Fish Passage Center

Weekly Report #11 - 14

June 17, 2011

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 82% and 249% of average at individual sub-basins over June. Precipitation above The Dalles has been 170% of average over June. Over the 2011 water year, precipitation has ranged between 110% and 135% of average.

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

Location	Water Year 2011 June 1-13, 2011		Water Year 2011 October 1, 2010 to June 13, 2011	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.69	163	23.08	120
Snake River Above Ice Harbor	1.25	197	18.96	133
Columbia Above The Dalles	1.32	170	23.48	126
Kootenai	1.44	135	22.72	116
Clark Fork	2.09	249	17.24	131
Flathead	2.52	220	23.41	135
Pend Oreille/ Spokane	1.39	146	32.13	124
Central Washington	0.28	103	8.96	118
Snake River Plain	0.63	152	11.94	132
Salmon/Boise/ Payette	1.29	203	19.80	118
Clearwater	1.97	183	33.52	132
SW Washington Cascades/Cowlitz	1.05	82	70.04	110
Willamette Valley	0.91	93	59.93	110

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

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

Location	June Final		June Mid-Month	
	% 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	79100
Libby Res. Inflow, MT (Apr-Aug)	127	7930 8099*	131	8170
Hungry Horse Res. Inflow, MT (Jan-July)	153	3410	153	3410
Lower Granite Res. Inflow (Apr- July)	156	33700	156	33700
Brownlee Res. Inflow (Apr-July)	177	11200	179	11300
Dworshak Res. Inflow (Apr-July)	143	3770 3813*	143	3770

* Denotes COE Forecast

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast, the flow objective this spring is 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 186.3 Kcfs over the last week and 136.5 Kcfs over the spring season.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives are 260 Kcfs at McNary Dam (began April 10th) and 135 Kcfs at Priest Rapids Dam (began April 10th). Flows at McNary Dam have averaged 489.8 Kcfs over the last week and 365.1 Kcfs over the spring season. Flows at Priest Rapids Dam have averaged 308.9 Kcfs over the last week and 222.4 Kcfs over the spring season.

Grand Coulee Reservoir is at 1255.3 feet (6-16-11) and has refilled 11.0 feet over the last week. Outflows at Grand Coulee have ranged between 225.9 and 241.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2399.0 feet (6-16-11) and has refilled 11.7 feet last week. Outflows at Libby Dam have been 24.5-25.8 Kcfs last week.

Hungry Horse is currently at an elevation of 3524.0 feet (6-16-11) and has refilled 8.9 feet last week. Outflows at Hungry Horse have been 8.0 Kcfs last week.

Dworshak is currently at an elevation of 1574.2 feet (6-16-11) and has refilled 14.0 feet last week. Outflows from Dworshak have ranged between 2.3-6.8 Kcfs last week.

The Brownlee Reservoir was at an elevation of 2068.5 feet on June 16th, 2011 refilling 6.4 feet last week. Over the last week, outflows at Brownlee have ranged between 48.7-50.2 Kcfs.

Spill:

Spill for fish passage began on April 3rd at the lower Snake River projects, and on April 10th at the lower Columbia River projects.

Continued high flows in the Snake and Columbia rivers have resulted in uncontrolled spill levels throughout the FCRPS, as flows peak and the system continues to be operated for flood control.

A small amount of spill occurred at Dworshak Dam on a few days this past week. Otherwise, the project has been refilling. All units are now operational at Lower Granite Dam. Over the past week, daily average flows at Lower Granite Dam have ranged from 178.8 to 197 Kcfs, and spill has ranged from 70.2 to 86.4 Kcfs. At Little Goose Dam, spill has exceeded the 30% level as specified in the Court Order. Daily average spill at Little Goose dam has ranged from 78.8 Kcfs to 98.7 Kcfs. At Lower Monumental Dam spill was in excess of the Court Order and ranged from 60.2 to 84.8 Kcfs.

Beginning April 28th, the Court Order spill operations at Ice Harbor called for an alternating schedule of 45 Kcfs spill during the day and gas cap spill at night versus 30% if instantaneous flow, on 2-day alternating blocks until mid-July. Over the past week spill levels have exceeded the Court Order and, since May 22nd spill has occurred as all flow in excess of powerhouse or generation capacity. Spill has ranged from 99 to 122.1 Kcfs.

Project	Day/Night Spill
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	**April 3-April 27:** 45 Kcfs/gas cap **April 28-~mid-July:** 45 Kcfs/gas cap vs. 30%/30%

Spill for fish passage at the Lower Columbia projects began on April 10th. However, due to high flows spill is also in excess of the Court Ordered spill for fish passage in the lower Columbia. In addition, spill is occurring at Grand Coulee Dam, which is being operated for flood control downriver. The COE is targeting a flood control flow of 480 Kcfs at The Dalles Dam. This flow exceeds the 7Q10 flow, above which Oregon and Washington's water quality standards do not apply.

Spill at McNary Dam has been in excess of the Court Order as a result of flows in excess of hydraulic capacity and unit outages. Spill at McNary Dam has ranged between 66.5% and 69.1% of daily average flow (daily average spill ranged from 320.4 to 343.3 Kcfs) at this project. The planned test at John Day Dam started on the evening of April 27th. Under this test, spill at John Day Dam alternates between 30% and 40% of instantaneous flow, roughly every two days. Spill levels at John Day have exceeded the Court Order and test conditions this week (daily average spill ranged from 45.4% to 50.4% of total river flow). At

The Dalles Dam, spill exceeded the 40% objective this past week, ranging from 48% to 53.1%). Finally, at Bonneville Dam, spill exceeded the 100 Kcfs in the Court Order implemented until June 15th and exceeded the summer test operations beginning June 16th, with spill ranging from a daily average of 279.6 Kcfs to 303.1 Kcfs.

Project	Day/Night Spill
McNary	40%/40%
John Day	**Pre-test:** 30%/30% **Testing:** 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	**June 16 to July 20**: alternate between 95 Kcfs/95 Kcfs and 85 Kcfs/121 Kcfs. **July 20th - August 31:** 75 Kcfs day/GasCap night.

All points of compliance, with the exception of the Lower Granite Dam forebay monitor, were exceeding the 115/120% TDG levels this week. Gas Bubble Trauma monitoring at Little Goose Dam showed GBT in 14% of the fish examined on June 13th, with some fish with Rank 3 and 4 signs. Incidences of GBT at Lower Monumental Dam showed 8% of fish examined showing signs of GBT on the June 15th sample at this site. Gas Bubble Trauma examinations at McNary Dam were done on June 13th with 1% of the fish examined showing signs of GBT. Incidence of GBT at Rock Island Dam has remained high this week. The examination on June 14th revealed a 21% incidence of GBT while the sample on June 16th revealed a 10% incidence of GBT. Total dissolved gas levels in the Mid Columbia River have generally been higher than observed in the Snake and lower Columbia rivers over the past week.

The action criteria for GBT with Rank 1 signs of GBT is 15% of the population. However, with the present flows and spill levels the system is in an uncontrolled state and no action would be possible if the criteria were exceeded.

Smolt Monitoring:

Smolt monitoring was ongoing at all SMP dams this past week. Spring migrant passage indices declined at all sites except Rock Island Dam over the past week, while subyearling Chinook indices increased at most sites.

At Lower Granite Dam subyearling Chinook smolts continued to predominate in the sample this week with indices averaging 26,000 per day compared to 18,000 per day last week. All spring migrant indices decreased this week, with steelhead indices averaging 6,700 per day this week compared to 13,000 last week; yearling Chinook average weekly indices dropped from 2,000 to 1,500; sockeye indices also dropped from 900 per day last week to 500 this week.

Sampling at Little Goose Dam was ongoing this past week. Indices followed patterns seen at Lower Granite Dam, with spring migrant indices decreasing and subyearling Chinook indices increasing. Monitoring Lower Monumental Dam found similar patterns to those at Lower Granite Dam, with passage indices for all spring species declining and subyearling Chinook predominating in collections.

Sampling at Rock Island Dam is ongoing. Collections at the site have declined rapidly over the past week for coho, while indices for other migrants either increased or were similar to last week. Steelhead predominated in the sample in the past week with the average index at 418 per day this week similar to the 420 per day last week. For coho indices were down, with the daily average index at 240 per day this week compared to 1,000 per day last week. The average daily passage index last week was 300 for subyearling Chinook about equal to the 296 per day last week.

Sampling at McNary Dam is every other day in the spring. Normal sampling began on April 13. Subyearling Chinook predominated in passage at the site this past week, with the average passage index for subyearling Chinook at 38,000 per day this week compared to 43,000 last week. Indices for all spring migrants were down. Coho indices were down this week with the index at 3,700 per day this week compared to 8,900 per day last week. The yearling Chinook index averaged 3,000 per day this week compared to 14,000 per day last week. For steelhead the index averaged 2,400 per day this week compared to 2,800 per day last week and for sockeye the index was at 1,200 per day this week compared to 5,400 per day last week.

At John Day Dam passage indices declined for all spring migrant species over the past week. And for the first time this season subyearling Chinook predominated in the sample. The site has had

considerable problems with debris in gatewells which lead to high mortality in turbine units 1 and 2 over that past few weeks. The COE only recently discovered the event but apparently there was at least a week period when debris was causing higher mortality. The COE initially estimated the mortality at 260 smolts but that was likely an underestimate. Collection estimates may have been biased over the past few weeks as gatewells had such low elevations due to debris loading that in some cases fish would have been drawn into the gatewells from the collection channel. As such subyearling Chinook predominated in the passage at the site, with the average index at 24,000 per day this week up from 23,000 per day last week. Indices were down for all spring migrants at the site.

At Bonneville Dam the screens have been removed at Powerhouse 2 so that collections are lower than normal. Due to debris and high flows the COE was unable to keep the screens clean so that they removed the screens until flows subside. Given the biased collections the largest collections over the past week have been subyearling Chinook followed in descending order by steelhead, coho, yearling Chinook and sockeye.

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 to begin this week. However, several releases of subyearling fall Chinook juveniles to the Clearwater River and its tributaries that began in early June were scheduled to end this week. In addition to the releases that were schedule to end this week, releases of fall Chinook surrogates to the Clearwater River are scheduled to begin on or around June 20th. In all, 98,000 fall Chinook surrogates are scheduled for release into the Clearwater River this year. Like the Snake River surrogates, these Clearwater River surrogates are 100% PIT-tagged, but otherwise unmarked. Beginning on or around June 28th, approximately 550,000 spring Chinook parr will be released into the Selway River. These spring Chinook parr are not expected to out-migrate until spring 2012 and approximately 27% are unmarked. There are no other new releases scheduled for this zone over the next two weeks.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. A release of approximately 3.45 million subyearling fall Chinook from Ringgold Hatchery was scheduled to begin this week. Several releases of juvenile coho that began in past weeks were scheduled to end this week. These coho releases were part of the Yakama Tribal program to reintroduce coho into the Methow, Wenatchee, and Yakima rives. There are no new releases of juvenile salmonids scheduled for the next two weeks. However, the release of 3.45 million subyearling fall Chinook from Ringgold Hatchery is scheduled to end on or around June 30th. In addition, a release of nearly 6.8 million subyearling fall Chinook from Priest Rapids that began on June 5th is scheduled to end on or around June 20th.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately 4.5 million subyearling fall Chinook were scheduled for release into the Little White Salmon River this week. These are the only juvenile salmonids that were scheduled for release into this zone this week. Finally, there are no new releases of juvenile salmonids scheduled for this zone over the next two weeks.

Adult Passage:

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam ranged between 2,511 and 3,877 adult summer Chinook in the last week. The 2011 summer Chinook count of 41,043 is about 1.18 times greater than the 2010 count and 1.36 times greater than the 10 year average. The 2011 Bonneville Dam summer Chinook jack count of 17,248 is 4.41 times greater than the 2010 count and 3.97 times greater than the 10 year average count. At McNary Dam 12,823 adult summer Chinook have been counted. The 2011 McNary adult summer Chinook is about 96.2% of the 2010 count while being 1.19 times greater than the 10 average. The 2011 McNary Dam summer Chinook jack count of 6,001 is about 5.17 times greater than the 2010 count of 1,161 and about 4.17 times greater than the 10 year average count of 1,440.

At Willamette Falls 26,901 adult spring Chinook have been counted so far this year. The 2011 adult spring Chinook count at Willamette Falls is about 59.7% of the 2010 count of 45,037. The last day of counting spring Chinook at Rock Island Dam and Lower Granite Dam is 6/17. The 2011 adult spring Chinook count at Rock Island Dam of 12,720 is about 43.5% of the 2010 count and 75.6% of the 10 year

average. The 2011 Rock Island spring Chinook jack count of 7,917 is about 5.35 times greater than the 2010 count and 5.24 times greater than the 10 year average. The 2011 adult spring Chinook count at Lower Granite Dam of 58,275 is about 65.1% of the 2010 count and 90.8% of the 10 year average. The 2011 Lower Granite spring Chinook jack count of 21,407 is about 3.50 times greater than the 2010 count and 2.83 times greater than the 10 year average.

The Bonneville Dam 2011 steelhead count of 5,984 is about 49.9% of the 2010 count of 11,995 and about 69.8% of the 10 year average count of 8,572. In the Snake River, this year's Lower Granite steelhead count of 12,318 is about 1.17 times greater than the 2010 count of 10,499 and 1.31 times greater than the 10 year average of 9,393. The 2011 Lower Granite wild steelhead count as of June 16th was 5,786. At Willamette Falls Dam, the 2011 count for steelhead was 18,290, as of June 12th. This year's steelhead count is about 77.5% of the 2010 count of 23,598 at Willamette Falls Dam for the same date range.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 297 and 1,904 last week. The 2011 adult sockeye count at Bonneville Dam of 6,306 is about 27.9% of the 2010 count of 22,598 and about 46.7% of the 10 year average count of 13,602. As of June 16th, the 2011 adult sockeye count at McNary Dam was 175.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 6/3/2011 to 06/16/11

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2011	230,000	05-16-11	06-06-11	Couse Creek	Snake River
National Marine Fisheries Service Total					**230,000**				
Nez Perce Tribe	Kooskia NFH	CO	UN	2012	50,000	05-25-11	06-07-11	Clear Creek	Clearwater River M F
Nez Perce Tribe	Kooskia NFH	CO	UN	2012	50,000	05-25-11	06-07-11	Lapwai Creek	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2011	200,000	06-01-11	06-15-11	Cedar Flats Acclim.	Selway River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2011	200,000	06-01-11	06-15-11	Lukes Gulch Acclim.	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2011	300,000	05-20-11	06-15-11	Clearwater River	Snake River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2011	500,000	06-01-11	06-15-11	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					**1,300,000**				
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2011	263,877	04-04-11	06-10-11	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					**263,877**				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2011	2,000,000	06-16-11	06-16-11	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2011	2,500,000	06-16-11	06-16-11	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service Total					**4,500,000**				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2011	6,785,432	06-05-11	06-20-11	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2011	3,450,000	06-15-11	06-30-11	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**10,235,432**				
Yakama Tribe	Cascade Hatchery	CO	UN	2011	69,223	05-07-11	06-16-11	Coulter Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2011	69,322	05-07-11	06-12-11	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2011	69,331	05-07-11	06-07-11	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2011	69,339	04-29-11	06-07-11	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2011	27,365	05-07-11	06-12-11	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2011	29,279	04-29-11	06-07-11	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2011	49,379	04-29-11	06-14-11	Winthrop Hatchery	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2011	60,901	05-07-11	06-07-11	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe Total					**444,139**				
Grand Total					**16,973,448**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 6/17/2011 to 6/30/2011

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2011	98,000	06-20-11	07-08-11	Big Canyon (Clearwater River)	Clearwater River M F
National Marine Fisheries Service Total					**98,000**				
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2012	550,000	06-28-11	06-29-11	Meadow Creek - SELW	Selway River
Nez Perce Tribe Total					**550,000**				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2011	6,785,432	06-05-11	06-20-11	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2011	3,450,000	06-15-11	06-30-11	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**10,235,432**				
Grand Total					**10,883,432**				

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/03/2011	261.9	97.9	267.7	144.6	286.6	133.7	308.1	112.6	299.9	115.8	316.7	183.8	328.0	208.7
06/04/2011	262.7	98.0	273.1	144.8	287.9	132.0	296.6	115.6	292.5	104.8	330.8	196.9	333.6	213.8
06/05/2011	264.8	100.5	269.6	145.1	295.1	149.9	312.7	123.6	310.5	119.8	329.1	199.5	342.4	217.5
06/06/2011	254.9	93.7	260.8	141.5	285.2	146.3	307.9	118.0	304.3	117.0	325.4	193.9	332.1	205.7
06/07/2011	228.5	68.8	233.4	118.8	270.2	137.2	284.1	106.8	282.0	100.1	301.2	167.7	299.8	193.1
06/08/2011	209.9	51.3	222.9	126.1	261.3	127.9	281.7	95.5	276.3	97.4	309.1	167.7	316.7	200.9
06/09/2011	203.6	46.9	201.2	89.7	232.8	96.8	251.1	74.4	253.9	79.1	281.9	143.9	288.8	166.9
06/10/2011	223.8	63.2	223.1	106.1	251.3	109.5	262.3	81.0	264.6	78.7	272.8	146.9	274.9	175.8
06/11/2011	236.2	73.1	239.4	139.5	272.0	137.6	283.1	119.0	286.7	93.3	307.5	176.8	312.8	227.3
06/12/2011	226.2	86.7	236.9	129.1	265.6	127.4	286.0	127.4	289.7	105.6	320.0	187.7	328.7	222.1
06/13/2011	225.9	71.9	219.8	131.8	250.7	113.7	265.3	93.1	269.6	96.9	280.2	170.3	287.3	179.5
06/14/2011	241.3	86.1	248.5	142.0	276.8	145.2	292.3	119.0	295.0	112.6	318.8	203.9	323.1	214.7
06/15/2011	239.9	82.2	242.7	137.3	270.3	137.7	280.2	115.4	282.9	108.0	311.8	200.3	321.0	208.4
06/16/2011	235.6	81.4	242.4	127.2	266.9	135.3	286.0	112.2	291.3	101.0	308.6	190.5	314.3	199.9

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/03/2011	10.1	0.4	61.0	51.5	169.6	59.6	161.6	71.5	168.7	55.5	175.2	93.6
06/04/2011	10.2	0.5	59.0	50.5	160.4	51.0	152.8	64.8	158.2	44.0	164.7	84.3
06/05/2011	9.6	0.7	56.3	50.6	158.2	50.1	149.0	63.2	155.0	43.0	159.3	83.0
06/06/2011	6.8	0.0	55.9	50.8	161.8	52.7	151.7	61.5	156.0	48.6	162.1	81.1
06/07/2011	7.0	0.0	60.3	50.8	188.1	77.6	177.1	87.1	185.2	76.2	189.3	105.2
06/08/2011	6.9	0.0	60.3	50.8	211.2	99.5	200.8	111.4	215.2	104.0	214.6	131.5
06/09/2011	6.8	0.0	60.2	50.8	206.5	97.1	195.0	105.3	211.2	96.9	215.7	134.9
06/10/2011	6.8	0.0	59.6	50.8	197.0	86.4	188.6	98.7	199.5	84.8	202.9	122.1
06/11/2011	2.4	0.5	58.2	50.8	182.6	72.0	173.1	83.1	180.5	65.4	186.7	106.2
06/12/2011	2.3	0.2	56.7	50.9	178.8	70.2	169.0	78.8	177.2	60.2	181.6	99.0
06/13/2011	6.7	0.0	56.5	51.2	183.2	72.5	172.9	83.3	178.3	61.3	184.7	101.1
06/14/2011	6.7	0.1	56.2	51.6	188.9	77.9	180.0	91.2	188.7	71.6	191.6	108.5
06/15/2011	6.7	0.0	55.4	51.4	189.4	78.5	180.6	90.5	190.2	73.2	196.6	113.6
06/16/2011	6.6	0.0	---	---	184.5	74.5	174.0	83.4	180.9	64.6	187.6	105.1

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

	McNary		John Day		The Dalles		Bonneville			
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
06/03/2011	476.7	332.6	498.0	225.6	481.1	225.7	493.8	282.7	82.7	116.0
06/04/2011	486.1	340.4	513.8	230.4	498.4	243.1	502.6	287.6	85.6	117.0
06/05/2011	477.6	329.9	502.5	224.5	493.3	240.0	502.7	290.0	83.0	117.3
06/06/2011	485.8	337.8	505.4	231.6	491.8	240.4	502.7	296.1	77.7	116.6
06/07/2011	493.6	342.9	496.5	230.4	482.4	227.1	499.9	291.5	77.3	118.7
06/08/2011	510.3	356.0	505.6	233.5	492.3	233.3	500.4	292.8	77.1	118.1
06/09/2011	500.9	339.8	506.1	239.5	494.5	238.1	500.5	296.3	75.2	116.5
06/10/2011	486.5	327.5	500.3	232.4	494.8	241.1	502.0	287.6	84.8	117.2
06/11/2011	484.3	325.3	498.6	229.5	491.1	242.9	500.2	286.0	85.9	115.9
06/12/2011	481.6	320.4	489.2	223.8	478.2	229.7	498.8	283.8	86.2	116.4
06/13/2011	484.3	325.2	492.3	223.3	482.1	241.3	498.4	280.4	87.5	118.1
06/14/2011	494.8	342.1	500.6	239.9	490.0	246.5	499.2	279.6	87.9	119.3
06/15/2011	501.5	343.3	507.0	255.4	489.8	244.2	500.8	293.6	86.8	108.0
06/16/2011	495.7	329.1	505.4	253.6	492.8	261.5	501.3	303.3	84.6	101.0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	99.1	99.4	99.9	24	128.9	129.4	129.9	24	117.0	117.4	118.2	24	140.0	140.2	140.9	24	137.4	137.6	137.7	24
6/4	98.6	98.7	98.8	24	129.5	130.0	130.6	23	117.2	117.7	118.3	24	140.2	140.5	140.6	23	138.0	138.7	139.2	24
6/5	99.5	100.0	100.4	23	129.6	130.1	130.3	22	118.4	119.0	119.2	24	141.5	142.4	142.9	22	139.0	139.5	139.9	24
6/6	99.7	100.0	100.3	23	130.1	130.3	130.9	21	120.0	120.5	121.2	24	141.7	142.7	143.5	21	139.5	140.2	140.5	24
6/7	99.6	99.7	99.9	24	129.9	130.5	131.2	22	120.5	120.7	120.9	24	138.9	139.4	139.6	22	139.7	140.2	140.6	24
6/8	100.3	101.1	101.9	24	130.1	130.4	131.1	19	119.1	119.4	119.9	24	134.3	135.4	137.2	19	135.4	136.3	137.9	24
6/9	101.1	101.3	101.8	20	131.5	131.7	132.3	19	119.2	119.5	120.0	24	132.6	133.0	133.2	19	133.5	134.0	134.6	24
6/10	101.5	102.8	103.4	24	131.8	132.2	132.5	23	120.3	120.7	121.1	24	135.9	137.7	138.7	23	131.2	131.5	131.8	24
6/11	103.8	104.3	104.7	23	131.7	132.0	132.5	23	121.5	121.8	122.2	24	139.0	139.3	139.5	23	132.8	134.3	135.1	24
6/12	103.8	104.2	104.6	24	132.1	132.4	132.7	22	121.7	122.0	122.7	24	140.5	142.1	143.4	22	136.2	136.9	137.1	24
6/13	104.0	104.5	104.9	24	132.0	132.1	132.5	23	121.9	122.2	122.5	24	138.1	139.4	141.8	23	137.5	138.6	139.2	24
6/14	104.3	104.6	105.0	24	132.6	133.5	134.0	23	121.0	121.3	121.6	24	140.9	141.4	141.8	23	134.2	135.2	137.2	24
6/15	104.0	104.4	104.9	24	133.0	133.1	133.2	21	121.4	121.5	121.7	24	140.4	140.6	140.8	21	137.1	137.8	138.2	24
6/16	104.2	104.9	105.3	22	133.3	133.5	133.7	21	121.0	121.1	121.4	23	140.5	141.4	142.2	21	136.0	136.2	137.0	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	122.1	122.9	123.4	24	125.3	126.3	127.2	23	135.3	135.6	136.3	23	132.1	132.6	133.1	24	132.2	133.1	133.6	24
6/4	121.2	121.6	122.0	24	127.9	129.1	129.9	24	136.4	137.3	137.7	24	132.5	133.3	133.9	24	132.2	133.0	133.6	24
6/5	119.4	120.8	122.7	24	126.4	127.0	127.3	24	136.5	137.3	138.2	24	134.2	134.6	135.3	24	134.5	135.4	136.5	24
6/6	118.5	119.0	119.5	24	126.1	126.6	127.0	23	136.2	136.7	137.7	23	133.7	134.4	135.4	24	133.5	134.1	134.8	24
6/7	117.6	118.1	118.9	24	124.5	124.8	125.5	24	133.8	135.5	137.6	24	131.8	132.2	132.7	24	129.0	129.6	131.9	24
6/8	116.7	117.1	117.8	24	120.5	121.5	123.0	24	130.1	131.7	135.3	24	128.0	128.8	130.5	24	126.5	127.0	128.1	24
6/9	116.2	117.3	118.5	24	121.3	121.9	122.2	24	128.2	129.6	132.4	24	127.5	128.9	129.9	24	125.0	125.8	127.2	24
6/10	116.8	117.7	119.4	24	121.2	121.7	122.4	24	128.4	129.0	129.8	24	126.6	127.8	129.7	24	127.0	127.5	127.9	24
6/11	118.4	119.0	119.6	24	121.1	121.6	122.2	24	135.4	148.6	150.3	24	127.7	129.2	131.1	24	127.6	128.0	128.7	24
6/12	117.6	118.5	119.4	24	122.1	122.9	123.7	24	95.3	95.6	95.8	24	128.5	129.4	130.4	24	128.1	128.4	128.7	24
6/13	116.9	117.2	117.6	24	121.3	122.4	123.1	24	95.0	95.2	95.5	24	127.9	128.4	129.5	24	127.0	127.5	128.3	24
6/14	117.7	118.2	118.9	24	121.0	121.4	121.5	23	114.7	130.9	131.6	23	125.9	127.5	129.1	24	130.4	131.2	131.9	24
6/15	117.5	118.0	118.8	24	121.0	121.7	122.3	24	130.7	131.5	132.2	24	128.0	128.6	129.1	24	128.0	128.5	130.1	24
6/16	117.2	117.5	117.7	24	121.6	121.9	122.3	24	131.1	132.1	132.7	24	128.6	129.6	130.4	24	127.8	128.3	128.7	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	128.7	129.4	129.8	24	132.7	133.2	133.4	24	126.3	128.7	129.7	24	129.9	130.7	132.7	24	125.2	126.5	127.1	24
6/4	129.0	129.8	130.2	24	131.8	132.3	132.9	24	130.1	131.5	132.7	34	133.0	135.0	148.2	28	126.8	128.5	128.8	34
6/5	130.6	131.3	131.8	24	133.9	134.6	135.0	24	130.8	131.4	131.9	34	148.3	148.3	149.2	10	129.4	130.4	130.6	34
6/6	130.0	130.4	131.2	24	133.1	133.3	133.5	24	130.9	132.0	133.8	24	131.4	131.7	133.4	16	129.9	131.5	133.3	24
6/7	127.4	128.0	128.5	24	131.1	131.5	132.4	24	125.0	125.9	127.2	24	128.8	129.5	130.2	24	123.5	124.9	126.5	24
6/8	125.1	125.6	126.6	24	129.7	130.4	131.2	24	122.7	123.8	125.2	24	127.7	128.1	128.9	24	124.3	125.8	126.4	24
6/9	124.8	125.1	125.2	24	128.6	129.0	129.3	24	125.7	126.5	127.9	24	126.2	127.3	127.7	24	125.6	126.3	126.7	24
6/10	124.9	125.2	125.5	24	129.3	129.8	130.1	24	126.6	127.3	128.5	24	127.3	128.4	128.9	24	123.9	124.9	126.5	24
6/11	125.4	126.2	126.9	24	128.9	129.5	130.1	24	125.8	126.7	128.1	24	129.4	130.2	130.9	24	124.6	126.3	127.3	24
6/12	126.2	126.7	127.0	24	129.7	130.0	130.4	24	125.6	126.6	127.9	24	129.4	129.9	131.0	24	125.6	127.2	127.9	24
6/13	125.2	125.8	126.2	24	128.0	129.1	129.7	24	124.8	125.5	125.7	24	128.2	129.5	130.8	24	125.1	127.2	127.9	24
6/14	124.9	125.6	126.0	24	127.7	128.1	128.6	24	121.9	122.5	123.4	24	129.5	130.1	130.9	24	123.9	125.7	126.3	24
6/15	125.2	125.5	125.8	24	127.7	128.3	128.9	24	121.6	122.2	122.5	24	129.7	130.6	131.6	24	123.8	124.9	125.8	24
6/16	125.4	125.7	126.0	24	127.3	127.6	128.1	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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	126.3	127.1	127.5	24	113.8	114.3	115.2	24	101.6	102.8	109.9	22	102.2	102.9	103.4	24	105.8	106.6	107.1	24
6/4	126.8	128.2	128.8	34	114.4	115.0	115.6	24	101.9	103.3	106.9	24	102.7	103.5	104.1	24	106.2	107.1	107.7	24
6/5	127.9	129.0	129.4	34	113.6	114.0	114.8	24	102.7	104.3	107.8	24	102.9	103.5	103.8	24	106.4	106.9	107.5	24
6/6	128.2	128.9	129.7	24	113.4	113.9	114.3	24	103.9	103.9	105.2	7	102.8	103.3	103.6	24	106.0	106.3	106.4	24
6/7	125.2	125.8	126.9	24	108.4	110.3	112.0	24	100.6	100.6	101.1	11	103.2	103.6	104.0	24	106.9	107.6	108.1	24
6/8	125.1	125.8	126.4	24	104.2	105.4	107.2	24	101.1	102.0	104.3	24	103.4	103.8	104.1	24	107.9	108.4	108.7	24
6/9	126.0	126.4	126.8	24	108.6	109.2	109.7	23	100.8	101.7	104.4	24	102.9	103.1	103.4	24	108.8	109.5	110.0	24
6/10	124.5	125.2	125.6	24	108.1	108.7	109.8	24	102.0	103.4	105.7	24	103.1	103.8	104.2	24	109.1	109.5	109.9	24
6/11	125.6	126.3	126.6	24	109.7	111.6	113.3	24	104.7	106.0	106.2	24	103.2	103.8	104.2	24	108.9	109.3	109.7	24
6/12	125.8	126.6	127.0	24	109.7	110.6	112.3	24	103.9	105.3	106.3	24	103.1	103.8	104.4	24	108.5	109.1	109.6	24
6/13	124.7	125.6	126.3	24	114.5	117.4	119.3	23	101.6	102.6	106.7	24	102.4	102.8	103.3	24	108.2	108.7	109.3	24
6/14	124.7	126.1	126.3	24	118.5	119.1	119.4	24	102.1	103.1	105.1	19	102.9	103.9	104.5	24	108.8	109.7	110.2	24
6/15	125.0	125.5	125.9	24	118.7	119.0	119.5	24	102.5	104.3	107.3	24	102.7	103.1	103.6	24	108.9	109.3	109.5	24
6/16	---	---	---	0	118.6	118.8	119.2	24	103.6	106.5	110.6	24	102.3	102.4	102.8	24	109.0	109.3	109.5	24

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	101.6	102.5	103.1	24	104.4	104.5	104.9	24	121.2	121.5	121.7	24	110.4	110.6	110.8	24	123.3	124.3	125.2	24
6/4	102.3	103.4	104.0	24	105.2	106.1	106.7	24	119.2	120.2	121.2	24	113.1	114.9	116.3	24	122.6	123.2	124.0	24
6/5	102.4	103.2	103.9	24	107.0	107.3	107.6	24	119.4	120.5	122.0	24	116.7	117.1	117.2	24	122.2	123.5	124.7	24
6/6	101.8	102.0	102.4	24	107.3	107.4	107.6	24	120.6	123.0	124.1	24	116.1	116.4	116.8	24	122.3	124.2	125.1	24
6/7	102.3	102.9	103.5	24	105.6	106.0	106.9	24	126.1	128.3	129.6	24	113.5	114.3	115.0	24	126.0	127.4	128.4	24
6/8	102.8	103.1	103.6	24	105.2	105.5	105.8	24	130.7	132.3	132.4	24	113.4	114.5	116.6	24	129.0	129.6	130.2	24
6/9	102.7	103.0	103.7	24	106.7	107.2	107.5	24	129.9	130.4	130.6	24	119.7	121.2	122.7	24	129.0	129.1	129.7	24
6/10	102.9	103.5	103.9	24	108.3	108.7	108.9	24	129.0	129.5	130.1	24	123.2	123.6	123.9	24	128.3	128.6	129.1	24
6/11	103.0	103.5	104.1	24	108.8	109.1	109.3	24	125.5	126.0	128.5	24	123.0	123.3	123.4	24	126.5	127.4	129.0	24
6/12	102.9	103.5	104.0	24	108.4	108.7	108.9	24	125.1	125.5	127.3	24	121.2	121.7	122.0	24	125.5	125.7	125.9	24
6/13	102.1	102.5	102.7	24	107.4	107.7	107.9	24	125.2	125.8	127.4	24	118.4	118.9	119.5	24	125.8	126.3	126.5	24
6/14	102.7	103.6	104.1	24	106.5	106.9	107.2	24	126.3	127.0	127.4	24	116.4	116.9	117.2	24	126.6	126.9	127.2	24
6/15	102.5	102.8	103.3	24	107.8	108.3	108.5	24	126.3	127.4	129.1	24	117.2	117.4	117.6	24	126.7	127.5	129.3	24
6/16	102.1	102.4	102.7	24	107.7	107.8	107.9	24	124.8	125.2	126.0	24	116.9	117.2	117.8	24	126.1	126.4	127.6	24

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

	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	118.9	119.6	120.5	24	121.1	121.8	123.0	24	118.5	119.2	120.1	24	122.7	123.7	125.3	24	---	---	---	0
6/4	124.4	125.3	125.6	24	119.8	121.3	122.5	24	118.7	119.1	119.8	24	121.5	122.5	122.9	24	---	---	---	0
6/5	124.5	124.9	125.4	24	119.9	120.9	121.9	24	121.3	121.9	122.1	24	121.2	121.7	122.5	24	---	---	---	0
6/6	124.6	125.1	125.5	24	120.9	121.8	124.2	24	121.4	121.8	121.9	24	122.0	122.6	122.7	24	---	---	---	0
6/7	121.6	122.6	123.9	24	124.2	125.6	126.6	24	118.1	118.8	119.7	24	124.3	125.6	126.4	24	---	---	---	0
6/8	126.0	128.2	129.6	24	126.5	127.5	128.7	24	118.2	119.5	120.9	24	128.4	129.4	133.9	24	---	---	---	0
6/9	131.2	132.5	132.8	24	126.1	126.7	128.4	24	124.1	125.6	126.0	24	129.3	130.6	135.4	24	---	---	---	0
6/10	131.8	132.1	132.3	24	125.3	125.8	126.1	24	126.0	126.2	126.5	24	127.3	128.2	128.7	24	---	---	---	0
6/11	130.7	131.1	132.3	24	123.4	124.4	126.0	24	125.3	125.5	126.1	24	125.2	126.5	128.2	24	---	---	---	0
6/12	127.5	128.3	130.0	24	122.8	123.3	123.8	24	123.5	124.0	124.8	24	123.9	124.6	125.2	24	---	---	---	0
6/13	125.8	126.7	127.1	24	122.7	123.1	123.3	24	120.9	121.7	122.5	24	124.0	124.7	124.9	24	---	---	---	0
6/14	126.0	127.2	128.5	24	124.2	125.0	125.5	24	120.1	121.0	121.8	24	125.3	127.1	128.2	24	---	---	---	0
6/15	127.6	128.2	128.8	24	124.1	125.1	127.1	24	121.7	121.8	122.1	24	126.1	127.2	128.9	24	---	---	---	0
6/16	127.2	128.0	128.4	24	123.4	124.0	124.9	24	121.5	122.1	122.6	24	125.0	126.0	128.6	24	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
6/3	116.7	117.0	117.2	24	129.6	131.7	133.0	24	118.2	118.8	119.3	24	128.5	129.1	129.6	24	120.7	122.3	123.1	24
6/4	118.4	119.7	120.4	24	129.5	130.2	130.5	24	118.8	119.7	120.2	24	129.2	129.7	130.1	24	121.8	122.7	123.2	24
6/5	121.2	121.8	122.0	24	129.4	130.5	133.5	24	123.7	125.8	126.7	24	129.0	129.4	130.1	24	123.2	124.3	125.3	24
6/6	121.6	122.0	122.1	24	130.0	130.4	131.1	24	126.7	127.3	127.8	24	129.5	129.9	130.6	24	122.6	123.3	123.6	24
6/7	117.5	119.3	120.7	24	130.8	132.2	135.3	24	119.8	121.6	124.1	24	128.7	129.2	129.5	24	119.8	120.4	120.7	24
6/8	114.2	114.8	115.3	24	138.4	139.4	141.0	24	114.4	115.3	116.6	24	129.1	129.3	129.6	24	118.3	118.7	119.1	24
6/9	116.2	117.3	118.7	23	135.6	137.4	138.4	23	114.3	115.5	117.5	24	129.3	129.8	130.6	24	119.8	121.1	121.8	24
6/10	120.4	122.0	122.8	24	131.1	131.3	131.6	24	125.3	128.9	130.6	24	129.0	129.4	130.4	24	121.6	122.5	123.0	24
6/11	119.6	120.3	120.8	24	131.1	131.5	131.7	24	130.1	130.7	131.0	24	128.4	128.8	129.2	24	124.8	125.7	126.2	24
6/12	118.1	118.4	119.1	24	130.8	130.9	131.1	24	125.2	126.2	127.7	24	127.8	128.3	129.0	24	124.1	124.4	125.0	24
6/13	117.3	118.0	118.3	24	130.4	130.8	131.4	24	121.4	121.9	122.4	24	127.7	127.9	128.2	24	121.6	122.3	123.5	24
6/14	116.5	117.4	117.9	24	129.9	130.5	132.3	24	118.5	118.8	119.1	24	128.6	129.3	130.8	24	120.4	120.8	121.6	24
6/15	116.3	116.9	117.3	24	130.1	130.8	131.4	24	115.8	116.4	117.7	24	130.3	131.1	132.3	24	120.1	120.6	120.9	24
6/16	117.2	117.4	117.8	24	130.2	130.7	131.5	24	116.0	116.2	116.4	24	129.9	131.0	131.8	24	121.2	122.0	122.6	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/3	123.3	124.5	124.9	24	121.4	122.3	122.9	24	128.5	129.0	129.3	24	126.1	126.9	127.1	24	---	---	---	0
6/4	124.5	124.9	125.4	24	123.6	124.2	124.7	24	129.5	129.9	130.2	24	127.0	127.8	128.0	24	---	---	---	0
6/5	125.2	125.8	126.2	24	124.0	124.3	124.7	24	130.0	130.2	130.4	24	128.6	129.3	129.8	24	---	---	---	0
6/6	124.5	125.2	125.6	24	121.1	122.6	123.6	24	129.0	129.7	130.2	24	127.7	128.1	128.3	24	---	---	---	0
6/7	122.7	123.2	123.6	24	117.0	117.5	117.9	24	126.6	126.9	127.5	24	124.6	125.0	125.8	24	---	---	---	0
6/8	121.9	122.3	123.0	24	118.1	118.6	119.2	24	127.2	127.6	128.0	24	124.7	125.2	125.5	24	---	---	---	0
6/9	123.3	124.2	124.5	24	120.8	122.0	122.6	24	129.4	130.3	132.4	24	127.1	128.3	129.8	24	---	---	---	0
6/10	124.1	124.5	124.7	24	121.1	121.8	122.2	24	128.2	128.8	129.2	24	126.8	127.1	127.4	24	---	---	---	0
6/11	125.5	126.4	126.8	24	120.9	121.6	122.1	24	128.0	128.4	128.9	24	126.7	127.0	127.4	24	---	---	---	0
6/12	125.2	125.5	125.9	24	122.7	123.0	123.1	24	128.8	129.0	129.1	24	126.9	127.4	127.7	24	---	---	---	0
6/13	123.8	124.3	124.8	24	121.5	122.3	123.1	24	127.9	128.4	128.9	24	126.1	126.4	126.7	24	---	---	---	0
6/14	123.0	123.6	124.3	24	119.8	120.1	120.4	24	126.7	127.0	127.2	24	125.0	125.3	125.7	24	---	---	---	0
6/15	122.8	123.1	123.6	24	119.0	119.4	119.8	24	127.2	127.9	128.5	24	124.7	125.4	126.2	24	---	---	---	0
6/16	123.7	124.3	125.2	24	119.6	119.8	120.3	24	129.0	130.0	131.3	24	127.4	128.3	129.4	24	---	---	---	0

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											
	06/09/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/16/11	Chinook + Steelhead	66	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	06/06/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/13/11	Chinook + Steelhead	101	14	14	13.86%	2.97%	9	2	2	1
Lower Monumental Dam											
	06/08/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/15/11	Chinook + Steelhead	100	8	8	8.00%	0.00%	8	0	0	0
McNary Dam											
	06/03/11	Chinook + Steelhead	100	5	5	5.00%	0.00%	4	1	0	0
	06/05/11	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/09/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/13/11	Chinook + Steelhead	100	1	1	1.00%	0.00%	0	1	0	0
Bonneville Dam											
	06/04/11	Chinook + Steelhead	35	1	1	2.86%	0.00%	1	0	0	0
	06/07/11	Chinook + Steelhead	49	0	0	0.00%	0.00%	0	0	0	0
	06/11/11	Chinook + Steelhead	65	0	0	0.00%	0.00%	0	0	0	0
	06/14/11	Chinook + Steelhead	73	1	1	1.37%	0.00%	1	0	0	0
Rock Island Dam											
	06/07/11	Chinook + Steelhead	100	41	40	40.00%	3.00%	25	12	3	0
	06/09/11	Chinook + Steelhead	100	33	31	31.00%	0.00%	21	10	0	0
	06/14/11	Chinook + Steelhead	100	23	21	21.00%	0.00%	13	8	0	0

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)
06/03/2011	*	---	1	---	---	2,478	2,219	1,701	56	---	16,887	1,796
06/04/2011	*	---	---	---	---	3,081	2,510	581	69	16,998	12,684	1,547
06/05/2011	*	---	---	---	---	2,109	1,039	405	65	---	7,634	1,018
06/06/2011	*	---	---	---	---	1,968	346	499	29	9,129	8,699	1,257
06/07/2011	*	---	---	---	---	1,832	1,210	709	48	---	7,741	776
06/08/2011	*	---	---	---	---	1,246	1,210	379	73	7,249	4,517	416
06/09/2011	*	---	---	---	---	3,339	4,060	618	49	---	5,288	562
06/10/2011	*	---	---	---	---	2,159	1,084	502	47	3,347	4,427	701
06/11/2011	*	---	0	---	---	2,362	1,857	231	78	---	1,497	307
06/12/2011	*	---	1	---	---	1,222	1,890	486	25	3,741	3,516	777
06/13/2011	*	---	5	---	---	495	2,801	419	22	---	2,493	375
06/14/2011	*	---	---	---	---	757	4,294	227	10	1,860	2,490	495
06/15/2011	*	---	---	---	---	425	2,270	---	27	---	8,334	784
06/16/2011	*	---	---	---	---	1,284	1,095	0	28	1,304	1,982	573
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**7**	**0**	**0**	**24,757**	**27,885**	**6,757**	**626**	**43,628**	**88,189**	**11,384**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**2**	**0**	**0**	**1,768**	**1,992**	**520**	**45**	**6,233**	**6,299**	**813**
YTD		**31,090**	**30,163**	**12,492**	**18,836**	**3,821,902**	**2,516,114**	**1,230,596**	**26,283**	**1,974,643**	**2,927,324**	**1,318,681**

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)
06/03/2011	*	---	0	---	---	35,208	45,210	14,032	377	---	14,216	2,915
06/04/2011	*	---	---	---	---	21,724	101,263	9,146	202	55,700	30,370	3,696
06/05/2011	*	---	---	---	---	22,258	38,467	6,746	185	---	33,082	4,903
06/06/2011	*	---	---	---	---	18,443	54,613	5,557	150	41,037	28,998	9,889
06/07/2011	*	---	---	---	---	17,324	23,712	4,729	454	---	17,978	7,700
06/08/2011	*	---	---	---	---	21,450	36,080	4,965	561	29,990	24,795	9,104
06/09/2011	*	---	---	---	---	25,472	93,818	8,272	412	---	29,086	12,827
06/10/2011	*	---	---	---	---	23,930	44,649	6,279	272	35,005	26,597	16,829
06/11/2011	*	---	0	---	---	21,525	41,622	2,442	414	---	23,852	20,603
06/12/2011	*	---	0	---	---	14,170	33,043	4,378	368	36,019	20,076	23,776
06/13/2011	*	---	0	---	---	11,555	30,769	4,366	198	---	17,821	22,780
06/14/2011	*	---	---	---	---	14,633	32,275	3,078	132	44,319	23,702	24,416
06/15/2011	*	---	---	---	---	15,220	49,294	---	275	---	30,295	15,675
06/16/2011	*	---	---	---	---	11,729	27,131	0	333	32,999	29,316	16,052
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**274,641**	**651,946**	**73,990**	**4,333**	**275,069**	**350,184**	**191,165**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**19,617**	**46,568**	**5,692**	**310**	**39,296**	**25,013**	**13,655**
YTD		**9**	**36**	**12**	**163**	**697,871**	**782,559**	**148,181**	**8,502**	**586,211**	**465,288**	**2,864,245**

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)
06/03/2011	*	---	0	---	---	866	123	142	1,569	---	8,263	896
06/04/2011	*	---	---	---	---	462	717	290	965	15,659	6,220	1,610
06/05/2011	*	---	---	---	---	509	173	0	1,026	---	4,848	1,706
06/06/2011	*	---	---	---	---	73	346	71	760	5,754	6,887	1,641
06/07/2011	*	---	---	---	---	153	691	0	551	---	5,118	608
06/08/2011	*	---	---	---	---	356	346	0	991	6,451	7,282	603
06/09/2011	*	---	---	---	---	477	1,128	39	444	---	4,457	625
06/10/2011	*	---	---	---	---	93	108	72	427	6,093	3,859	1,092
06/11/2011	*	---	0	---	---	175	0	0	272	---	2,432	726
06/12/2011	*	---	0	---	---	81	283	61	165	4,103	3,423	552
06/13/2011	*	---	0	---	---	165	0	0	109	---	1,016	311
06/14/2011	*	---	---	---	---	252	298	65	125	1,035	2,029	577
06/15/2011	*	---	---	---	---	170	306	---	160	---	4,706	371
06/16/2011	*	---	---	---	---	0	0	0	134	1,665	2,118	1,051
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**3,832**	**4,519**	**740**	**7,698**	**40,760**	**62,658**	**12,369**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**274**	**323**	**57**	**550**	**5,823**	**4,476**	**884**
YTD		**0**	**0**	**0**	**218**	**79,562**	**79,438**	**18,679**	**45,531**	**182,313**	**467,457**	**437,121**

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)
06/03/2011	*	---	4	---	---	11,952	6,370	7,371	449	---	17,616	1,598
06/04/2011	*	---	---	---	---	15,099	6,186	3,484	507	3,431	16,100	1,144
06/05/2011	*	---	---	---	---	14,693	6,063	2,226	484	---	15,754	1,157
06/06/2011	*	---	---	---	---	10,643	10,163	3,562	324	1,054	13,653	853
06/07/2011	*	---	---	---	---	11,982	5,532	4,256	324	---	10,735	1,028
06/08/2011	*	---	---	---	---	13,618	5,360	2,674	467	2,657	7,527	831
06/09/2011	*	---	---	---	---	14,596	8,910	4,175	401	---	6,950	479
06/10/2011	*	---	---	---	---	10,180	7,802	5,310	285	2,521	6,772	502
06/11/2011	*	---	12	---	---	6,387	9,287	1,683	449	---	7,015	348
06/12/2011	*	---	5	---	---	5,049	8,015	2,645	447	2,938	7,031	901
06/13/2011	*	---	11	---	---	2,971	7,003	1,735	434	---	6,556	505
06/14/2011	*	---	---	---	---	3,280	7,898	389	500	1,607	8,024	1,732
06/15/2011	*	---	---	---	---	4,847	4,692	---	425	---	14,805	639
06/16/2011	*	---	---	---	---	3,938	1,892	0	237	639	6,152	1,338
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**32**	**0**	**0**	**129,235**	**95,173**	**39,510**	**5,733**	**14,847**	**144,690**	**13,055**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**8**	**0**	**0**	**9,231**	**6,798**	**3,039**	**410**	**2,121**	**10,335**	**933**
YTD		**1,080**	**13,798**	**4,071**	**2,934**	**4,085,942**	**2,005,278**	**828,851**	**25,919**	**605,335**	**2,600,736**	**243,417**

Two-Week Summary of Passage Indices

				COMBINED SOCKEYE								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/03/2011	*	---	0	---	---	1,732	1,356	1,559	51	---	4,252	900
06/04/2011	*	---	---	---	---	924	717	1,016	21	7,283	2,805	729
06/05/2011	*	---	---	---	---	582	693	472	50	---	2,303	1,216
06/06/2011	*	---	---	---	---	510	866	356	10	2,259	2,657	789
06/07/2011	*	---	---	---	---	534	691	394	12	---	1,873	567
06/08/2011	*	---	---	---	---	1,335	173	297	16	2,494	1,628	416
06/09/2011	*	---	---	---	---	572	564	541	27	---	982	375
06/10/2011	*	---	---	---	---	935	325	179	71	1,394	946	247
06/11/2011	*	---	0	---	---	525	309	66	97	---	468	210
06/12/2011	*	---	0	---	---	489	666	274	93	1,165	833	306
06/13/2011	*	---	0	---	---	330	747	239	63	---	554	143
06/14/2011	*	---	---	---	---	673	596	259	51	1,050	646	412
06/15/2011	*	---	---	---	---	510	204	---	54	---	980	41
06/16/2011	*	---	---	---	---	257	398	0	26	642	273	191
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**9,908**	**8,305**	**5,652**	**642**	**16,287**	**21,200**	**6,542**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**708**	**593**	**435**	**46**	**2,327**	**1,514**	**467**
YTD		**0**	**0**	**1**	**0**	**114,293**	**41,052**	**29,052**	**17,078**	**312,341**	**354,390**	**107,921**

				COMBINED LAMPREY JUVENILES								
		WTB	IMN	GRN	LEW	LGR†	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
06/03/2011	*	---	0	---	---	0	0	0	1	---	15,067	73
06/04/2011	*	---	---	---	---	0	0	0	1	5,350	9,400	88
06/05/2011	*	---	---	---	---	50	0	0	0	---	8,600	80
06/06/2011	*	---	---	---	---	0	200	0	1	2,550	7,600	40
06/07/2011	*	---	---	---	---	0	0	0	1	---	4,066	25
06/08/2011	*	---	---	---	---	0	0	0	1	1,325	2,417	90
06/09/2011	*	---	---	---	---	250	0	0	3	---	1,080	45
06/10/2011	*	---	---	---	---	100	0	0	4	1,075	2,150	52
06/11/2011	*	---	0	---	---	0	100	0	3	---	3,050	17
06/12/2011	*	---	0	---	---	0	100	0	1	850	2,750	14
06/13/2011	*	---	0	---	---	0	0	0	2	---	1,250	49
06/14/2011	*	---	---	---	---	0	50	0	0	5,100	1,350	40
06/15/2011	*	---	---	---	---	0	0	---	0	---	2,650	10
06/16/2011	*	---	---	---	---	0	0	0	1	8,100	5,983	20
06/17/2011		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**400**	**450**	**0**	**19**	**24,350**	**67,413**	**643**
# Days:		**0**	**4**	**0**	**0**	**14**	**14**	**13**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**29**	**32**	**0**	**1**	**3,479**	**4,815**	**46**
YTD		**0**	**0**	**0**	**0**	**5,927**	**11,093**	**746**	**295**	**146,010**	**445,620**	**24,646**

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 macropthalmia.

† 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/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: 6/17/11 10:03 AM

06/03/11 TO 06/17/11

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	168,500	15,172	2,400	79,728	6,100	271,900
	Sum of NumberBarged	167,696	15,153	2,397	76,015	6,072	267,333
	Sum of NumberBypassed	37	0	0	3,657	0	3,694
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	67	0	0	2	3	72
	Sum of FacilityMorts	700	19	3	49	25	796
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	767	19	3	51	28	868
LGS	Sum of NumberCollected	342,698	14,475	2,375	50,270	4,528	414,346
	Sum of NumberBarged	341,017	14,455	2,374	50,250	4,518	412,614
	Sum of NumberBypassed	21	0	1	0	0	22
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	46	0	0	1	2	49
	Sum of FacilityMorts	1,614	20	0	19	8	1,661
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,660	20	0	20	10	1,710
LMN	Sum of NumberCollected	47,735	4,384	490	25,171	3,730	81,510
	Sum of NumberBarged	39,664	3,768	429	19,892	3,323	67,076
	Sum of NumberBypassed	7,722	604	60	5,179	379	13,944
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	1	0	0	0	1
	Sum of FacilityMorts	349	11	1	100	28	489
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	349	12	1	100	28	490
MCN	Sum of NumberCollected	84,970	13,080	12,323	4,593	4,880	119,846
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	84,031	12,473	12,271	4,552	4,779	118,106
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	105	48	4	3	19	179
	Sum of FacilityMorts	834	559	48	38	82	1,561
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	939	607	52	41	101	1,740
Total Sum of NumberCollected		643,903	47,111	17,588	159,762	19,238	887,602
Total Sum of NumberBarged		548,377	33,376	5,200	146,157	13,913	747,023
Total Sum of NumberBypassed		91,811	13,077	12,332	13,388	5,158	135,766
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		218	49	4	6	24	301
Total Sum of FacilityMorts		3,497	609	52	206	143	4,507
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		3,715	658	56	212	167	4,808

YTD Transportation Summary

Source: Fish Passage Center Updated: 6/17/11 10:03 AM

TO: 06/17/11

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	422,875	2,711,002	52,159	74,689	2,692,002	5,952,727
	Sum of NumberBarged	339,526	1,699,234	37,635	32,096	1,416,064	3,524,555
	Sum of NumberBypassed	81,764	1,009,672	14,507	42,055	1,275,588	2,423,586
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	97	101	1	69	38	306
	Sum of FacilityMorts	1,488	1,754	16	469	249	3,976
	Sum of ResearchMorts	0	241	0	0	58	299
	Sum of TotalProjectMorts	1,585	2,096	17	538	345	4,581
LGS	Sum of NumberCollected	362,757	1,441,587	39,985	22,121	1,115,538	2,981,988
	Sum of NumberBarged	361,024	1,336,639	39,583	16,767	876,529	2,630,542
	Sum of NumberBypassed	55	103,168	401	5,227	238,633	347,484
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	47	50	0	9	8	114
	Sum of FacilityMorts	1,631	1,730	1	118	368	3,848
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,678	1,780	1	127	376	3,962
LMN	Sum of NumberCollected	97,716	849,959	12,400	19,511	559,473	1,539,059
	Sum of NumberBarged	88,808	632,565	11,238	17,318	453,544	1,203,473
	Sum of NumberBypassed	8,208	215,889	1,254	1,964	103,275	330,590
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	3	0	0	4	7
	Sum of FacilityMorts	700	1,499	10	229	850	3,288
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	700	1,502	10	229	854	3,295
MCN	Sum of NumberCollected	184,943	950,935	69,623	130,919	294,974	1,631,394
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	183,458	948,182	69,458	130,566	294,776	1,626,440
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	124	187	7	38	13	369
	Sum of FacilityMorts	1,361	2,566	158	315	185	4,585
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,485	2,753	165	353	198	4,954
Total Sum of NumberCollected		1,068,291	5,953,483	174,167	247,240	4,661,987	12,105,168
Total Sum of NumberBarged		789,358	3,668,438	88,456	66,181	2,746,137	7,358,570
Total Sum of NumberBypassed		273,485	2,276,911	85,620	179,812	1,912,272	4,728,100
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		268	341	8	116	63	796
Total Sum of FacilityMorts		5,180	7,549	185	1,131	1,652	15,697
Total Sum of ResearchMorts		0	241	0	0	58	299
Total Sum of TotalProjectMorts		5,448	8,131	193	1,247	1,773	16,792

Cumulative Adult Passage at Mainstem Dams Through: 06/16

		Spring Chinook						Summer Chinook						Fall Chinook					
		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.		2011		2010		10-Yr Avg.	
DAM	EndDate	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	**06/16**	**167097**	**50945**	**244384**	**12612**	**174444**	**16431**	**41043**	**17248**	**34856**	**3913**	**30222**	**4342**	**0**	**0**	**0**	**0**	**0**	**0**
TDA	**06/16**	**124164**	**40146**	**189839**	**11546**	**130174**	**13470**	**22624**	**10662**	**25268**	**2730**	**21600**	**2791**	**0**	**0**	**0**	**0**	**0**	**0**
JDA	**06/16**	**103401**	**39823**	**179446**	**11794**	**110572**	**12004**	**17471**	**8429**	**17804**	**1869**	**15566**	**2073**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**06/16**	**101245**	**31750**	**153500**	**9185**	**102003**	**11175**	**12823**	**6001**	**13327**	**1161**	**10758**	**1440**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**06/16**	**69306**	**18161**	**101188**	**6047**	**70295**	**6879**	**4770**	**1427**	**7904**	**348**	**4470**	**694**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**06/16**	**69832**	**18094**	**97334**	**5898**	**69566**	**5561**	**3286**	**1240**	**7854**	**379**	**3051**	**290**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**06/16**	**67321**	**23492**	**92985**	**5461**	**64800**	**6145**	**672**	**490**	**3876**	**187**	**1057**	**132**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**06/16**	**58275**	**21407**	**89489**	**6121**	**64196**	**7572**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**06/14**	**15246**	**6030**	**30539**	**932**	**20141**	**818**	**219**	**171**	**265**	**4**	**306**	**13**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**06/15**	**12720**	**7917**	**29230**	**1481**	**16814**	**1512**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**06/15**	**6496**	**3148**	**8498**	**507**	**6165**	**497**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**06/15**	**3393**	**2790**	**6965**	**603**	**3806**	**432**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**06/12**	**26901**	**788**	**45037**	**1069**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**0**	**-**	**-**

	Coho						Sockeye			Steelhead			
	2011		2010		10-Yr Avg.								
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2011	2010	10-Yr Avg.	2011	2010	10-Yr Avg.	Wild 2011
BON	**0**	**0**	**0**	**0**	**0**	**0**	**6306**	**22598**	**13602**	**5984**	**11995**	**8572**	**1882**
TDA	**0**	**0**	**0**	**0**	**0**	**0**	**2287**	**11901**	**7419**	**1750**	**3852**	**2684**	**815**
JDA	**0**	**0**	**0**	**0**	**0**	**0**	**982**	**7480**	**4957**	**3041**	**3661**	**3936**	**1787**
MCN	**0**	**0**	**0**	**0**	**0**	**0**	**175**	**2068**	**2073**	**2785**	**2836**	**2789**	**1592**
IHR	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**2**	**1**	**3116**	**3166**	**2683**	**1214**
LMN	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**3971**	**4300**	**3067**	**2197**
LGS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6250**	**3184**	**2989**	**3343**
LGR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12318**	**10499**	**9393**	**5786**
PRD	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**319**	**186**	**45**	**95**	**48**	**0**
RIS	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**101**	**39**	**73**	**123**	**96**	**50**
RRH	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**71**	**19**	**553**	**359**	**253**	**490**
WEL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**127**	**104**	**54**	**98**
WFA	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**0**	**-**	**18290**	**23598**	**9166**	**-**

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: 06/17/11

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