



Fish Passage Center

Weekly Report #10 - 14

June 18, 2010

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 138% and 453% of average at individual sub-basins over June. Precipitation above The Dalles has been 241% of average over June. Over the 2010 water year, precipitation has ranged between 87% and 108% 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 2010 June 1-14		Water Year 2010 October 1, 2009 to June 14, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.96	176	16.74	87
SNAKE RIVER ABOVE ICE HARBOR	1.98	291	14.17	99
Columbia Above The Dalles	2.02	241	17.74	95
Kootenai	2.09	182	17.17	87
Clark Fork	1.78	197	11.58	88
Flathead	1.70	138	16.75	96
Pend Oreille/ Spokane	2.60	254	23.81	91
Central Washington	1.02	342	7.91	104
SNAKE RIVER PLAIN	1.10	246	8.80	97
Salmon/Boise/ Payette	2.33	340	16.89	100
Clearwater	3.43	296	24.07	95
SW Washington Cascades/Cowlitz	3.69	267	59.16	92
Willamette Valley	4.75	453	52.80	97

Table 2 displays the June Final and June Mid Month runoff volume forecasts for multiple reservoirs. The June Mid Month Runoff Volume Forecasts remained similar to the June Final Forecasts at Upper Columbia locations; however increased between 10-17% relative to the June Final forecasts at Snake River locations. The current forecast at The Dalles between January and July is 80900 Kaf (75% 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)	69	74000	75	80900
Grand Coulee (Jan-July)	74	46400	76	47800
Libby Res. Inflow, MT (Apr-Aug)	71	4420	69	4310
Hungry Horse Res. Inflow, MT (Jan-July)	75	1660	76	1680
Lower Granite Res. Inflow (Apr- July)	68	14600	85	18300
Brownlee Res. Inflow (Apr-July)	58	3670	74	4700
Dworshak Res. Inflow (Apr-July)	63	1670	73	1920

* 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 85 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 77.0 Kcfs from April 3 to June 17 and 138.7 Kcfs last week.

The Biological Opinion flow period began on April 10th in the mid and lower Columbia River (Priest Rapids and McNary Dams). According to the April Final Water Supply Forecast, the flow objective this spring is 220 Kcfs at McNary and 135 Kcfs at Priest Rapids. Flows from April 10 to June 17 have averaged 208.1 Kcfs at McNary Dam and 121.2 Kcfs at Priest Rapids Dam. Over the last week, flows have averaged 343.1 Kcfs at McNary Dam and 202.4 Kcfs at Priest Rapids Dam.

Grand Coulee Reservoir is at 1288.1 feet (6-17-10) and refilled 2.6 feet over the last week. Outflows at Grand Coulee have ranged between 136.4 and 186.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2423.0 feet (6-17-10) and has held steady last week. The sturgeon pulse continues at Libby Dam, outflows have been decreased down to full powerhouse outflows with no spill. Inflows to Libby have ranged between 27.5 Kcfs to 37.0 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3555.3 feet (6-17-10) and has refilled 3.9 feet last week. Outflows at Hungry Horse have been increased to 7.0 Kcfs. Inflows to Hungry Horse Dam have ranged between 10.9 Kcfs to 14.4 Kcfs over the last week.

Dworshak is currently at an elevation of 1599.7 feet (6-17-10) and has refilled approximately 2.2 feet last week. Outflows from Dworshak have been increased to 9.5 Kcfs. Inflows to Dworshak have ranged between 9.9 to 15.0 Kcfs over the last week.

The Brownlee Reservoir was at an elevation of 2076.0 feet on June 17, 2010 refilling 0.2 feet last week. Over the last week, outflows at Brownlee have ranged between 28.4-43.8 Kcfs. Inflows to Brownlee have ranged between 29.3 Kcfs and 41.6 Kcfs over the last week.

Spill:

The 2010 planned spring spill program at the lower Snake River Projects began on April 3 at 0001 hours. The following table shows the planned operations for spring 2010.

Project	Day/Night Spill
Lower Granite	20Kcfs/20Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	April 3-April 28: 45 Kcfs/Gas Cap April 29-June 20: 30%/30% vs. 45 Kcfs/Gas Cap

Recent rain and snow melt had significantly increased flows in the Snake River, but flows were receding over the past week. Spill occurred as both planned spill and unplanned (in excess of hydraulic or generation capacity) spill. At Dworshak, the reservoir is nearly full and has been spilling some water. At Lower Granite Dam the project is operating with limited hydraulic capacity due to Unit 3 being out of service. Consequently, spill at Lower Granite Dam was well in excess of the 20 Kcfs instantaneous level over the past week. Daily average spill ranged from 32.6 Kcfs to 77.9 Kcfs. Spill at Little Goose Dam was managed relative to TDG below the project, or more often to TDG at the next downstream forebay. Consequently, spill was less than the Court Order on the majority of days. Spill at Lower Monumental Dam was in excess of hydraulic capacity for the first few days of the past week, but dropped to the gas cap level of 27 Kcfs by June 13th, and has ranged from a daily average of 26.2 to 54.3 Kcfs. The Ice Harbor simulated test of 30% spill versus 45 Kcfs during daytime hours and gas cap spill during nighttime hours began on April 29. However, earlier in the past week it was difficult at the high flows to implement the simulated test conditions, and spill at Ice Harbor Dam occurred as excess hydraulic capacity spill. By mid week the simulated spill test was being attempted. Spill ranged from a daily average of 45.1 Kcfs to 93.5 Kcfs.

The 2010 spill program at the lower Columbia River projects began at 0001 hours on April 10th. The following table shows the planned operations for spring 2010.

Project	Day/Night Spill
McNary	40%/40%
John Day	Pre-test: 30%/30% Testing: 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

The planned spill levels of 40% of instantaneous flows were exceeded at McNary Dam due to the higher flow levels. Spill ranged from 45 to 59% of average daily flow. At John Day Dam the testing of 30% spill versus 40% spill occurred in two-day blocks. The objectives of the study were met on the planned 30% spill days, but not met on the 40% days when the gas cap implemented by the COE prevented the project from meeting the 40% spill level. The planned spill levels were not met at The Dalles over the past week where again, the gas cap implemented by the COE did not allow for the project to meet the objective. At Bonneville Dam spill exceeded the 100 Kcfs spill level. The summer spill test was scheduled to begin June 16th. However, the spill test conditions cannot be implemented until river flows drop below 300 Kcfs. Therefore, beginning on June 16th spill was implemented according to the System Operational Request submitted by the fishery managers. Recent high flows have resulted in high debris levels and increased descaling of fish passing the difficult to keep clean debris laden fish screens. The request was for a reduction of flow through the Bonneville Second Powerhouse, to the low to mid range of peak efficiency, and spill of any water above that operating range. The US Army Corps of Engineers predicts that flow will drop below 300 Kcfs sometime between June 20th and 22nd, at which time the summer spill test will begin.

The high flows and uncontrolled spill levels in the Snake River resulted in total dissolved gas levels exceeding the State’s water quality waiver levels throughout the lower Snake hydrosystem, but by week’s end the flows had decreased sufficiently that spill and TDG decreased. TDG levels were below the State waivers on June 17th. There was some elevated TDG levels at various places in the Lower Columbia, but TDG levels did not exceed 125%.

At present, GBT monitoring is being implemented at Lower Granite, Little Goose, Lower Monumental, McNary, Bonneville and Rock Island dams. The decreasing levels of TDG in the Snake

River are reflected by the decrease in fish observed with signs of GBT. The exception to this was the 15% of fish sampled at Little Goose Dam that were reported with signs of fin GBT this past week, likely as a response to the TDG levels exceeding 130% a few days before the fish were observed at Little Goose Dam. This would have required an action to be taken in spill management, however, spill at Lower Granite Dam was uncontrolled and no action could have been taken.

Smolt Monitoring:

Smolt collections at Snake River dams decreased over the past week as the late spring migrants appeared to be pushed out by the high flows. Subyearling Chinook passage indices decreased at Snake River sites, but increased at all Columbia River SMP sites. Debris from high flows continued to cause high mortality and descaling problems for sockeye at several COE dams.

At Lower Granite Dam passage indices for all smolts decreased over the past week. Subyearling Chinook predominated in the samples over the past week. Subyearling Chinook passage indices peaked on June 5 at 115,000 and the average index fell to 16,000 per day this week compared to a daily average of 70,000 last week.

At Rock Island Dam the bypass trap has collected an unusually large number of coho this season, and those smolts predominated over the past week. The passage indices for coho averaged nearly 500 per day this past week, while subyearling Chinook indices average 310 per day.

At McNary Dam sockeye and subyearling Chinook predominated over the past week. Indices for sockeye were down again from two weeks earlier when the index averaged 270,000 per day compared to 10,000 per day this week. For subyearling Chinook the index averaged 68,000 per day this week compared to 29,000 per day last week. Descaling and mortality in sockeye has remained high in the sample at McNary Dam since June 2. The percent of sockeye descaled rose 28% on June 16. Mortality for sockeye was at 17% in the sample two of the past 3 sample dates. Subyearling Chinook mortality, while not as high as that of sockeye did rise above 5% on the past two sample dates at McNary Dam. The COE has been cleaning screens at the project to reduce debris load on the vertical barrier screens. High flows and winds have brought in debris to the project—especially tumble weeds which are a particular problem at the site.

At Bonneville Dam the largest collections over the past week have been subyearling Chinook followed by sockeye. Subyearling Chinook indices increased from 15,000 per day last week to 25,000 per day this week. For sockeye the passage index averaged 4,000 this week compared to 29,000 last week. Bonneville Dam has also seen high descaling and mortality in the past week as a result of increased debris in the vertical barrier screens. Sockeye mortality was between 14% and 17% the past 3 sample dates. Descaling rates for sockeye were also high ranging between 20% and 46% over the past 4 sample dates. Salmon Managers issued a system operational request (SOR 2010-03) asking the COE to reduce turbine loading at Powerhouse 2 and spill the excess discharge at Bonneville Dam until debris levels decrease.

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. The Nez Perce Tribal Hatchery was scheduled to release approximately 500,000 subyearling fall Chinook into the Clearwater Rive between June 1st and June 15th. About 40% of these subyearlings are unmarked. In addition, approximately 498,000 subyearlings were scheduled for release this week. Of these, 400,000 are production fall Chinook that will be released from the Cedar Flats and Lukes Gulch acclimation facilities. All of these production subyearlings are marked with either an adipose fin clip and/or a coded-wire-tag. The remaining 98,000 subyearlings are Clearwater River surrogates. These Clearwater River surrogate releases are scheduled to run through early July. As with the Snake Rive surrogates, the Clearwater River surrogates are 100% unmarked but are tagged with PIT-tags.

Approximately 700,000 spring Chinook parr from the Nez Perce Tribal Hatchery are scheduled for release into the Clearwater River and its tributaries over the next two weeks. These spring Chinook parr are 100% unmarked and are not expected to out-migrate until spring of 2011.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Two releases of subyearling fall Chinook to the mid-Columbia River continued this week. These releases are taking place from Priest Rapids and Ringold Springs hatcheries and are expected to total about 10.25 million subyearlings. These releases are expected to

run through the end of June. In addition, a release of approximately 800,000 subyearling summer Chinook from Turtle Rock Hatchery continued this week. Of these subyearling summer Chinook, about 75% are unmarked. This release is also expected to run through mid-June. There are no releases of juvenile salmonids to this zone that are expected to begin over the next two weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. On June 17th, approximately 2.5 million subyearling fall Chinook were released from Little White Salmon NFH into the Little White Salmon River. Little White NFH is planning to release an additional 2.0 million subyearling fall Chinook juveniles into the Little White Salmon River on June 24th. These subyearlings were originally scheduled for release on June 17th. The original release date was postponed for another week because these juveniles were smaller than desired. There are no other releases of juvenile salmonids to this zone that are expected to begin over the next two weeks.

Adult Fish Passage:

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam ranged between 1432 and 2519 adult summer Chinook in the last week. The 2010 summer Chinook count of 37375 is about 98.5% of the 2009 count and 1.26 times greater than the 10 year average. The 2010 Bonneville Dam summer Chinook jack count of 4242 is only about 24.4% of the 2009 and about 92.2% of the 10 year average count. At McNary Dam 15085 adult summer Chinook have been counted. The 2010 McNary adult summer Chinook is about 1.06 times greater than the 2009 count and 1.34 times greater than the 10 average. The 2010 summer Chinook jack count of 1363 is about 24.1% of the 2009 count and 82.3% of the 10 year average.

At Willamette Falls Dam, 45530 adult spring Chinook have been counted so far this year. The 2010 adult spring Chinook count at Willamette Falls Dam is 2.27 times greater than the 2009 count of 20023. The last day of counting spring Chinook at Rock Island Dam and Lower Granite Dam is 6/17. As of 6/16, the 2010 adult spring Chinook count at Rock Island Dam of 29503 is about 2.41 times greater than the 2009 count and 1.89 times greater than the 10 year average. As of 6/17, the 2010 adult spring Chinook count at Lower Granite Dam of 94100 is about 1.89 times greater than

the 2009 count and about 1.59 times greater than the 10 year average. The 2010 Lower Granite spring Chinook jack count of 6390 is only about 20.6% of the 2009 count and about 78.6% of the 10 year average.

The Bonneville Dam 2010 steelhead count of 12533 is about 1.5 times greater than the 2009 count of 8371.

The 2010 steelhead count is about 1.48 times greater than of the 10 year average of 8486. In the Snake River, this year's Lower Granite steelhead count of 10510 is about 96.7% of the 2009 count. The 2010 LGR steelhead count is about 1.22 times greater than the 10 year average count of 8608. The 2010 LGR wild steelhead count as of June 17th was 4183. At Rock Island Dam, as of June 16th, 123 adult steelhead had been counted and at Rocky Reach Dam 359 adult steelhead had been counted. At Willamette Falls Dam, the 2010 count for steelhead was 21852, as of June 14th. This year's steelhead count is only about 1.85 times greater than the 2009 count of 11781 at Willamette Falls Dam for the same date range.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 1070 and 6987 last week. The 2010 adult sockeye count at Bonneville Dam of 29583 is about 1.10 times greater than the 2009 count and about 1.83 times greater than the 10 year average. The 2010 adult sockeye count at McNary Dam of 3517 is about 65.2% of the 2009 count. However, the 2010 McNary adult sockeye count is about 1.19 times greater than the 10 year average count of 2957.

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 6/4/2010 to 06/17/10

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2010	98,000	06-15-10	07-03-10	Big Canyon (Clearwater River)	Clearwater River M F
National Marine Fisheries Service Total					98,000				
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	200,000	06-12-10	06-12-10	Lukes Gulch Acclim.	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	200,000	06-15-10	06-15-10	Cedar Flats Acclim. Nez Perce Tribal	Selway River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	500,000	06-01-10	06-15-10	Hatchery	Clearwater River M F
Nez Perce Tribe Total					900,000				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2010	2,500,000	06-17-10	06-17-10	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service Total					2,500,000				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2010	6,800,000	06-09-10	06-20-10	Priest Rapids Hatchery Ringold Springs	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2010	3,450,000	06-14-10	06-28-10	Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2010	800,000	06-10-10	06-20-10	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					11,050,000				
Grand Total					14,548,000				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	6/18/2010		to		7/1/2010				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service National Marine Fisheries Service Total	Lyons Ferry Hatchery	CH0	FA	2010	98,000	06-15-10	07-03-10	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	Clearwater Hatchery	CH0	SP	2011	300,000	07-01-10	07-15-10	Selway River	Clearwater River M F
Nez Perce Tribe Nez Perce Tribe Total	Nez Perce Tribal Hatchery	CH0	SP	2011	400,000	06-21-10	06-25-10	Meadow Creek - CLES	S Fk Clearwater River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2010	2,000,000	06-24-10	06-24-10	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service Total					2,000,000				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2010	6,800,000	06-09-10	06-20-10	Priest Rapids Hatchery Ringold Springs	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2010	3,450,000	06-14-10	06-28-10	Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Washington Dept. of Fish and Wildlife Total	Turtle Rock Hatchery	CH0	SU	2010	800,000	06-10-10	06-20-10	Turtle Rock Hatchery	Mid-Columbia River
Grand Total					11,050,000				
					13,848,000				

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

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
06/04/2010	73.7	0.2	74.1	0.0	98.2	7.0	100.5	0.0	114.2	12.6	120.3	18.3	121.1	23.9
06/05/2010	53.7	0.2	51.5	0.0	70.2	6.1	73.7	0.0	88.1	10.7	114.9	18.0	112.0	22.9
06/06/2010	66.8	0.2	77.1	0.0	96.5	7.4	97.1	0.0	107.7	9.8	104.4	16.0	101.2	23.9
06/07/2010	106.6	4.3	97.8	18.4	116.2	7.5	114.5	0.0	126.5	12.6	105.5	19.1	111.2	22.2
06/08/2010	141.6	17.8	134.7	63.4	155.2	9.6	153.4	1.4	164.9	15.5	166.9	41.1	146.9	30.5
06/09/2010	145.4	15.9	150.7	51.5	175.4	15.1	180.8	46.6	192.2	32.0	195.5	64.2	194.0	57.6
06/10/2010	173.6	36.5	158.9	103.0	185.5	18.1	185.4	56.9	194.3	60.9	204.0	75.2	208.4	85.0
06/11/2010	168.6	31.9	161.2	52.1	192.3	21.1	199.2	55.1	207.8	63.6	221.1	88.4	221.5	110.5
06/12/2010	142.2	0.6	144.7	0.0	162.4	10.0	163.2	22.9	176.6	41.4	179.2	48.8	180.0	70.0
06/13/2010	136.4	0.3	136.0	0.0	158.7	10.0	162.2	30.6	173.6	35.4	175.4	44.5	178.2	80.6
06/14/2010	147.8	5.3	146.0	3.0	169.7	10.0	173.9	49.0	183.1	39.4	191.7	56.2	190.7	79.7
06/15/2010	178.9	48.3	171.8	37.2	194.9	24.9	195.4	54.8	203.7	38.7	209.4	87.5	210.5	103.6
06/16/2010	176.0	44.6	174.1	33.8	198.7	32.2	201.7	61.5	211.2	39.7	216.1	80.4	218.0	95.8
06/17/2010	186.9	52.3	180.6	39.1	204.9	33.2	203.4	56.7	208.5	36.8	214.7	81.6	217.7	101.9

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/04/2010	1.2	0.0	38.3	28.4	160.9	69.4	148.6	39.2	157.2	41.4	162.9	82.9
06/05/2010	1.2	0.0	45.2	32.0	196.5	104.9	187.0	78.9	197.3	81.3	195.3	114.0
06/06/2010	1.2	0.0	49.6	47.9	207.2	115.6	198.6	88.9	212.8	97.0	216.4	135.8
06/07/2010	1.3	0.0	50.2	54.0	200.1	108.9	192.9	83.8	205.0	90.3	204.9	123.7
06/08/2010	7.4	2.0	46.6	49.6	204.0	112.1	195.3	86.5	207.5	92.1	210.4	127.7
06/09/2010	7.4	0.6	45.3	45.8	181.5	90.5	174.9	63.8	183.2	68.4	187.6	105.0
06/10/2010	7.4	0.3	43.6	45.8	180.2	89.1	173.6	62.1	179.6	64.7	182.8	99.4
06/11/2010	5.0	0.4	41.6	45.3	168.0	77.9	162.3	51.0	167.6	54.3	173.1	93.5
06/12/2010	5.6	0.0	39.2	43.8	151.1	61.8	147.0	42.0	150.7	37.2	156.2	77.6
06/13/2010	5.6	0.0	37.8	37.8	137.6	48.8	134.5	42.6	136.9	30.2	139.8	61.2
06/14/2010	7.9	0.2	35.9	35.0	131.0	40.9	129.1	37.4	130.8	26.9	132.2	48.8
06/15/2010	9.5	0.8	33.4	35.3	130.0	39.9	124.7	34.2	125.9	26.2	128.6	57.0
06/16/2010	9.5	0.8	31.8	32.2	131.0	41.3	129.1	31.1	132.7	26.9	135.7	65.9
06/17/2010	9.4	0.7	---	---	122.3	32.6	116.7	31.2	118.0	26.9	118.5	45.1

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
06/04/2010	305.4	141.3	310.6	121.8	299.0	114.8	317.8	95.9	83.7	125.8
06/05/2010	320.3	165.9	334.5	124.9	318.9	117.5	331.0	105.6	84.1	128.8
06/06/2010	320.6	156.3	345.2	125.0	334.8	110.9	343.1	124.9	83.5	122.3
06/07/2010	321.6	157.7	352.5	112.4	343.2	107.1	336.2	122.0	82.4	119.3
06/08/2010	341.2	176.4	361.6	116.1	343.0	112.0	363.7	153.1	75.7	122.5
06/09/2010	364.1	200.0	385.2	124.8	368.0	112.8	375.1	169.2	73.4	120.1
06/10/2010	389.8	226.6	389.4	125.0	371.7	117.7	380.0	178.0	73.1	116.4
06/11/2010	391.7	229.9	408.4	125.0	390.8	133.5	391.7	191.2	72.6	115.5
06/12/2010	362.9	202.2	400.9	124.2	385.3	133.9	397.7	195.1	72.1	118.1
06/13/2010	319.3	161.4	328.2	98.8	317.3	123.5	343.8	145.1	72.7	113.7
06/14/2010	305.8	137.2	317.6	95.1	297.1	118.0	301.3	107.5	72.9	108.5
06/15/2010	328.8	155.1	329.2	113.6	311.8	120.2	315.3	112.3	80.3	110.3
06/16/2010	350.8	179.7	356.4	127.1	340.5	134.2	346.6	151.7	83.7	98.8
06/17/2010	342.1	168.6	356.9	113.2	340.5	135.7	354.2	173.0	82.8	86.0

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

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>	
6/4	104.5	104.8	105.0	24	117.1	117.2	117.4	24	107.2	107.5	107.6	24	105.0	105.6	106.7	24	104.9	105.3	105.6	24
6/5	103.7	104.0	104.2	24	118.9	120.3	120.8	24	105.9	106.1	106.2	24	103.7	104.1	104.5	24	103.4	104.4	104.6	24
6/6	103.6	104.1	104.7	24	120.1	120.7	121.2	22	106.2	106.3	106.5	24	104.1	104.6	104.9	22	103.9	104.7	105.0	24
6/7	104.3	104.6	105.1	24	120.5	121.3	122.6	23	106.2	106.3	106.5	23	104.8	105.5	106.1	23	104.9	105.7	106.0	24
6/8	104.9	105.2	105.6	23	123.4	123.8	124.3	20	106.3	106.5	106.9	24	106.4	107.5	109.2	20	105.9	106.6	106.8	24
6/9	105.3	105.5	105.8	24	123.7	124.0	124.4	24	106.9	107.0	107.4	24	106.7	107.0	107.5	24	106.3	106.6	107.0	24
6/10	104.9	105.4	105.7	24	123.6	123.8	124.1	23	106.4	106.7	107.1	24	107.8	109.4	112.9	23	106.4	107.5	108.0	24
6/11	103.3	104.0	104.4	24	123.3	123.7	123.9	23	105.6	105.8	106.2	24	109.8	112.1	118.1	23	105.5	106.4	107.3	24
6/12	102.5	103.1	103.5	24	123.5	124.1	124.6	22	105.3	105.6	105.8	24	105.4	106.0	106.6	22	109.4	112.2	115.4	24
6/13	103.9	104.8	105.4	24	124.0	124.7	125.6	21	105.9	106.2	106.5	24	105.4	105.8	106.4	21	112.2	114.6	115.3	24
6/14	105.1	105.7	106.0	24	124.1	124.4	125.1	22	106.5	106.7	107.0	24	104.8	105.0	105.3	22	105.6	105.9	106.5	24
6/15	105.4	105.9	106.4	24	123.8	124.6	124.9	22	107.0	107.1	108.1	24	108.3	109.8	110.9	22	104.9	105.3	105.9	24
6/16	104.6	105.3	105.5	24	121.2	121.6	123.4	23	106.9	107.0	107.2	24	110.4	111.6	118.5	23	107.5	110.7	113.7	24
6/17	104.3	104.7	105.3	24	122.7	123.3	123.8	23	107.0	107.1	107.3	24	112.3	114.0	115.4	23	111.0	112.7	114.6	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>	
6/4	105.3	106.0	106.9	23	105.3	105.8	106.6	23	106.9	107.3	107.5	23	106.6	106.9	107.1	24	105.8	106.2	106.7	24
6/5	104.6	105.4	106.4	24	104.7	105.4	106.4	24	106.1	106.6	106.9	24	105.8	106.3	107.3	24	104.9	105.2	105.7	24
6/6	104.8	105.5	106.5	24	104.8	105.1	105.4	24	106.1	106.8	106.9	24	106.1	106.3	106.5	24	105.4	105.7	105.9	24
6/7	108.2	112.5	115.5	24	105.1	105.6	106.1	24	106.7	107.2	107.6	24	106.3	106.5	106.9	24	105.6	105.9	106.2	24
6/8	115.6	117.1	118.1	24	106.5	108.1	109.9	24	108.0	109.2	110.6	24	106.4	107.2	107.6	24	105.9	106.7	107.5	24
6/9	115.1	115.3	116.5	24	111.0	111.8	112.3	24	112.8	114.1	116.1	24	108.1	108.5	109.1	24	115.7	118.8	121.0	24
6/10	120.2	123.0	124.8	24	109.3	110.3	112.8	24	111.6	113.1	116.7	24	110.7	111.4	111.8	24	119.6	119.8	120.1	24
6/11	112.9	116.5	123.2	24	113.2	113.8	114.8	24	115.6	116.8	117.4	24	109.9	110.9	113.1	24	119.0	119.4	120.4	24
6/12	109.3	112.0	115.3	24	108.5	109.2	111.6	24	110.7	111.5	114.0	24	114.2	115.0	115.4	24	117.3	118.1	119.2	24
6/13	110.9	113.9	115.5	24	110.3	112.3	113.7	24	111.3	112.9	114.0	24	112.7	114.0	114.9	24	117.7	118.5	119.1	24
6/14	105.5	106.4	113.3	24	110.0	112.1	113.7	24	111.8	113.6	114.2	24	109.8	110.4	111.1	24	118.6	119.5	120.0	24
6/15	111.9	113.4	114.1	24	105.9	106.2	106.7	24	109.7	111.5	113.9	24	111.1	112.4	112.8	24	118.7	119.2	119.6	24
6/16	111.7	113.0	113.7	24	105.7	106.1	106.6	24	111.3	114.4	119.1	24	108.4	109.2	112.1	24	117.3	117.8	118.5	24
6/17	112.9	113.9	114.3	24	108.8	110.9	111.5	24	114.3	117.9	129.9	24	111.2	113.3	115.7	24	118.1	119.2	119.7	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			#	<u>Rock I. Tlwr</u>			#	<u>Wanapum</u>			#	<u>Wanapum Tlwr</u>			#	<u>Priest Rapids</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>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>	
6/4	106.0	106.4	106.6	24	109.6	111.2	114.4	24	107.2	107.7	108.2	24	110.2	111.4	112.5	24	109.8	110.4	110.7	24
6/5	104.9	105.1	105.2	24	108.9	110.0	111.2	24	107.5	109.6	112.0	24	109.1	110.1	110.8	24	108.5	108.9	109.6	24
6/6	105.2	105.3	105.4	24	109.2	110.5	112.6	24	108.7	109.8	110.8	24	109.8	110.7	111.4	24	109.5	109.8	110.3	24
6/7	101.5	105.2	105.2	23	109.0	109.8	112.7	24	107.2	107.7	109.1	24	110.2	111.2	112.4	24	109.1	109.3	109.6	24
6/8	104.3	104.3	106.5	11	108.0	108.6	109.3	24	107.6	109.0	109.5	24	111.2	113.0	116.0	24	109.7	111.0	112.5	24
6/9	106.7	106.8	106.9	24	112.0	114.6	120.5	24	108.6	108.8	109.2	24	113.0	114.0	115.6	24	112.3	113.1	113.5	24
6/10	109.9	113.1	113.7	24	119.0	120.4	122.0	24	107.2	107.3	107.9	24	114.3	117.5	121.8	24	111.1	112.4	113.4	24
6/11	112.7	113.2	113.8	24	119.3	119.9	120.8	24	110.8	113.4	114.6	24	117.3	119.3	121.6	24	113.2	114.6	116.4	24
6/12	113.3	114.3	114.7	24	117.8	118.3	118.7	24	115.1	116.9	118.5	24	116.5	117.7	120.3	24	117.4	118.5	119.2	24
6/13	113.5	114.2	114.7	24	117.5	118.3	118.8	24	117.0	117.4	118.3	24	115.9	116.0	116.3	24	115.2	115.6	116.4	24
6/14	111.4	112.5	113.3	24	116.4	118.0	118.7	24	114.6	115.0	115.7	24	115.0	115.4	115.9	24	112.9	113.7	114.1	24
6/15	112.7	113.5	114.0	24	116.9	117.7	118.1	24	112.5	112.8	113.9	24	118.1	119.9	123.0	24	113.3	115.3	116.9	24
6/16	111.6	111.9	112.6	24	116.2	116.8	117.4	24	---	---	---	0	---	---	---	0	---	---	---	0
6/17	113.9	115.3	116.1	24	117.9	119.1	120.6	24	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	Priest R. Dnst			#	Pasco			#	Dworshak			#	Clwrtr-Peck			#	Anatone			#			
	24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
6/4	111.1	111.8	112.4	24	108.6	109.0	109.4	24	98.3	99.0	99.6	24	103.3	103.6	104.2	24	104.6	105.0	105.5	24			
6/5	110.1	110.9	111.5	24	107.9	108.7	109.0	24	97.4	98.3	99.1	24	104.2	105.6	106.2	24	106.9	108.9	109.6	24			
6/6	111.3	112.0	112.8	24	108.7	109.1	109.4	24	97.1	97.7	98.2	24	103.6	104.0	104.3	24	109.3	109.5	109.7	24			
6/7	111.2	111.6	112.2	24	108.6	109.7	110.6	24	97.4	98.4	99.8	24	102.9	103.4	103.8	24	109.2	109.5	110.0	24			
6/8	112.0	113.3	115.2	24	109.4	110.3	110.8	24	104.2	106.4	106.5	24	104.0	105.0	105.5	24	109.6	109.9	110.9	17			
6/9	115.9	116.4	117.0	24	109.4	109.9	110.4	24	99.8	101.9	106.1	24	102.2	102.7	103.8	24	108.6	108.9	109.5	23			
6/10	116.7	117.2	117.6	24	109.4	110.4	111.0	24	98.2	99.5	100.9	24	101.9	102.3	102.7	24	107.9	108.1	108.5	24			
6/11	118.6	119.2	120.2	24	111.0	112.2	112.8	24	101.8	103.1	103.7	24	102.1	102.7	103.1	24	107.6	107.9	108.4	24			
6/12	119.0	119.8	120.7	24	113.9	115.1	115.7	24	104.1	104.6	104.9	24	102.9	103.9	104.7	24	107.6	108.3	108.8	24			
6/13	118.8	119.2	119.7	24	115.0	115.5	115.8	24	104.5	104.9	105.5	24	102.9	103.8	104.4	24	107.1	107.6	108.0	24			
6/14	117.7	118.1	118.4	24	113.8	114.5	115.1	24	99.5	101.9	106.6	24	101.8	102.5	103.3	24	106.3	106.8	107.2	24			
6/15	118.8	119.5	120.0	24	112.3	113.0	113.4	24	100.7	103.9	107.5	24	102.0	102.6	103.4	24	105.9	106.5	106.9	24			
6/16	---	---	---	0	112.4	113.0	113.5	24	100.7	104.6	108.5	24	101.1	101.9	103.5	18	105.5	105.6	105.8	24			
6/17	---	---	---	0	112.5	113.2	113.6	24	100.1	103.5	107.6	24	101.0	101.6	102.4	23	105.1	105.3	105.6	24			

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clwrtr-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			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
6/4	102.9	103.3	103.7	24	102.9	103.0	103.2	24	124.7	125.7	127.5	24	108.3	108.7	109.0	24	115.6	116.9	119.4	24			
6/5	102.8	104.2	104.6	24	103.0	103.7	104.1	24	130.1	131.7	132.4	24	114.5	116.2	116.5	24	123.9	126.0	126.7	24			
6/6	102.8	103.1	103.8	24	106.4	107.6	108.0	24	130.8	131.5	132.6	24	122.3	124.4	124.7	24	126.3	127.8	128.3	24			
6/7	102.0	102.5	102.9	24	107.7	107.8	108.0	24	130.1	130.8	133.8	24	124.4	124.9	125.1	24	126.1	126.7	127.9	24			
6/8	103.1	104.3	104.8	24	108.0	108.7	109.0	24	130.5	130.8	131.5	24	124.2	125.1	125.9	24	126.5	126.8	127.1	24			
6/9	102.1	102.7	103.7	24	109.0	109.3	109.7	24	128.8	129.6	130.2	24	125.6	126.0	126.2	24	122.9	123.8	125.6	24			
6/10	101.2	101.8	102.6	24	107.1	107.7	108.4	24	128.7	129.8	130.6	24	121.0	122.2	124.0	24	123.2	124.5	142.6	24			
6/11	101.3	101.8	102.2	24	105.5	105.6	105.7	24	126.6	128.1	130.5	24	117.8	118.2	118.8	24	119.4	120.2	121.4	24			
6/12	102.5	103.7	104.4	24	106.3	107.1	107.5	24	124.5	124.7	125.1	24	119.8	120.8	121.3	24	117.5	119.6	120.4	24			
6/13	102.8	103.7	104.5	24	107.6	108.1	108.6	24	123.7	124.1	124.5	24	122.4	123.0	123.4	24	117.8	119.5	120.9	24			
6/14	102.2	102.8	103.5	24	107.5	107.8	108.4	24	122.9	123.2	123.5	24	121.8	122.1	122.6	24	116.6	117.2	117.6	24			
6/15	101.9	102.9	103.9	24	106.4	106.8	107.5	23	122.3	123.1	123.9	24	118.8	119.6	120.9	24	115.2	116.2	117.0	24			
6/16	100.5	101.1	101.5	23	104.9	105.4	106.1	24	122.1	122.5	123.1	24	116.0	116.4	117.2	24	114.2	114.3	114.4	24			
6/17	100.7	101.5	102.3	24	103.6	104.0	104.6	24	118.1	119.3	121.4	24	114.0	114.5	115.0	24	113.6	113.7	113.9	24			

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

Date	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			24 h	12 h	
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High
6/4	113.4	114.2	116.0	24	118.5	118.8	119.9	24	114.1	114.3	114.7	24	120.7	121.7	123.1	24	---	---	---	0			
6/5	113.8	115.9	122.3	24	123.4	126.3	128.0	24	114.3	115.4	116.6	24	125.0	127.6	128.2	24	---	---	---	0			
6/6	127.7	128.6	129.5	24	125.9	126.8	127.3	24	120.4	122.0	123.2	24	128.4	129.2	130.4	24	---	---	---	0			
6/7	127.3	128.2	129.6	24	125.6	126.7	127.7	24	123.6	123.8	124.3	24	127.0	127.8	128.2	24	---	---	---	0			
6/8	127.8	128.5	129.7	24	125.7	126.2	126.5	24	124.1	125.0	125.6	24	127.6	128.2	128.9	24	---	---	---	0			
6/9	128.1	129.1	129.7	24	122.3	123.6	126.2	24	124.5	125.2	125.7	24	124.9	126.2	127.5	24	---	---	---	0			
6/10	122.2	122.7	124.7	24	121.3	122.3	122.7	24	120.6	121.5	123.0	24	123.9	124.5	125.0	24	---	---	---	0			
6/11	120.9	121.2	122.5	24	119.9	120.7	122.0	24	117.9	118.4	118.8	24	122.5	123.6	123.8	24	---	---	---	0			
6/12	120.2	120.4	120.6	24	120.5	121.0	121.3	24	119.4	119.8	120.1	24	120.3	120.9	121.2	24	---	---	---	0			
6/13	119.8	120.5	121.5	24	117.9	119.6	121.2	24	120.0	120.2	120.4	24	119.2	120.1	121.1	24	---	---	---	0			
6/14	121.4	122.2	122.3	24	117.4	118.7	121.3	24	118.9	119.1	119.5	24	117.9	118.5	119.4	24	---	---	---	0			
6/15	118.3	118.5	119.1	24	120.3	120.5	120.9	24	118.1	118.4	118.6	24	118.6	119.5	120.0	24	---	---	---	0			
6/16	116.9	117.7	118.2	24	119.8	120.2	120.6	24	116.1	116.4	117.2	24	118.8	119.4	119.6	24	---	---	---	0			
6/17	113.9	114.2	114.7	24	119.3	119.6	119.8	24	114.6	114.9	115.4	24	116.8	117.2	117.8	24	---	---	---	0			

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
6/4	109.1	109.6	110.2	24	117.4	117.6	117.8	24	108.8	109.0	109.2	24	117.8	118.3	118.4	24	110.9	111.4	112.0	24
6/5	109.6	110.6	111.4	24	118.9	120.4	121.0	24	108.1	108.6	109.1	24	118.2	118.6	119.0	24	111.3	113.1	113.7	24
6/6	112.7	114.4	116.0	24	118.6	119.0	119.4	24	109.6	109.8	109.9	24	118.4	118.7	118.9	24	111.8	112.2	113.1	24
6/7	115.7	116.1	116.7	24	118.5	119.0	119.1	24	109.4	109.5	109.7	24	118.1	118.5	118.9	24	111.0	111.5	112.1	24
6/8	114.7	116.1	117.0	24	119.6	120.1	120.4	24	111.8	113.6	114.5	24	118.0	118.9	119.6	24	111.8	113.3	114.2	24
6/9	116.7	117.3	117.8	24	121.2	121.7	122.0	24	113.9	114.5	114.7	24	118.9	119.2	119.8	24	113.5	113.9	114.2	24
6/10	112.2	113.6	115.2	24	122.6	122.9	123.2	24	111.4	111.8	112.6	24	118.3	118.6	118.8	24	110.9	111.4	112.2	24
6/11	109.9	110.4	111.0	24	122.7	122.9	123.1	24	109.8	110.0	110.3	24	118.8	119.1	119.4	24	110.4	111.3	112.0	24
6/12	112.2	113.4	114.0	24	121.2	121.8	122.6	24	110.2	111.0	111.7	24	118.8	119.1	119.3	24	111.9	113.0	113.7	24
6/13	115.1	115.6	116.0	24	118.6	118.8	119.1	24	113.1	113.9	114.4	24	117.0	117.6	118.3	24	112.3	112.6	112.9	24
6/14	115.8	116.2	116.7	24	117.6	117.8	117.9	24	115.1	115.9	116.4	24	116.6	117.8	118.2	24	111.0	111.7	112.3	24
6/15	113.2	113.6	114.8	24	118.2	118.9	119.0	24	114.1	114.8	115.3	24	117.4	118.5	118.6	24	110.9	111.2	111.3	24
6/16	110.8	111.0	111.2	24	119.5	120.2	121.1	24	110.4	111.3	112.3	24	118.2	118.4	119.0	24	110.7	111.0	111.3	24
6/17	110.3	110.6	110.9	24	122.1	123.6	123.9	24	107.4	107.7	108.2	24	118.3	118.5	118.7	24	109.5	109.9	110.4	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High		<u>24h</u>	<u>12h</u>	High	
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
6/4	116.1	116.9	117.4	24	113.6	114.4	114.9	24	114.6	115.3	115.9	24	112.5	112.9	113.3	24	119.5	120.1	121.0	24
6/5	116.4	117.0	117.5	24	113.6	114.6	115.7	24	114.7	115.9	117.1	24	113.1	114.4	115.0	24	119.7	120.6	121.4	24
6/6	115.9	116.3	117.4	24	116.3	116.5	116.6	24	117.4	117.8	118.0	24	115.4	116.2	116.8	24	121.0	121.3	121.6	24
6/7	114.8	115.4	116.5	24	113.7	114.1	115.3	24	115.8	116.2	116.5	24	114.9	115.4	115.7	24	120.6	121.2	121.6	24
6/8	115.8	116.5	117.5	24	114.2	114.5	114.9	24	117.7	118.5	119.0	24	115.5	116.3	116.5	24	121.6	122.2	122.5	24
6/9	116.4	116.7	117.1	24	114.8	115.1	115.3	24	118.7	118.9	119.0	24	116.5	116.9	117.3	24	122.3	122.4	122.6	24
6/10	114.9	115.2	115.5	24	112.6	113.3	114.1	24	117.8	118.1	118.4	24	115.2	115.3	115.5	24	122.2	122.3	122.4	24
6/11	115.2	115.8	116.4	24	110.7	111.2	112.0	24	117.7	118.3	118.7	24	115.4	116.0	116.6	24	122.2	122.6	122.7	24
6/12	116.6	117.2	117.8	24	114.6	116.3	117.3	24	120.1	120.9	121.6	24	117.8	118.9	119.2	24	122.9	123.1	123.3	24
6/13	117.8	118.1	118.6	24	115.9	116.8	117.3	24	118.4	120.1	122.1	24	118.5	119.4	120.1	24	121.4	122.5	123.1	24
6/14	116.9	117.2	117.6	24	111.6	112.5	113.4	24	113.8	114.2	115.3	24	113.3	113.8	114.6	24	118.8	119.3	119.5	24
6/15	116.5	116.9	117.5	24	110.8	111.3	111.9	24	113.2	113.7	114.4	24	111.5	111.8	112.2	24	119.6	120.2	121.1	24
6/16	116.5	116.8	117.3	24	111.7	111.8	112.0	24	115.5	116.3	116.9	24	112.8	113.5	114.5	24	122.6	123.0	123.1	24
6/17	116.2	116.6	117.6	24	112.5	112.7	113.2	24	117.1	117.5	118.2	24	116.1	117.0	117.4	24	123.2	123.2	123.4	24

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/04/2010	*	---	---	---	4,242	5,375	6,131	83	49,558	15,753	28,004
06/05/2010	*	---	---	---	7,201	9,836	8,012	124	---	16,844	33,224
06/06/2010	*	---	---	---	6,814	7,536	7,904	45	18,113	23,457	40,966
06/07/2010	*	---	---	---	3,108	10,014	4,420	58	---	18,158	17,612
06/08/2010	*	---	---	---	1,329	15,621	8,508	66	11,571	9,592	16,396
06/09/2010	*	---	0	---	1,085	10,531	5,723	100	---	6,163	13,066
06/10/2010	*	---	2	---	791	8,103	6,343	189	4,798	4,485	6,547
06/11/2010	*	---	---	---	983	9,575	5,836	280	---	10,965	3,535
06/12/2010	*	---	---	---	859	2,251	3,940	268	2,297	2,893	4,140
06/13/2010	*	---	13	---	84	4,003	3,238	158	---	2,646	4,673
06/14/2010	*	---	13	---	337	2,943	2,800	52	5,051	4,002	6,572
06/15/2010	*	---	15	---	993	571	879	49	---	3,639	2,886
06/16/2010	*	---	---	---	215	472	1,013	23	1,761	2,695	3,190
06/17/2010	*	---	---	---	436	963	1,028	14	---	2,911	1,694
06/18/2010	*	---	---	---	---	---	---	---	---	---	---
Total:	0	43	0	0	28,477	87,794	65,775	1,509	93,149	124,203	182,505
# Days:	0	5	0	0	14	14	14	14	7	14	14
Average:	0	9	0	0	2,034	6,271	4,698	108	13,307	8,872	13,036
YTD	56,130	79,994	27,916	7,995	2,450,615	1,258,248	439,216	11,670	2,083,637	1,022,517	2,292,601

COMBINED SUBYEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/04/2010	*	---	---	---	67,709	24,107	7,221	287	10,276	9,817	13,103
06/05/2010	*	---	---	---	115,033	49,023	13,757	200	---	9,817	19,839
06/06/2010	*	---	---	---	84,041	87,208	15,243	140	20,470	14,198	16,699
06/07/2010	*	---	---	---	77,252	67,235	28,821	230	---	9,079	14,310
06/08/2010	*	---	---	---	38,915	90,230	47,973	311	26,496	7,587	15,576
06/09/2010	*	---	0	---	62,259	109,311	71,877	314	---	14,415	13,785
06/10/2010	*	---	0	---	42,533	96,863	96,735	656	58,866	15,548	12,731
06/11/2010	*	---	---	---	20,159	67,678	76,483	673	---	25,217	9,746
06/12/2010	*	---	---	---	21,332	112,516	37,360	564	81,734	25,463	21,936
06/13/2010	*	---	1	---	14,827	69,531	29,915	308	---	34,329	33,387
06/14/2010	*	---	0	---	10,885	31,851	21,379	205	69,607	25,919	32,698
06/15/2010	*	---	0	---	9,884	15,444	18,968	144	---	32,947	34,516
06/16/2010	*	---	---	---	13,332	21,218	16,292	161	53,936	48,005	20,592
06/17/2010	*	---	---	---	21,299	33,159	13,238	112	---	45,326	22,206
06/18/2010	*	---	---	---	---	---	---	---	---	---	---
Total:	0	1	0	0	599,460	875,374	495,262	4,305	321,385	317,667	281,124
# Days:	0	5	0	0	14	14	14	14	7	14	14
Average:	0	0	0	0	42,819	62,527	35,376	308	45,912	22,691	20,080
YTD	0	43	28	1,275	739,474	901,967	509,558	6,825	359,378	351,894	2,126,931

Two-Week Summary of Passage Indices

COMBINED COHO											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/04/2010	*	---	---	---	326	1,932	817	1,136	8,633	4,314	11,048
06/05/2010	*	---	---	---	1,800	1,967	2,419	766	---	4,128	14,341
06/06/2010	*	---	---	---	909	2,017	2,258	417	5,452	3,499	10,559
06/07/2010	*	---	---	---	0	2,131	354	801	---	7,805	6,329
06/08/2010	*	---	---	---	442	1,420	0	506	4,485	4,295	3,826
06/09/2010	*	---	0	---	1,085	0	336	706	---	3,777	2,607
06/10/2010	*	---	0	---	396	0	317	1,034	3,256	1,595	3,658
06/11/2010	*	---	---	---	295	618	154	913	---	3,788	2,034
06/12/2010	*	---	---	---	316	985	408	968	3,189	2,701	1,961
06/13/2010	*	---	0	---	126	0	0	715	---	2,083	1,883
06/14/2010	*	---	0	---	37	699	382	387	2,788	2,383	4,430
06/15/2010	*	---	0	---	183	214	251	270	---	2,777	2,842
06/16/2010	*	---	---	---	72	67	0	140	600	2,904	2,055
06/17/2010	*	---	---	---	73	0	257	76	---	1,768	941
06/18/2010	*	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	6,060	12,050	7,953	8,835	28,403	47,817	68,514
# Days:		0	5	0	14	14	14	14	7	14	14
Average:		0	0	0	433	861	568	631	4,058	3,416	4,894
YTD		0	0	0	104	39,485	52,851	13,323	40,623	80,901	515,794

COMBINED STEELHEAD											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/04/2010	*	---	---	---	14,194	13,174	6,403	403	6,321	5,103	8,221
06/05/2010	*	---	---	---	102,071	47,639	12,547	346	---	4,461	8,844
06/06/2010	*	---	---	---	36,342	43,453	25,217	118	5,650	14,301	5,848
06/07/2010	*	---	---	---	38,626	53,009	26,169	114	---	14,654	2,477
06/08/2010	*	---	---	---	16,963	74,540	17,741	141	9,226	13,600	6,148
06/09/2010	*	---	34	---	10,847	26,677	23,277	171	---	15,408	2,817
06/10/2010	*	---	21	---	5,341	16,819	15,224	182	3,732	9,867	3,194
06/11/2010	*	---	---	---	6,097	7,413	4,761	111	---	6,976	6,106
06/12/2010	*	---	---	---	3,661	6,332	3,396	67	2,224	6,849	4,140
06/13/2010	*	---	57	---	2,806	4,891	1,554	51	---	6,381	2,465
06/14/2010	*	---	57	---	2,394	5,936	1,909	52	2,615	4,192	2,587
06/15/2010	*	---	82	---	2,997	3,140	1,256	41	---	2,586	2,255
06/16/2010	*	---	---	---	2,867	1,955	1,564	51	1,823	2,384	1,638
06/17/2010	*	---	---	---	2,799	3,223	386	70	---	2,704	1,505
06/18/2010	*	---	---	---	---	---	---	---	---	---	---
Total:		0	251	0	248,005	308,201	141,404	1,918	31,591	109,466	58,245
# Days:		0	5	0	14	14	14	14	7	14	14
Average:		0	50	0	17,715	22,014	10,100	137	4,513	7,819	4,160
YTD		4,385	27,683	4,051	11,795	2,026,789	1,580,191	421,975	16,556	445,457	588,240

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/04/2010	*	---	---	---	---	163	141	136	586	47,618	37,754	40,594
06/05/2010	*	---	---	---	---	360	703	0	282	---	21,529	76,248
06/06/2010	*	---	---	---	---	1,363	0	0	118	31,645	12,141	47,926
06/07/2010	*	---	---	---	---	0	0	0	198	---	11,150	17,612
06/08/2010	*	---	---	---	---	442	710	0	82	36,470	8,303	7,651
06/09/2010	*	---	0	---	---	0	0	168	134	---	10,438	2,907
06/10/2010	*	---	0	---	---	0	0	0	122	12,303	7,076	10,050
06/11/2010	*	---	---	---	---	98	0	0	92	---	9,568	5,569
06/12/2010	*	---	---	---	---	136	0	0	49	16,704	8,006	4,728
06/13/2010	*	---	0	---	---	126	148	0	10	---	4,896	4,518
06/14/2010	*	---	0	---	---	0	140	255	6	7,366	6,195	3,868
06/15/2010	*	---	0	---	---	146	214	0	2	---	4,214	5,098
06/16/2010	*	---	---	---	---	108	34	252	5	6,041	3,628	3,262
06/17/2010	*	---	---	---	---	73	0	0	5	---	3,328	2,258
06/18/2010	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	3,015	2,090	811	1,691	158,147	148,226	232,289
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	215	149	58	121	22,592	10,588	16,592
YTD		80	0	0	188	8,476	12,480	2,122	36,448	1,458,194	645,178	795,412

* 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, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, 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.

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:

6/18/10 9:55 AM

		06/04/10 TO 06/18/10					
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	313,875	14,879	3,150	128,544	1,525	461,973
	Sum of NumberBarged	313,195	14,870	3,146	126,633	1,522	459,366
	Sum of NumberBypassed	0	0	0	1,857	0	1,857
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	42	1	0	5	0	48
	Sum of FacilityMorts	638	8	4	49	3	702
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	680	9	4	54	3	750
LGS	Sum of NumberCollected	557,809	54,662	7,675	187,758	1,375	809,279
	Sum of NumberBarged	552,566	54,536	7,675	187,691	1,375	803,843
	Sum of NumberBypassed	41	0	0	0	0	41
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	27	3	0	0	0	30
	Sum of FacilityMorts	5,176	123	0	67	0	5,366
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	5,203	126	0	67	0	5,396
LMN	Sum of NumberCollected	324,604	42,309	5,100	85,288	600	457,901
	Sum of NumberBarged	324,207	42,263	5,100	85,064	500	457,134
	Sum of NumberBypassed	104	9	0	88	0	201
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	5	1	0	3	0	9
	Sum of FacilityMorts	288	36	0	135	0	459
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	293	37	0	138	0	468
MCN	Sum of NumberCollected	149,722	48,380	14,040	15,519	78,501	306,162
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	148,280	47,497	14,000	15,422	77,948	303,147
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	56	12	0	2	41	111
	Sum of FacilityMorts	1,386	871	40	95	512	2,904
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,442	883	40	97	553	3,015
Total Sum of NumberCollected		1,346,010	160,230	29,965	417,109	82,001	2,035,315
Total Sum of NumberBarged		1,189,968	111,669	15,921	399,388	3,397	1,720,343
Total Sum of NumberBypassed		148,425	47,506	14,000	17,367	77,948	305,246
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		130	17	0	10	41	198
Total Sum of FacilityMorts		7,488	1,038	44	346	515	9,431
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		7,618	1,055	44	356	556	9,629

YTD Transportation Summary

Source: Fish Passage Center

Updated:

6/18/10 9:56 AM

TO: 06/18/10

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	417,733	1,620,857	27,850	5,585	1,343,571	3,415,596
	Sum of NumberBarged	416,241	1,427,304	27,840	5,570	1,294,924	3,171,879
	Sum of NumberBypassed	700	191,860	0	10	48,344	240,914
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	50	54	0	0	19	123
	Sum of FacilityMorts	742	1,224	10	5	267	2,248
	Sum of ResearchMorts	0	415	0	0	17	432
	Sum of TotalProjectMorts	792	1,693	10	5	303	2,803
LGS	Sum of NumberCollected	576,383	871,599	36,170	8,635	1,075,797	2,568,584
	Sum of NumberBarged	571,131	789,927	36,169	8,635	1,016,100	2,421,962
	Sum of NumberBypassed	46	81,373	0	0	59,473	140,892
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	29	29	1	0	9	68
	Sum of FacilityMorts	5,178	270	0	0	215	5,663
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	5,207	299	1	0	224	5,731
LMN	Sum of NumberCollected	333,842	296,476	8,575	1,470	235,329	875,692
	Sum of NumberBarged	333,442	295,010	8,575	1,369	230,140	868,536
	Sum of NumberBypassed	122	1,455	0	0	4,973	6,550
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	7	9	0	0	10	26
	Sum of FacilityMorts	290	200	0	1	307	798
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	297	209	0	1	317	824
MCN	Sum of NumberCollected	172,107	1,218,848	44,931	843,291	258,630	2,537,807
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	170,659	1,217,555	44,877	842,558	258,427	2,534,076
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	56	121	3	92	16	288
	Sum of FacilityMorts	1,392	1,172	51	641	187	3,443
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,448	1,293	54	733	203	3,731
Total Sum of NumberCollected		1,500,065	4,007,780	117,526	858,981	2,913,327	9,397,679
Total Sum of NumberBarged		1,320,814	2,512,241	72,584	15,574	2,541,164	6,462,377
Total Sum of NumberBypassed		171,527	1,492,243	44,877	842,568	371,217	2,922,432
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		142	213	4	92	54	505
Total Sum of FacilityMorts		7,602	2,866	61	647	976	12,152
Total Sum of ResearchMorts		0	415	0	0	17	432
Total Sum of TotalProjectMorts		7,744	3,494	65	739	1,047	13,089

Cumulative Adult Passage at Mainstem Dams Through: 06/17

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	06/17	244362	12613	114525	66631	167834	17301	37375	4242	37945	17378	29670	4603	0	0	0	0	0	0
TDA	06/17	189839	11546	93908	53646	121486	13792	25994	2850	31654	10500	21377	2987	0	0	0	0	0	0
JDA	06/17	179446	11794	76806	49733	101283	12037	18897	2113	22178	9178	15766	2279	0	0	0	0	0	0
MCN	06/17	153246	9178	70413	43328	93119	11340	15085	1363	14157	5664	11223	1656	0	0	0	0	0	0
IHR	06/17	101188	6047	55435	28223	64058	7222	10968	593	6347	3268	4624	837	0	0	0	0	0	0
LMN	06/17	97334	5899	66931	20009	63381	6004	10363	571	5562	1345	3139	383	0	0	0	0	0	0
LGS	06/17	92991	5461	52642	24331	58937	6617	7025	371	2034	853	1342	234	0	0	0	0	0	0
LGR	06/17	94100	6390	49667	31064	59267	8126	0	0	0	0	0	0	0	0	0	0	0	0
PRD	06/15	30539	932	13469	2910	19097	834	578	11	1022	51	667	26	0	0	0	0	0	0
RIS	06/16	29503	1498	12233	5844	15591	1550	0	0	0	0	0	0	0	0	0	0	0	0
RRH	06/16	8529	516	5319	1013	5899	488	0	0	0	0	0	0	0	0	0	0	0	0
WEL	06/16	6922	605	2741	1665	3329	411	0	0	0	0	0	0	0	0	0	0	0	0
WFA	06/14	45530	1097	20023	1838	-	-	-	-	-	-	-	-	0	0	0	0	0	-

DAM	Coho						Sockeye			Steelhead			
	2010		2009		10-Yr Avg.		10-Yr Avg.			10-Yr			Wild 2010
	Adult	Jack	Adult	Jack	Adult	Jack	2010	2009	Avg.	2010	2009	Avg.	
BON	0	0	0	0	0	0	29583	26854	16195	12533	8371	8486	3469
TDA	0	0	0	0	0	0	14766	16337	9148	3985	2455	2647	1569
JDA	0	0	0	0	0	0	10201	12077	6418	3776	4638	4125	1799
MCN	0	0	0	0	0	0	3517	5393	2957	2941	3073	2711	1380
IHR	0	0	0	0	0	0	3	11	1	3212	3373	2498	1273
LMN	0	0	0	0	0	0	2	5	0	4340	5056	2771	2249
LGS	0	0	0	0	0	0	0	1	0	3207	5546	2786	1599
LGR	0	0	0	0	0	0	0	1	0	10510	10873	8608	4183
PRD	0	0	0	0	0	0	431	622	344	98	78	42	0
RIS	0	0	0	0	0	0	137	159	76	123	117	89	88
RRH	0	0	0	0	0	0	95	48	33	359	448	227	275
WEL	0	0	0	0	0	0	20	5	4	104	92	46	86
WFA	0	0	0	0	0	0	-	-	-	21852	11781	-	0

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: 06/05/2010

BON counts from January 1, 2009 to March 14, 2010 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2010	39	0	2,318	657
2009	19	-1	321	109

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											
	06/07/10	Chinook + Steelhead	73	0	0	0.00%	0.00%	0	0	0	0
	06/14/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	06/07/10	Chinook + Steelhead	100	6	6	6.00%	1.00%	5	0	1	0
	06/14/10	Chinook + Steelhead	100	15	15	15.00%	4.00%	8	3	3	1
Lower Monumental Dam											
	06/09/10	Chinook + Steelhead	101	4	4	3.96%	0.00%	4	0	0	0
	06/16/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	06/07/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/13/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	06/08/10	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/12/10	Chinook + Steelhead	56	0	0	0.00%	0.00%	0	0	0	0
	06/15/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	06/08/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/10/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0