



Fish Passage Center

Weekly Report #11 - 28

September 30, 2011

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 5% and 68% of average at individual sub-basins over September. Precipitation above The Dalles has been 44% of average over September. Over the 2011 water year, precipitation has ranged between 102% and 134% of average.

Table 1. Summary of September 1-12 precipitation and cumulative October through September 12 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2011 September 1-26, 2011		Water Year 2011 October 1, 2010 to September 26, 2011	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.76	54	27.09	107
SNAKE RIVER ABOVE ICE HARBOR	0.26	28	20.78	117
Columbia Above The Dalles	0.50	44	26.11	112
Kootenai	0.73	52	26.48	102
Clark Fork	0.35	33	19.48	110
Flathead	0.97	68	26.75	114
Pend Oreille/Spokane	0.40	31	33.79	108
Central Washington	0.04	11	9.36	103
SNAKE RIVER PLAIN	0.26	36	13.18	115
Salmon/Boise/Payette	0.23	26	20.90	104
Clearwater	0.26	18	36.26	117
SW Washington Cascades/Cowlitz	2.03	75	74.77	105
Willamette Valley	0.36	20	62.69	105

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. The July Final forecast at The Dalles between January and July was 142000 Kaf (132% of average).

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

Location	June Final		July Final	
	% Average (1971 -2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	131	141000	132	142000
Grand Coulee (Jan-July)	124	78300	126	79500
Libby Res. Inflow, MT (Apr-Aug)	127	7930 8099*	129	8090
Hungry Horse Res. Inflow, MT (Jan-July)	153	3410	154	3430
Lower Granite Res. Inflow (Apr- July)	156	33700	159	34200
Brownlee Res. Inflow (Apr-July)	177	11200	173	10900
Dworshak Res. Inflow (Apr-July)	143	3770 3813*	149	3940

* Denotes COE Forecast

The flow objective at Lower Granite over the summer period (June 21st to August 31st) was 55 Kcfs; over the entire summer period flows at Lower Granite averaged 81.2 Kcfs.

The summer flow objective period began at McNary Dam on July 1st and ended on August 31st with a flow objective of 200 Kcfs. Over the entire summer flow period, flows at McNary averaged 261.2 Kcfs.

Grand Coulee Reservoir is currently at 1283.7 feet (9-29-11) and refilled 1.1 feet over the last two weeks. Outflows at Grand Coulee have ranged between 46.2 and 101 Kcfs.

The Libby Reservoir is currently at elevation 2446.9 feet (9-29-11) and has drafted 0.5 feet over the last two weeks. Outflows at Libby Dam have been 6.0 Kcfs over the period.

Hungry Horse is currently at an elevation of 3550.4 feet (9-29-11) and has drafted 2.3 feet over the last two weeks. Outflows at Hungry Horse have been about 3.0 Kcfs over the period. The BOR plans to target elevation 3550 feet by the end of September.

Dworshak is currently at an elevation of 1519.3 feet on September 29th, 2011 and drafted 2.5 feet over the last week. Outflows from Dworshak have been reduced to the 1.7 – 1.8 Kcfs minimum.

The Brownlee Reservoir was at an elevation of 2022.7.5 feet on September 28th, 2011, drafting 17.8 feet over the last two weeks. The project is preparing to catch inflow in excess to that provided for fall Chinook spawning flows.

Smolt Monitoring:

Sampling continued at five SMP monitoring sites at dams. Subyearling Chinook continued to predominate in the collections at all dams over the past week. Subyearling Chinook passage indices were similar to last week with relatively low numbers at the Snake River and the highest numbers in the McNary Dam to Bonneville Dam reach.

Subyearling Chinook juvenile salmon numbers increased over the past week at Lower Granite Dam where the passage index averaged over 900 per day over the past week compared 600 per day the previous week. Small numbers of all spring migrants continue to be collected sporadically. Little Goose and Lower Monumental dams also had subyearling Chinook predominating in the indices, although at Lower Monumental Dam the subyearling Chinook indices decreased. Small but steady numbers of juvenile coho salmon were collected at the Snake River collector

dams last week.

Mortality rates at Lower Monumental Dam have been high over the past week ranging between 11% and 28%. Due to poor fish condition collected fish are being transported every day. Disease incidence was as high as 50% on September 25. The incidence of *columnaris* tends to be high at the site this time of year and trucks transporting fish use salt water to treat the disease during transport. The every day transport schedule minimizes holding and the potential disease transmission.

At McNary Dam sampling resumed on September 17 after debris was removed from the forebay of the dam. Subyearling Chinook Passage passage indices spiked at 20,000 on September 22 but dropped down to an average of 3,000 subs per day over the past week.

Sampling at John Day Dam ended on September 15.

At Bonneville Dam normal sampling has been ongoing since September 1. Sampling during high temperatures at Bonneville consists of every-other-day condition monitoring. The average index for subyearling Chinook at Bonneville Dam decreased this week to 500 per day compared to 700 per day last week.

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 scheduled releases to this zone this week. However, approximately 225,000 spring Chinook pre-smolts are scheduled to be released to the Clearwater River basin, beginning next week. 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 to this zone this week. In addition, there are no new releases of juvenile salmonids scheduled for 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 2,958 to 7,078. The 2011 adult fall Chinook count of 366,160 is about 83.9% of the 2010 count and 97.1% of the 10 year average count. The 2011 Bonneville Dam fall Chinook jack count of 71,592 is about 1.24 times greater than the 2010 count and 1.54 times greater than the 10 year average. The 2011 McNary Dam adult fall Chinook count of 125,369 is about 80.3% of the 2010 count and about 1.18 times greater than the 10 year average. The 2011 fall Chinook jack McNary Dam jack count of 31,285 is about 1.46 times greater than the 2010 count and about 1.40 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 95,031 is about 96.8% of the 2010 count of 98,192 and 75.9% of the 10 year average count of 125,241.

The Bonneville Dam 2011 steelhead count of 357,473 is about 88.8% of the 2010 count of 402,294 and about 90.5% of the 10 year average count of 394,846. In the Snake River, this year's Lower Granite steelhead count of 118,602 is about 90.5% of the 2010 count and about 1.18 times greater than the 10 year average count. The 2011 LGR wild steelhead count as of September 29th was 33,857. The 2011 Rock Island Dam adult steelhead count of 16,845 is about 83.1% of the 2010 count, while being 1.01 times greater than the 10 year average. At Willamette Falls Dam, the 2011 count for steelhead was 27,654, as of September 27th. This year's steelhead count is about 85.8% of the 2010 count and about 96.4% of the 10 year average.

The 2011 adult sockeye count at Bonneville Dam of 185,796 is about 48.1% of the 2010 count, while being about 1.5 times greater than the 10 year average. The 2011 adult sockeye count at McNary Dam of 113,952 is about 40.8% of the 2010 count,

while being 1.24 times greater than the 10 year average. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River zone at Ice Harbor Dam, the 2011 adult sockeye count of 1,141 is about 87.6% of the 2010 count of 1,302, while being about 4.07 times greater than the 10 year average count of 280. The Lower Granite Dam 2011 adult sockeye count of 1,501 is about 68.2% of the 2010 count of 2,201 and about 3.5 times greater than the 10 year average of 427.

The 2011 Bonneville Dam adult coho salmon count of 116,505 is about 2.15 times greater than the 2010 count of 54,074 and 1.28 times greater than the 10 year average count of 90,875. The 2011 Bonneville Dam coho jack count of 3,278 is about 66.7% of the 2010 count and 67.6% of the 10 year average count.

Hatchery Releases Last Two Weeks

No releases to report.

Hatchery Releases Next Two Weeks

Hatchery Release Summary
9/30/2011 to 10/13/2011

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				
Grand Total					225,000				

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>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>
9/16	103.3	103.6	103.8	24	106.4	106.8	107.3	24	105.5	105.8	106.2	24	107.2	107.7	108.3	24	106.1	106.4	106.6	24
9/17	103.3	103.6	103.8	23	105.6	105.9	106.6	22	104.9	105.3	105.8	24	106.3	107.0	107.5	22	104.7	104.9	105.4	24
9/18	103.1	103.3	103.5	23	103.8	104.0	104.4	20	103.5	103.9	105.2	24	106.2	106.5	107.3	20	104.2	104.4	104.5	24
9/19	102.8	103.0	103.5	24	104.3	104.7	105.3	22	104.2	104.9	105.2	24	106.5	106.9	108.7	22	103.8	104.0	104.2	24
9/20	102.1	102.2	102.3	24	103.8	104.3	104.9	22	104.7	104.9	105.2	24	105.3	105.6	106.0	22	103.9	104.3	104.6	24
9/21	102.2	102.6	102.9	24	103.5	104.2	105.0	21	103.5	103.8	104.8	24	104.6	105.5	106.8	21	104.5	105.0	105.3	24
9/22	102.0	102.2	102.6	15	103.4	103.4	104.8	12	103.4	103.4	103.6	14	103.4	103.4	104.8	12	105.3	105.5	105.8	24
9/23	102.1	102.3	102.6	19	103.8	104.2	105.5	16	103.2	103.3	103.6	18	103.3	103.4	104.5	16	104.8	105.1	105.3	24
9/24	102.3	102.5	103.1	18	104.1	104.3	106.0	14	103.7	103.8	104.7	16	103.3	103.4	104.5	14	104.6	105.0	105.3	24
9/25	102.8	102.9	103.1	16	104.6	104.7	105.1	15	104.0	104.2	104.7	14	104.0	104.2	105.2	15	104.1	104.3	104.6	24
9/26	102.2	102.2	102.3	8	103.3	103.3	103.6	6	103.0	103.0	103.3	8	102.8	102.8	103.1	6	102.9	103.0	103.1	24
9/27	119.7	119.7	120.1	16	103.4	103.5	104.0	14	102.8	102.8	103.2	14	103.1	103.3	104.3	14	102.7	103.0	103.3	24
9/28	119.5	119.6	119.7	24	102.6	102.9	103.3	23	103.0	103.3	103.4	24	101.2	101.5	102.2	23	101.5	101.8	102.2	24
9/29	---	---	---	0	102.9	103.5	104.0	22	102.9	103.2	103.4	24	101.8	102.4	102.9	22	102.2	103.0	103.2	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>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>
9/16	106.9	107.3	108.5	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/17	105.7	106.3	106.8	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/18	105.1	105.8	107.1	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/19	104.6	104.9	105.8	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/20	104.7	105.9	107.4	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/21	105.2	106.6	110.4	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/22	105.1	105.8	106.4	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/23	104.9	105.3	105.5	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/24	105.1	105.9	106.5	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/25	103.4	104.0	104.7	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/26	101.3	101.9	102.5	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/27	102.2	102.7	103.2	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/28	100.8	101.4	101.9	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
9/29	100.5	101.8	102.3	24	---	---	---	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>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>
9/16	---	---	---	0	---	---	---	0	101.9	102.5	102.6	24	103.2	103.5	104.1	24	102.0	102.4	103.1	24
9/17	---	---	---	0	---	---	---	0	101.4	101.8	102.3	24	102.4	102.7	103.0	24	100.6	101.1	101.7	24
9/18	---	---	---	0	---	---	---	0	100.8	102.0	103.1	24	103.0	103.6	104.3	24	100.9	101.7	102.5	24
9/19	---	---	---	0	---	---	---	0	102.5	102.8	103.0	24	103.0	103.3	103.9	24	102.1	102.6	103.4	24
9/20	---	---	---	0	---	---	---	0	102.2	102.8	103.8	24	102.4	102.8	103.1	24	102.3	102.8	103.4	24
9/21	---	---	---	0	---	---	---	0	102.3	103.4	104.2	24	103.1	103.5	103.9	24	102.3	102.9	103.5	24
9/22	---	---	---	0	---	---	---	0	104.4	105.9	106.7	24	103.5	103.9	104.1	24	103.1	104.0	104.7	24
9/23	---	---	---	0	---	---	---	0	104.7	105.4	105.9	24	104.0	104.4	104.6	24	103.7	104.3	104.9	24
9/24	---	---	---	0	---	---	---	0	106.1	107.6	108.9	24	104.8	105.4	105.6	24	104.9	105.7	106.2	24
9/25	---	---	---	0	---	---	---	0	104.1	105.3	106.9	24	104.3	104.9	105.5	24	103.5	104.1	104.8	24
9/26	---	---	---	0	---	---	---	0	102.5	102.9	103.2	24	103.0	103.2	104.8	24	102.2	102.5	102.8	24
9/27	---	---	---	0	---	---	---	0	101.9	102.2	102.4	24	102.2	102.4	102.7	24	101.6	102.0	102.3	24
9/28	---	---	---	0	---	---	---	0	101.0	101.8	102.4	24	100.9	101.1	101.4	24	100.3	100.9	101.5	24
9/29	---	---	---	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
9/16	103.2	103.7	104.3	24	101.8	101.8	102.5	9	101.2	101.7	102.1	24	101.8	103.0	104.4	23	---	---	---	0
9/17	101.8	102.0	102.2	24	---	---	---	0	100.8	101.1	101.5	24	101.3	102.5	103.6	23	---	---	---	0
9/18	102.1	102.6	103.0	24	---	---	---	0	101.3	101.7	102.1	24	101.9	103.6	105.4	23	---	---	---	0
9/19	102.5	102.8	103.1	24	---	---	---	0	101.0	101.5	101.9	24	101.8	103.4	105.1	23	---	---	---	0
9/20	103.2	103.8	104.2	24	---	---	---	0	102.8	104.8	109.9	24	101.2	103.3	105.4	24	---	---	---	0
9/21	103.1	103.4	103.7	24	---	---	---	0	105.9	107.7	111.3	24	102.5	105.4	107.2	24	---	---	---	0
9/22	103.4	103.7	104.0	24	---	---	---	0	104.6	105.1	106.2	24	103.1	105.2	106.9	24	---	---	---	0
9/23	103.9	104.3	104.5	24	---	---	---	0	104.9	105.5	106.4	24	103.5	105.4	107.0	21	---	---	---	0
9/24	105.4	106.2	106.7	24	---	---	---	0	105.5	105.9	107.3	24	103.8	105.8	107.6	21	---	---	---	0
9/25	104.4	105.0	105.8	24	---	---	---	0	107.4	107.8	108.9	24	102.5	104.2	105.8	24	---	---	---	0
9/26	102.6	102.8	103.1	24	---	---	---	0	107.3	107.4	108.0	18	104.6	106.2	107.9	18	---	---	---	0
9/27	102.3	102.5	102.9	24	---	---	---	0	108.1	108.4	108.7	16	103.5	105.6	107.3	23	---	---	---	0
9/28	101.5	101.9	102.2	24	---	---	---	0	106.7	107.2	107.9	24	102.8	104.7	106.7	23	---	---	---	0
9/29	---	---	---	0	---	---	---	0	107.5	108.1	109.2	24	102.9	105.3	106.9	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>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
9/16	101.8	103.5	104.9	23	101.0	101.2	101.4	24	100.1	100.5	100.9	24	---	---	---	0	100.0	100.2	100.4	24
9/17	101.1	102.5	103.6	24	100.1	100.2	100.4	24	99.2	99.5	99.7	24	---	---	---	0	99.0	99.3	99.7	24
9/18	102.4	104.0	105.4	22	99.9	100.0	100.2	24	99.3	99.4	99.5	24	---	---	---	0	98.1	98.3	98.6	24
9/19	101.9	103.3	104.6	23	99.0	99.3	99.6	24	98.2	98.5	99.0	24	---	---	---	0	98.1	98.4	99.4	24
9/20	100.6	100.8	105.2	13	98.2	98.2	98.7	12	98.2	98.9	99.4	24	---	---	---	0	97.8	98.2	98.4	24
9/21	---	---	---	0	---	---	---	0	99.2	99.6	100.0	24	---	---	---	0	98.0	98.3	98.6	24
9/22	---	---	---	0	---	---	---	0	99.4	99.8	100.1	24	---	---	---	0	98.5	99.0	100.0	24
9/23	---	---	---	0	---	---	---	0	100.1	100.5	100.8	24	---	---	---	0	98.9	99.6	100.4	24
9/24	---	---	---	0	---	---	---	0	101.1	101.7	102.0	24	---	---	---	0	99.7	100.5	100.8	24
9/25	---	---	---	0	---	---	---	0	100.1	100.8	101.4	24	---	---	---	0	98.2	98.7	99.2	24
9/26	---	---	---	0	---	---	---	0	99.5	99.7	99.9	18	---	---	---	0	98.1	98.5	99.5	18
9/27	---	---	---	0	---	---	---	0	99.1	99.4	99.8	24	---	---	---	0	98.2	98.6	99.8	24
9/28	---	---	---	0	---	---	---	0	98.4	99.0	99.3	24	---	---	---	0	99.4	102.2	109.9	24
9/29	---	---	---	0	---	---	---	0	101.4	104.1	114.7	24	---	---	---	0	101.0	102.9	108.7	24

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
9/16	---	---	---	0	100.3	100.5	101.2	24	---	---	---	0	102.8	103.2	103.7	24	---	---	---	0
9/17	---	---	---	0	99.2	99.3	99.5	24	---	---	---	0	100.7	101.0	101.4	24	---	---	---	0
9/18	---	---	---	0	99.0	99.2	99.5	24	---	---	---	0	101.2	102.6	103.7	24	---	---	---	0
9/19	---	---	---	0	98.9	99.1	99.7	24	---	---	---	0	105.9	106.9	107.5	24	---	---	---	0
9/20	---	---	---	0	98.6	99.0	99.6	24	---	---	---	0	109.9	111.6	113.1	24	---	---	---	0
9/21	---	---	---	0	98.6	98.9	99.5	24	---	---	---	0	112.5	112.8	113.0	24	---	---	---	0
9/22	---	---	---	0	98.3	98.7	99.9	24	---	---	---	0	113.4	113.7	114.3	24	---	---	---	0
9/23	---	---	---	0	97.8	98.4	98.7	24	---	---	---	0	119.9	125.9	137.4	24	---	---	---	0
9/24	---	---	---	0	98.5	99.4	99.9	24	---	---	---	0	130.2	131.1	131.4	24	---	---	---	0
9/25	---	---	---	0	98.2	98.7	100.0	24	---	---	---	0	131.1	131.3	131.6	24	---	---	---	0
9/26	---	---	---	0	97.6	97.9	98.2	18	---	---	---	0	107.2	110.5	130.7	17	---	---	---	0
9/27	---	---	---	0	97.0	97.6	98.8	24	---	---	---	0	99.1	99.7	100.6	24	---	---	---	0
9/28	---	---	---	0	96.4	97.1	97.3	24	---	---	---	0	98.3	98.6	99.6	24	---	---	---	0
9/29	---	---	---	0	97.3	98.0	98.2	24	---	---	---	0	98.6	99.2	102.8	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>		<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>				
9/16	---	---	---	0	103.9	105.8	108.7	24	---	---	---	0	101.8	102.2	102.4	24	---	---	---	0
9/17	---	---	---	0	100.8	101.0	101.3	24	---	---	---	0	100.7	101.0	101.3	24	---	---	---	0
9/18	---	---	---	0	100.3	100.4	100.6	24	---	---	---	0	100.1	100.3	100.7	24	---	---	---	0
9/19	---	---	---	0	99.9	100.1	100.3	24	---	---	---	0	99.8	100.2	100.8	24	---	---	---	0
9/20	---	---	---	0	100.5	100.9	101.1	24	---	---	---	0	99.8	100.2	100.9	24	---	---	---	0
9/21	---	---	---	0	101.5	102.6	106.6	24	---	---	---	0	100.1	100.6	101.1	24	---	---	---	0
9/22	---	---	---	0	100.6	100.9	101.2	24	---	---	---	0	99.9	100.1	100.4	19	---	---	---	0
9/23	---	---	---	0	101.0	101.6	101.9	24	---	---	---	0	99.7	100.1	100.9	21	---	---	---	0
9/24	---	---	---	0	102.4	103.1	103.7	24	---	---	---	0	100.6	100.7	101.2	18	---	---	---	0
9/25	---	---	---	0	101.8	102.4	102.8	24	---	---	---	0	100.2	100.6	101.1	17	---	---	---	0
9/26	---	---	---	0	101.0	101.1	101.4	19	---	---	---	0	100.1	100.1	100.8	11	---	---	---	0
9/27	---	---	---	0	100.5	100.8	101.0	24	---	---	---	0	99.5	99.7	100.1	17	---	---	---	0
9/28	---	---	---	0	99.5	99.8	99.9	24	---	---	---	0	98.4	98.4	99.1	12	---	---	---	0
9/29	---	---	---	0	100.0	100.2	100.4	24	---	---	---	0	101.1	101.5	106.6	14	---	---	---	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>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>				
9/16	101.1	101.3	101.5	24	---	---	---	0	101.6	102.0	102.4	23	---	---	---	0	---	---	---	0
9/17	100.9	101.2	101.4	24	---	---	---	0	101.3	101.6	102.0	21	---	---	---	0	---	---	---	0
9/18	100.7	100.9	101.2	24	---	---	---	0	101.6	102.1	102.4	24	---	---	---	0	---	---	---	0
9/19	100.9	101.1	101.3	24	---	---	---	0	100.9	101.6	102.1	24	---	---	---	0	---	---	---	0
9/20	100.6	100.8	101.2	24	---	---	---	0	102.3	103.1	103.9	24	---	---	---	0	---	---	---	0
9/21	100.6	100.9	101.3	24	---	---	---	0	102.7	103.2	104.2	24	---	---	---	0	---	---	---	0
9/22	100.8	101.0	101.7	19	---	---	---	0	103.0	103.3	103.9	19	---	---	---	0	---	---	---	0
9/23	101.0	101.4	101.7	21	---	---	---	0	103.4	103.7	104.6	21	---	---	---	0	---	---	---	0
9/24	102.0	102.3	102.7	18	---	---	---	0	103.9	104.3	104.9	18	---	---	---	0	---	---	---	0
9/25	101.1	101.4	102.1	17	---	---	---	0	103.2	103.4	104.0	17	---	---	---	0	---	---	---	0
9/26	100.2	100.2	100.5	11	---	---	---	0	102.1	102.1	103.4	11	---	---	---	0	---	---	---	0
9/27	99.6	99.7	100.3	17	---	---	---	0	101.5	101.7	102.2	17	---	---	---	0	---	---	---	0
9/28	99.8	100.3	100.5	24	---	---	---	0	101.5	102.1	102.5	24	---	---	---	0	---	---	---	0
9/29	100.7	101.3	101.8	24	---	---	---	0	101.9	102.6	102.9	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
09/16/2011	64.1	0.1	69.1	0.0	68.8	0.0	67.1	0.0	69.5	0.0	75.3	1.9	70.6	1.0
09/17/2011	69.8	0.1	63.8	0.0	65.1	0.0	64.6	0.0	64.8	0.0	70.4	1.9	68.9	1.1
09/18/2011	51.0	0.1	54.9	0.0	53.7	0.9	49.8	2.0	50.7	0.0	48.0	2.0	45.6	0.9
09/19/2011	67.1	0.1	64.7	0.0	68.2	0.0	72.6	0.1	76.9	0.0	89.6	2.2	83.0	1.1
09/20/2011	74.0	0.1	71.6	0.0	72.8	0.0	71.4	0.0	73.7	0.0	81.9	1.3	79.4	1.1
09/21/2011	84.7	0.1	75.0	0.0	75.4	0.0	75.6	0.0	77.5	0.0	77.7	1.1	70.7	0.7
09/22/2011	85.2	0.1	78.3	0.0	78.9	0.0	76.7	0.0	80.0	0.0	84.6	1.3	81.9	2.0
09/23/2011	101.0	0.1	89.9	0.0	87.9	0.0	86.2	0.0	87.2	0.0	88.9	2.0	83.8	0.8
09/24/2011	73.0	0.1	68.6	0.0	73.5	0.0	76.7	0.0	80.1	0.0	90.6	2.2	89.7	1.2
09/25/2011	46.2	0.1	45.6	0.0	47.4	0.0	45.6	0.0	46.8	0.0	58.7	1.9	57.0	1.1
09/26/2011	84.2	0.1	81.1	0.0	83.3	0.0	84.2	0.0	87.2	0.0	86.1	1.8	80.9	0.7
09/27/2011	58.3	0.2	60.9	0.0	64.7	0.0	66.3	0.0	69.3	0.0	80.1	1.7	78.5	0.8
09/28/2011	73.9	0.1	70.3	0.0	70.8	0.0	72.2	0.0	74.1	0.0	73.0	1.7	68.9	1.0
09/29/2011	77.3	0.1	75.5	0.0	78.4	0.0	77.4	0.0	78.8	0.0	87.4	1.8	84.7	1.0

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
09/16/2011	4.8	0.0	17.1	25.6	36.5	0.0	39.8	0.0	43.5	0.0	41.8	0.0		
09/17/2011	4.8	0.0	17.4	25.9	39.0	0.0	38.8	0.0	41.9	0.0	40.9	0.0		
09/18/2011	2.5	0.0	17.3	26.1	36.3	0.0	35.7	0.0	38.5	0.0	41.9	0.0		
09/19/2011	2.4	0.0	17.9	25.6	38.6	0.0	37.8	0.0	39.6	0.0	39.8	0.0		
09/20/2011	2.4	0.0	18.3	25.4	36.0	0.0	33.0	0.0	32.5	0.0	31.7	0.0		
09/21/2011	1.7	0.0	17.0	24.1	35.3	0.0	34.1	0.0	36.1	0.0	36.4	0.0		
09/22/2011	1.8	0.0	17.9	24.6	31.4	0.0	28.7	0.0	27.8	0.0	29.3	0.0		
09/23/2011	1.8	0.0	18.4	---	35.5	0.0	31.9	0.0	30.9	0.0	25.6	0.0		
09/24/2011	1.8	0.0	18.8	---	29.7	0.0	31.9	0.0	20.4	0.0	20.9	0.0		
09/25/2011	1.7	0.0	---	---	30.8	0.0	20.6	0.0	22.7	0.0	21.7	0.0		
09/26/2011	1.7	0.0	---	---	37.4	0.0	33.8	0.0	31.9	0.0	32.4	0.0		
09/27/2011	1.7	0.0	---	23.6	30.1	0.0	30.1	0.0	30.1	0.0	28.7	0.0		
09/28/2011	1.7	0.0	---	24.3	32.6	0.0	30.6	0.0	32.9	0.0	31.8	0.0		
09/29/2011	1.7	0.0	---	---	35.8	0.0	31.3	0.0	32.8	0.0	32.8	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
09/16/2011	116.9	2.6	114.7	1.0	116.9	0.0	119.1	1.3	50.4	60.0
09/17/2011	108.1	0.0	105.7	0.8	109.4	0.0	110.6	1.3	42.0	60.1
09/18/2011	107.4	0.0	102.8	0.9	104.1	0.0	111.2	1.2	44.5	58.9
09/19/2011	101.2	0.0	101.5	0.8	102.3	0.0	114.7	1.1	50.7	56.4
09/20/2011	119.2	0.0	118.5	0.9	122.0	0.0	130.4	0.8	63.6	59.5
09/21/2011	120.7	1.0	125.3	0.8	123.3	0.0	128.6	1.3	61.9	59.0
09/22/2011	107.5	0.0	101.5	0.6	104.3	0.0	111.8	1.2	49.6	54.5
09/23/2011	105.0	0.0	102.5	0.8	103.6	0.0	114.0	1.2	50.0	56.2
09/24/2011	99.5	0.0	90.7	0.1	91.7	0.0	97.6	1.2	35.8	54.0
09/25/2011	105.1	0.0	94.5	0.8	96.1	0.0	101.0	1.2	38.3	54.9
09/26/2011	114.2	0.0	115.2	0.8	117.0	0.0	126.0	1.1	61.8	56.6
09/27/2011	116.7	0.0	109.7	0.8	109.7	0.0	114.9	1.1	51.6	55.7
09/28/2011	97.2	0.0	108.2	0.3	110.7	0.0	119.8	0.6	49.6	63.1
09/29/2011	111.6	0.0	103.0	0.8	101.4	0.0	109.5	0.6	34.0	68.4

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)	
09/16/2011	*	---	---	---	0	0	1	---	---	---	0	
09/17/2011	*	---	---	---	0	0	0	---	---	---	0	
09/18/2011		---	---	---	0	1	0	---	0	---	0	
09/19/2011		---	---	---	0	1	0	---	0	---	0	
09/20/2011		---	---	---	0	0	0	---	0	---	0	
09/21/2011		---	---	---	0	0	0	---	0	---	0	
09/22/2011		---	---	---	0	0	0	---	0	---	0	
09/23/2011		---	---	---	0	2	0	---	0	---	0	
09/24/2011		---	---	---	4	0	0	---	0	---	0	
09/25/2011		---	---	---	0	0	1	---	0	---	7	
09/26/2011		---	---	---	0	1	0	---	0	---	0	
09/27/2011		---	---	---	0	0	0	---	0	---	8	
09/28/2011		---	---	---	0	0	0	---	0	---	0	
09/29/2011		---	---	---	---	0	0	---	0	---	0	
09/30/2011		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	4	5	2	0	0	0	15	
# Days:		0	0	0	13	14	14	0	12	0	14	
Average:		0	0	0	0	0	0	0	0	0	1	
YTD		31,090	30,210	12,492	18,836	3,831,094	2,528,608	1,236,927	26,463	1,979,496	2,936,472	1,322,332

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)	
09/16/2011	*	---	---	---	675	237	90	---	---	---	298	
09/17/2011	*	---	---	---	165	64	25	---	---	---	445	
09/18/2011		---	---	---	346	44	233	---	3,800	---	642	
09/19/2011		---	---	---	486	33	229	---	860	---	834	
09/20/2011		---	---	---	704	23	86	---	1,590	---	1,111	
09/21/2011		---	---	---	739	90	136	---	3,490	---	1,041	
09/22/2011		---	---	---	929	204	159	---	20,224	---	1,035	
09/23/2011		---	---	---	986	165	84	---	7,960	---	508	
09/24/2011		---	---	---	716	184	61	---	2,240	---	734	
09/25/2011		---	---	---	668	151	54	---	2,180	---	476	
09/26/2011		---	---	---	977	49	61	---	2,690	---	421	
09/27/2011		---	---	---	1,257	69	45	---	2,370	---	594	
09/28/2011		---	---	---	858	158	27	---	1,520	---	601	
09/29/2011		---	---	---	---	88	63	---	1,920	---	331	
09/30/2011		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	9,506	1,559	1,353	0	50,844	0	9,071	
# Days:		0	0	0	13	14	14	0	12	0	14	
Average:		0	0	0	731	111	97	0	4,237	0	648	
YTD		9	38	12	163	1,170,328	1,362,966	373,288	31,133	5,824,344	3,296,670	5,210,672

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)	
09/16/2011	*	---	---	---	7	3	0	---	---	---	0	
09/17/2011	*	---	---	---	1	4	0	---	---	---	0	
09/18/2011		---	---	---	1	5	1	---	0	---	7	
09/19/2011		---	---	---	2	5	0	---	0	---	0	
09/20/2011		---	---	---	6	3	2	---	0	---	0	
09/21/2011		---	---	---	2	5	0	---	0	---	0	
09/22/2011		---	---	---	8	1	1	---	0	---	0	
09/23/2011		---	---	---	4	1	0	---	0	---	0	
09/24/2011		---	---	---	2	2	0	---	0	---	0	
09/25/2011		---	---	---	4	4	0	---	0	---	0	
09/26/2011		---	---	---	4	5	0	---	0	---	0	
09/27/2011		---	---	---	3	5	0	---	0	---	0	
09/28/2011		---	---	---	2	0	0	---	0	---	0	
09/29/2011		---	---	---	---	1	1	---	0	---	0	
09/30/2011		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	46	44	5	0	0	0	7	
# Days:		0	0	0	13	14	14	0	12	0	14	
Average:		0	0	0	4	3	0	0	0	0	1	
YTD		0	0	0	218	83,932	81,880	19,964	46,400	188,209	477,004	439,946

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)	
09/16/2011	*	---	---	---	0	0	0	---	---	---	0	
09/17/2011	*	---	---	---	0	0	1	---	---	---	0	
09/18/2011		---	---	---	0	1	0	---	0	---	0	
09/19/2011		---	---	---	2	0	1	---	0	---	0	
09/20/2011		---	---	---	0	0	0	---	0	---	0	
09/21/2011		---	---	---	0	0	0	---	0	---	0	
09/22/2011		---	---	---	2	0	2	---	0	---	0	
09/23/2011		---	---	---	0	0	2	---	0	---	0	
09/24/2011		---	---	---	0	0	0	---	0	---	0	
09/25/2011		---	---	---	1	0	0	---	10	---	0	
09/26/2011		---	---	---	0	0	1	---	0	---	0	
09/27/2011		---	---	---	1	0	0	---	0	---	0	
09/28/2011		---	---	---	0	0	0	---	0	---	0	
09/29/2011		---	---	---	---	1	0	---	0	---	0	
09/30/2011		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	6	2	7	0	10	0	0	
# Days:		0	0	0	13	14	14	0	12	0	14	
Average:		0	0	0	0	0	1	0	1	0	0	
YTD		1,080	13,882	4,071	2,934	4,118,596	2,033,111	838,189	28,473	608,092	2,620,215	246,508

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)
09/16/2011	*	---	---	---	---	1	0	0	---	---	0
09/17/2011	*	---	---	---	---	7	0	0	---	---	0
09/18/2011		---	---	---	---	3	1	0	---	0	0
09/19/2011		---	---	---	---	7	0	0	---	0	0
09/20/2011		---	---	---	---	2	2	0	---	0	0
09/21/2011		---	---	---	---	4	1	0	---	10	0
09/22/2011		---	---	---	---	3	0	0	---	40	0
09/23/2011		---	---	---	---	8	0	0	---	0	0
09/24/2011		---	---	---	---	2	0	0	---	0	0
09/25/2011		---	---	---	---	2	0	0	---	0	0
09/26/2011		---	---	---	---	2	0	0	---	0	0
09/27/2011		---	---	---	---	3	2	0	---	0	0
09/28/2011		---	---	---	---	0	0	0	---	10	0
09/29/2011		---	---	---	---	---	2	0	---	0	0
09/30/2011		---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	44	8	0	0	60	0
# Days:		0	0	0	0	13	14	14	0	12	14
Average:		0	0	0	0	3	1	0	0	5	0
YTD		0	0	1	0	119,409	44,457	31,325	18,763	325,901	364,035

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)
09/16/2011	*	---	---	---	---	0	0	0	---	---	0
09/17/2011	*	---	---	---	---	0	1	0	---	---	0
09/18/2011		---	---	---	---	0	0	0	---	0	0
09/19/2011		---	---	---	---	0	0	0	---	20	4
09/20/2011		---	---	---	---	1	0	0	---	0	0
09/21/2011		---	---	---	---	0	0	0	---	0	0
09/22/2011		---	---	---	---	0	1	0	---	0	0
09/23/2011		---	---	---	---	0	0	0	---	0	0
09/24/2011		---	---	---	---	0	0	0	---	40	0
09/25/2011		---	---	---	---	1	1	0	---	20	0
09/26/2011		---	---	---	---	1	2	0	---	10	0
09/27/2011		---	---	---	---	0	1	0	---	20	4
09/28/2011		---	---	---	---	0	2	0	---	20	0
09/29/2011		---	---	---	---	---	1	0	---	30	0
09/30/2011		---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	3	9	0	0	160	8
# Days:		0	0	0	0	13	14	14	0	12	14
Average:		0	0	0	0	0	1	0	0	13	1
YTD		0	0	0	0	10,566	17,646	748	327	164,516	494,478

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:

9/30/11 10:34 AM

09/16/11 TO 09/30/11

		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	9,506	4	46	6	44	9,606
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,915	0	0	3	0	1,918
	Sum of Numbertrucked	7,488	3	47	4	44	7,586
	Sum of SampleMorts	196	1	0	0	3	200
	Sum of FacilityMorts	12	0	0	0	0	12
	Sum of ResearchMorts	23	0	0	0	0	23
	Sum of TotalProjectMorts	231	1	0	0	3	235
LGS	Sum of NumberCollected	1,559	5	44	2	8	1,618
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	1,553	6	45	2	6	1,612
	Sum of SampleMorts	33	0	3	0	0	36
	Sum of FacilityMorts	18	0	1	0	0	19
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	51	0	4	0	0	55
LMN	Sum of NumberCollected	1,353	2	5	7		1,367
	Sum of NumberBarged	0	0	0	0		0
	Sum of NumberBypassed	0	0	0	4		4
	Sum of Numbertrucked	1,178	2	6	3		1,189
	Sum of SampleMorts	201	0	0	0		201
	Sum of FacilityMorts	0	0	0	0		0
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	201	0	0	0		201
MCN	Sum of NumberCollected	50,655			10	60	50,725
	Sum of NumberBarged	0			0	0	0
	Sum of NumberBypassed	0			0	0	0
	Sum of Numbertrucked	48,536			9	60	48,605
	Sum of SampleMorts	11			0	0	11
	Sum of FacilityMorts	194			1	0	195
	Sum of ResearchMorts	0			0	0	0
	Sum of TotalProjectMorts	205			1	0	206
Total Sum of NumberCollected		63,073	11	95	25	112	63,316
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		1,915	0	0	7	0	1,922
Total Sum of Numbertrucked		58,755	11	98	18	110	58,992
Total Sum of SampleMorts		441	1	3	0	3	448
Total Sum of FacilityMorts		224	0	1	1	0	226
Total Sum of ResearchMorts		23	0	0	0	0	23
Total Sum of TotalProjectMorts		688	1	4	1	3	697

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/30/11 10:34 AM

TO: 09/30/11

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	740,434	2,716,916	54,700	78,111	2,713,313	6,303,474
	Sum of NumberBarged	641,690	1,705,111	40,040	35,412	1,437,012	3,859,265
	Sum of NumberBypassed	84,983	1,009,672	14,509	42,055	1,275,916	2,427,135
	Sum of NumberTrucked	11,029	9	128	64	8	11,238
	Sum of SampleMorts	615	102	2	76	42	837
	Sum of FacilityMorts	2,064	1,781	21	504	272	4,642
	Sum of ResearchMorts	53	241	0	0	58	352
	Sum of TotalProjectMorts	2,732	2,124	23	580	372	5,831
LGS	Sum of NumberCollected	736,432	1,449,338	41,602	24,301	1,132,423	3,384,096
	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	6,930	13	249	29	24	7,245
	Sum of SampleMorts	442	52	6	14	11	525
	Sum of FacilityMorts	3,354	1,736	3	133	403	5,629
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	3,796	1,788	9	147	414	6,154
LMN	Sum of NumberCollected	252,596	854,199	13,240	21,051	565,789	1,706,875
	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	5,227	38	66	2	5	5,338
	Sum of SampleMorts	625	3	6	0	5	639
	Sum of FacilityMorts	1,378	1,499	13	253	872	4,015
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2,003	1,502	19	253	877	4,654
MCN	Sum of NumberCollected	2,484,938	952,682	71,810	136,764	295,999	3,942,193
	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	404,089	9	95	1,092	9	405,294
	Sum of SampleMorts	831	187	8	41	13	1,080
	Sum of FacilityMorts	41,822	2,691	170	374	206	45,263
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	42,653	2,878	178	415	219	46,343
Total Sum of NumberCollected		4,214,400	5,973,135	181,352	260,227	4,707,524	15,336,638
Total Sum of NumberBarged		2,664,698	3,686,259	93,246	75,933	2,790,130	9,310,266
Total Sum of NumberBypassed		1,069,247	2,278,512	87,441	181,710	1,913,658	5,530,568
Total Sum of NumberTrucked		427,275	69	538	1,187	46	429,115
Total Sum of SampleMorts		2,513	344	22	131	71	3,081
Total Sum of FacilityMorts		48,618	7,707	207	1,264	1,753	59,549
Total Sum of ResearchMorts		53	241	0	0	58	352
Total Sum of TotalProjectMorts		51,184	8,292	229	1,395	1,882	62,982

Cumulative Adult Passage at Mainstem Dams Through: 09/29

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	09/29	167097	50945	244384	12612	174444	16431	108279	51451	97604	15603	89217	13568	366160	71592	436479	57833	377015	46424
TDA	09/29	124164	40146	189839	11546	130174	13470	81127	39844	81292	12528	78252	10628	201835	58757	242242	43699	194448	36109
JDA	09/29	103401	39823	179446	11794	110572	12004	74073	34571	70955	12475	71151	11642	149729	51814	179792	37991	140256	30899
MCN	09/29	101245	31750	153500	9185	102003	11175	74621	28165	66526	8063	67398	9237	125369	31285	156076	21444	105932	22330
IHR	09/29	69306	18161	101188	6047	70295	6879	26758	12378	29583	3503	17776	3412	27185	15610	40494	8697	17630	9503
LMN	09/29	69832	18094	97334	5898	69566	5561	31176	13730	35097	4362	18759	3055	23070	13538	34109	11080	15836	8344
LGS	09/29	67321	23492	92985	5461	64800	6145	42211	18214	32410	3968	15770	3504	22132	11596	32761	7010	13722	6069
LGR	09/29	59342	22063	94203	6409	65342	7745	36764	16425	28778	5294	14778	4385	19188	12035	30435	8537	11712	7590
PRD	09/28	15246	6030	30539	932	20141	818	50865	4223	49265	1217	58614	2426	24024	4017	22747	2796	22618	3844
RIS	09/28	13089	8394	29684	1513	17327	1572	44432	14299	47220	4018	55301	5331	6296	3956	6032	1999	7527	2003
RRH	09/28	6989	3491	8660	523	6536	525	38861	8131	34173	1724	42074	4056	5108	2615	4139	1179	5155	1483
WEL	09/28	4153	3969	7596	661	5414	510	29491	8443	27052	1898	31529	2157	1846	1678	2105	803	2738	1034
WFA	09/27	43748	1399	65293	1758	51657	1104	-	-	-	-	-	-	1238	272	598	72	835	139

DAM	Coho 2010						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	116505	3278	54074	4911	90875	4847	185796	386524	123898	357473	402294	394846	125530
TDA	50178	3893	19154	1882	22359	2491	138289	325132	105743	273682	299757	281676	95333
JDA	36985	2174	12742	1360	18844	2873	143137	324124	110256	210282	240072	252159	72435
MCN	23372	1426	8384	1014	9492	1192	113952	278798	91599	200314	217113	194861	63611
IHR	3264	710	895	139	816	52	1141	1302	280	151645	164330	136038	38241
LMN	1679	178	792	162	746	83	1395	1656	349	136629	156823	124518	35119
LGS	1531	256	829	127	662	73	1436	1659	335	119558	132505	105268	32923
LGR	1314	120	514	134	486	102	1501	2201	427	118602	131035	100662	33857
PRD	1937	336	1328	191	1691	225	145070	357058	115345	18352	24663	18125	0
RIS	4618	313	1907	409	1701	245	146111	338307	111637	16845	20273	16739	7764
RRH	778	38	370	92	222	39	132096	295634	88146	12636	15665	12574	5424
WEL	353	0	59	0	28	0	111507	291753	88342	9051	10521	8941	3618
WFA	1785	1295	11919	1356	3486	797	-	-	-	27654	32223	28677	-

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: 09/30/11

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