	---	---	---	0	0	0	---	0	---	0
10/01/2011	*	---	---	---	0	1	0	---	---	---	0
10/02/2011	---	---	---	---	1	0	---	---	---	---	0
10/03/2011	---	---	---	---	0	0	---	---	---	---	0
10/04/2011	---	---	---	---	0	0	---	---	---	---	0
10/05/2011	---	---	---	---	1	0	---	---	---	---	0
10/06/2011	---	---	---	---	1	0	---	---	---	---	0
10/07/2011	---	---	---	---	1	0	---	---	---	---	0
10/08/2011	---	---	---	---	0	0	---	---	---	---	0
10/09/2011	---	---	---	---	0	0	---	---	---	---	0
10/10/2011	---	---	---	---	0	0	---	---	---	---	6
10/11/2011	---	---	---	---	0	0	---	---	---	---	0
10/12/2011	---	---	---	---	0	1	---	---	---	---	0
10/13/2011	---	---	---	---	---	0	---	---	---	---	0
10/14/2011	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	4	2	0	0	0	0	6
# Days:	0	0	0	0	13	14	2	0	1	0	14
Average:	0	0	0	0	0	0	0	0	0	0	0
YTD	1,080	13,882	4,071	2,934	4,118,600	2,033,113	838,189	28,473	608,092	2,620,215	246,514

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)
09/30/2011	---	---	---	---	2	4	0	---	0	---	0
10/01/2011 *	---	---	---	---	1	1	0	---	---	---	0
10/02/2011	---	---	---	---	1	1	---	---	---	---	0
10/03/2011	---	---	---	---	0	0	---	---	---	---	0
10/04/2011	---	---	---	---	1	2	---	---	---	---	0
10/05/2011	---	---	---	---	1	3	---	---	---	---	0
10/06/2011	---	---	---	---	1	3	---	---	---	---	0
10/07/2011	---	---	---	---	3	1	---	---	---	---	0
10/08/2011	---	---	---	---	1	0	---	---	---	---	0
10/09/2011	---	---	---	---	3	2	---	---	---	---	0
10/10/2011	---	---	---	---	1	0	---	---	---	---	0
10/11/2011	---	---	---	---	0	1	---	---	---	---	0
10/12/2011	---	---	---	---	1	2	---	---	---	---	0
10/13/2011	---	---	---	---	---	6	---	---	---	---	0
10/14/2011	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	16	26	0	0	0	0	0
# Days:	0	0	0	0	13	14	2	0	1	0	14
Average:	0	0	0	0	1	2	0	0	0	0	0
YTD	0	0	1	0	119,427	44,483	31,325	18,763	325,901	364,035	114,157

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)
09/30/2011	---	---	---	---	2	0	0	---	10	---	0
10/01/2011 *	---	---	---	---	0	1	0	---	---	---	13
10/02/2011	---	---	---	---	1	3	---	---	---	---	0
10/03/2011	---	---	---	---	1	1	---	---	---	---	0
10/04/2011	---	---	---	---	1	3	---	---	---	---	0
10/05/2011	---	---	---	---	1	3	---	---	---	---	4
10/06/2011	---	---	---	---	0	2	---	---	---	---	4
10/07/2011	---	---	---	---	1	3	---	---	---	---	0
10/08/2011	---	---	---	---	1	4	---	---	---	---	0
10/09/2011	---	---	---	---	1	1	---	---	---	---	4
10/10/2011	---	---	---	---	0	1	---	---	---	---	0
10/11/2011	---	---	---	---	1	2	---	---	---	---	0
10/12/2011	---	---	---	---	2	2	---	---	---	---	0
10/13/2011	---	---	---	---	---	2	---	---	---	---	0
10/14/2011	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	12	28	0	0	10	0	25
# Days:	0	0	0	0	13	14	2	0	1	0	14
Average:	0	0	0	0	1	2	0	0	10	0	2
YTD	0	0	0	0	10,580	17,674	748	327	164,526	494,478	26,119

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, and pacific lamprey macrophthalmia.

† 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/Washington Dept. of Fish and Wildlife.

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.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

10/14/11 12:51 PM

09/30/11 TO 10/14/11

		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	4,093		5	9	4	16	4,127
	Sum of NumberBarged	0		0	0	0	0	0
	Sum of NumberBypassed	1,369		0	0	1	0	1,370
	Sum of Numbertrucked	3,004		7	11	3	16	3,041
	Sum of SampleMorts	46		0	0	0	1	47
	Sum of FacilityMorts	1		0	0	0	0	1
	Sum of ResearchMorts	23		0	0	0	0	23
	Sum of TotalProjectMorts	70		0	0	0	1	71
LGS	Sum of NumberCollected	1,675			24	2	26	1,727
	Sum of NumberBarged	0			0	0	0	0
	Sum of NumberBypassed	0			0	0	0	0
	Sum of Numbertrucked	1,674			23	3	24	1,724
	Sum of SampleMorts	63			0	0	4	67
	Sum of FacilityMorts	20			1	0	0	21
	Sum of ResearchMorts	0			0	0	0	0
	Sum of TotalProjectMorts	83			1	0	4	88
LMN	Sum of NumberCollected	168						168
	Sum of NumberBarged	0						0
	Sum of NumberBypassed	0						0
	Sum of Numbertrucked	143						143
	Sum of SampleMorts	25						25
	Sum of FacilityMorts	0						0
	Sum of ResearchMorts	0						0
	Sum of TotalProjectMorts	25						25
MCN	Sum of NumberCollected	2,150						2,150
	Sum of NumberBarged	0						0
	Sum of NumberBypassed	0						0
	Sum of Numbertrucked	4,043						4,043
	Sum of SampleMorts	2						2
	Sum of FacilityMorts	19						19
	Sum of ResearchMorts	0						0
	Sum of TotalProjectMorts	21						21
Total Sum of NumberCollected		8,086		5	33	6	42	8,172
Total Sum of NumberBarged		0		0	0	0	0	0
Total Sum of NumberBypassed		1,369		0	0	1	0	1,370
Total Sum of Numbertrucked		8,864		7	34	6	40	8,951
Total Sum of SampleMorts		136		0	0	0	5	141
Total Sum of FacilityMorts		40		0	1	0	0	41
Total Sum of ResearchMorts		23		0	0	0	0	23
Total Sum of TotalProjectMorts		199		0	1	0	5	205

YTD Transportation Summary

Source: Fish Passage Center

Updated: 10/14/11 12:51 PM

TO: 10/14/11

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	744,951	2,716,923	54,711	78,129	2,713,317	6,308,031
	Sum of NumberBarged	641,690	1,705,111	40,040	35,412	1,437,012	3,859,265
	Sum of NumberBypassed	86,421	1,009,672	14,509	42,055	1,275,917	2,428,574
	Sum of NumberTrucked	14,033	16	139	80	11	14,279
	Sum of SampleMorts	665	102	2	78	42	889
	Sum of FacilityMorts	2,066	1,781	21	504	272	4,644
	Sum of ResearchMorts	76	241	0	0	58	375
	Sum of TotalProjectMorts	2,807	2,124	23	582	372	5,908
LGS	Sum of NumberCollected	738,107	1,449,338	41,626	24,327	1,132,425	3,385,823
	Sum of NumberBarged	725,531	1,344,369	40,943	18,896	893,351	3,023,090
	Sum of NumberBypassed	93	103,168	401	5,227	238,633	347,522
	Sum of NumberTrucked	8,604	13	272	53	27	8,969
	Sum of SampleMorts	505	52	6	18	11	592
	Sum of FacilityMorts	3,374	1,736	4	133	403	5,650
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	3,879	1,788	10	151	414	6,242
LMN	Sum of NumberCollected	252,764	854,199	13,240	21,051	565,789	1,707,043
	Sum of NumberBarged	236,788	636,755	12,003	18,832	459,659	1,364,037
	Sum of NumberBypassed	8,578	215,901	1,254	1,964	103,446	331,143
	Sum of NumberTrucked	5,370	38	66	2	5	5,481
	Sum of SampleMorts	650	3	6	0	5	664
	Sum of FacilityMorts	1,378	1,499	13	253	872	4,015
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,028	1,502	19	253	877	4,679
MCN	Sum of NumberCollected	2,487,088	952,682	71,810	136,764	295,999	3,944,343
	Sum of NumberBarged	1,060,689	24	260	2,793	108	1,063,874
	Sum of NumberBypassed	975,593	949,771	71,277	132,464	295,663	2,424,768
	Sum of NumberTrucked	408,132	9	95	1,092	9	409,337
	Sum of SampleMorts	833	187	8	41	13	1,082
	Sum of FacilityMorts	41,841	2,691	170	374	206	45,282
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	42,674	2,878	178	415	219	46,364
Total Sum of NumberCollected		4,222,910	5,973,142	181,387	260,271	4,707,530	15,345,240
Total Sum of NumberBarged		2,664,698	3,686,259	93,246	75,933	2,790,130	9,310,266
Total Sum of NumberBypassed		1,070,685	2,278,512	87,441	181,710	1,913,659	5,532,007
Total Sum of NumberTrucked		436,139	76	572	1,227	52	438,066
Total Sum of SampleMorts		2,653	344	22	137	71	3,227
Total Sum of FacilityMorts		48,659	7,707	208	1,264	1,753	59,591
Total Sum of ResearchMorts		76	241	0	0	58	375
Total Sum of TotalProjectMorts		51,388	8,292	230	1,401	1,882	63,193

Cumulative Adult Passage at Mainstem Dams Through: 10/13

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	10/13	167097	50945	244384	12612	174444	16431	108279	51451	97604	15603	89217	13568	393070	80717	461593	63295	393561	50643
TDA	10/13	124164	40146	189839	11546	130174	13470	81127	39844	81292	12528	78252	10628	226752	68042	267313	50347	210534	40718
JDA	10/13	103401	39823	179446	11794	110572	12004	74073	34571	70955	12475	71151	11642	172949	60708	209337	44229	156221	35666
MCN	10/13	101245	31750	153500	9185	102003	11175	74621	28165	66526	8063	67398	9237	149318	39170	191493	26497	123212	26757
IHR	10/13	69306	18161	101188	6047	70295	6879	26758	12378	29583	3503	17776	3412	30676	19013	45626	11827	19704	11687
LMN	10/13	69832	18094	97334	5898	69566	5561	31176	13730	35097	4362	18759	3055	26567	16821	41833	14831	18297	10942
LGS	10/13	67321	23492	92985	5461	64800	6145	42211	18214	32410	3968	15770	3504	26771	15883	41158	10644	16319	8170
LGR	10/13	59342	22063	94203	6409	65342	7745	36764	16425	28778	5294	14778	4385	23070	17647	39409	11940	14167	10367
PRD	10/11	15246	6030	30539	932	20141	818	50865	4223	49265	1217	58614	2426	32077	5131	31057	3514	27385	4494
RIS	10/11	13089	8394	29684	1513	17327	1572	44432	14299	47220	4018	55301	5331	7411	4781	8503	2500	9260	2414
RRH	10/11	6989	3491	8660	523	6536	525	38861	8131	34173	1724	42074	4056	5858	3196	5802	1416	6086	1764
WEL	10/12	4153	3969	7596	661	5414	510	29491	8443	27052	1898	31529	2157	2252	2082	2514	947	3321	1255
WFA	10/11	43748	1399	65293	1758	51657	1104	-	-	-	-	-	-	1765	337	678	78	1020	180

DAM	Coho						Sockeye			Steelhead			
	2011		2010		10-Yr Avg.		2011	2010	10-Yr Avg.	2011	2010	10-Yr Avg.	Wild 2011
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	137935	4279	96163	6417	114828	6261	185796	386525	123898	363753	409713	406296	127163
TDA	68946	4485	25513	2160	29892	2857	138289	325131	105743	294561	323267	311318	101511
JDA	56306	2753	16335	1606	26134	3460	143137	324127	110256	240566	266905	294574	81754
MCN	35044	1917	10576	1307	13763	1606	113952	278799	91599	232035	244358	240079	71942
IHR	4809	795	1125	191	1348	79	1141	1302	280	185822	193148	177420	46058
LMN	3129	235	1163	254	1423	155	1395	1656	349	170987	196067	172900	42610
LGS	2881	348	1220	201	1287	124	1436	1658	335	156312	174787	157024	41048
LGR	2945	214	929	306	1228	222	1501	2201	427	157478	173397	157241	41837
PRD	9027	812	1825	258	3216	369	145070	357058	115345	19954	25824	19504	0
RIS	14373	503	3799	1012	4354	412	146111	338309	111637	18256	21627	18351	8239
RRH	3212	78	972	318	805	97	132096	295636	88146	14221	16862	14038	5935
WEL	1986	9	318	9	182	0	111508	291755	88342	11030	11768	10498	4235
WFA	2992	1845	18116	1845	5848	1249	-	-	-	27724	32321	28768	-

PRD does not post wild steelhead numbers. These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART. Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish. Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC. Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 10/14/11

BON counts from January 1, 2011 to March 14, 2011 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2011	49	1	1,419	600
2010	39	0	2,318	657