



Fish Passage Center

Weekly Report #10 - 12

June 4, 2010

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 79% and 134% of average at individual sub-basins over May. Precipitation above The Dalles has been 96% of average over May. Over the 2010 water year, precipitation has ranged between 75% and 89% of average.

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

Location	Water Year 2010 May 1-24		Water Year 2010 October 1, 2009 to May 24, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.40	81	14.05
Snake River Above Ice Harbor	1.41	97	11.59	88
Columbia Above The Dalles	1.46	96	14.92	85
Kootenai	1.37	80	14.58	81
Clark Fork	1.30	82	8.91	75
Flathead	1.70	90	13.58	87
Pend Oreille/ Spokane	1.59	79	19.76	81
Central Washington	0.57	95	6.27	88
Snake River Plain	1.15	101	7.24	87
Salmon/Boise/ Payette	1.46	106	14.0	89
Clearwater	2.19	94	19.57	83
SW Washington Cascades/Cowlitz	3.94	134	54.04	88
Willamette Valley	3.34	122	46.51	88

Table 2 displays the May Final and June Early runoff volume forecasts for multiple reservoirs. The current forecast at The Dalles between January and July is 71300 Kaf (66% of average).

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

Location	May Final		June Early	
	% Average (1971 -2000)	Probable Runoff Volume (Kaf)	% Average (1971 -2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	66	70900	66	71300
Grand Coulee (Jan- July)	74	46400	72	45600
Libby Res. Inflow, MT (Apr-Aug)	69 77*	4310 4887*	69	4340
Hungry Horse Res. Inflow, MT (Jan-July)	74	1640	71	1570
Lower Granite Res. Inflow (Apr- July)	58	12400	62	13300
Brownlee Res. Inflow (Apr-July)	44	2780	46	2910
Dworshak Res. Inflow (Apr-July)	55 57*	1460 1526*	59	1560

* 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 57.2 Kcfs from April 3 to June 3 and 84.6 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 3 have averaged 174.4 Kcfs at McNary Dam and 108.2 Kcfs at Priest Rapids Dam. Over the last week, flows have averaged 212.0 Kcfs at McNary Dam and 124.1 Kcfs at Priest Rapids Dam. Grand Coulee Reservoir is at 1273.1 feet (6-3-10) and refilled 7.8 feet over the last week. Outflows at Grand Coulee have ranged between 64.3 and 121.5 Kcfs over the last week. Outflows from Grand Coulee continue to be managed to achieve flows of 125-135 Kcfs at Priest Rapids Dam.

The Libby Reservoir is currently at elevation 2420.6 feet (6-3-10) and has refilled 1.9 feet last week. Outflows at Libby are currently 17.7 Kcfs. The COE released its May Final forecast at Libby Dam on May 7th, 2010 which was 4887 Kaf (April-August) which puts Libby in a Tier 2 sturgeon operation in 2010. It is expected that the sturgeon pulse (full powerhouse outflows) will occur in early to middle June. Inflows to Libby have been increasing over the last week, ranging from 17.0 Kcfs to 29.4 Kcfs.

Hungry Horse is currently at an elevation of 3544.0 feet (6-3-10) and has refilled 4.8 feet last week. Outflows at Hungry Horse have been approximately 4.0 Kcfs last week. Inflows to Hungry Horse Dam have been increasing over the last week, ranging between 10.0 Kcfs to 17.1 Kcfs.

Dworshak is currently at an elevation of 1585.4 feet (6-3-10) and has refilled approximately 8.3 feet last week. Outflows from Dworshak have been 1.2 Kcfs. Inflows to Dworshak have been increasing over the last week, ranging between 8.8 to 21.4 Kcfs.

The Brownlee Reservoir was at an elevation of 2073.5 feet on June 3, 2010 refilling 0.2 feet last week. Over the last week, outflows at Brownlee have ranged between 18.6-23.5 Kcfs. Inflows to Brownlee have increased from 20.5 Kcfs to 22.7 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 significantly increased flows in the Snake River by week's end. Spill at Lower Granite Dam met the 20 Kcfs instantaneous level over most of the past week, and increased dramatically to near 80 Kcfs on June 3rd. Spill at Little Goose Dam achieved the 30% of instantaneous flow for most of the week, but missed it slightly on June 3rd. The project spill cap was set too low to allow achieving the 30% as flows increased, even though the project TDG was not exceeding waiver limits. Spill at Lower Monumental Dam was relatively constant over the past week, near the gas cap of 27 Kcfs, except for June 3rd when the increased flows resulted in increased spill with a daily average spill of 31.3 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. Spill at Ice Harbor Dam occurred as 45 Kcfs during daytime hours, and spill to the gas cap during nighttime hours, or as 30% spill, in two-day blocks.

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 were met at McNary Dam, and exceeded the 40% on June 3rd due to the higher flow levels. At John Day Dam the testing of 30% spill versus 40% spill occurred in two-day blocks. The objectives of the study were met except for June 3rd, when the gas cap implemented by the COE prevented the project from meeting the 40% spill level. The planned spill levels were met at The Dalles over the past week, except for June 3rd, where again, the gas cap implemented by the COE did not allow for the project to meet the objective. At Bonneville Dam spill met the 100 Kcfs spill level, except for June 2 to June 3rd, when the spill was reduced to address the TDG levels at the Camas/Washougal TDG gage, which is not a required point of compliance.

At present, GBT monitoring is being implemented at Lower Granite, Little Goose, Lower Monumental, McNary, Bonneville and Rock Island dams. One fish was reported with Rank 1 signs of fin GBT this past week at Rock Island Dam (1%) and one fish at Little Goose Dam. These levels of incidence are well below the action criteria of 15%.

All of the tailrace TDG monitors reported TDGS levels below the State Waiver limits, with the exception of June 3rd when the TDG recorded below Lower Granite Dam exceeded 120%. One forebay exceedence was reported at Camas/Washougal on June 1, when the TDG registered 115.7%. However, this location is not a required point of compliance for the water quality waivers.

Smolt Monitoring:

Subyearling Chinook collections at Snake River dams increased over the past week as the summer migrants began to predominate in passage at Lower Granite Dam. Collections of yearling Chinook and steelhead at Snake River dams have declined over the past week. Traps operated for SMP at the Salmon River, at Lewiston on the Snake River and on the Grande Ronde River in Oregon, have completed sampling for the season. Collections of sockeye and coho at Rock Island Dam have begun to decrease, while sockeye collections at McNary Dam have increased dramatically.

At Lower Granite Dam passage indices for all spring migrants declined over the past two weeks, while subyearling Chinook indices have begun to increase rapidly. Indices for subyearling Chinook averaged 16,000 per day this week compared to just over 2,000 per day last week. The index for subyearling Chinook

reached 50,000 on June 3 indicating that the summer migrants are likely to predominate for the rest of the season.

Rock Island Dam bypass trap has collected an unusually large number of smolts the past two weeks. The crew had to take the unusual step of diverting water away from the trap 12 hours a day due to high numbers of fish in the trap. Coho and sockeye were the predominant species being collected at the site the past several days. The Passage indices for coho and sockeye have decreased over the past week. The average index for sockeye was 3,600 per day last week but dropped to 170 per day this week, while coho indices averaged 2,800 per day last week and are down to just over 1,200 per day this week. The SMP crew went back to 24 hour sampling on June 2 at Rock Island Dam.

At McNary Dam sockeye have predominated over the past week. Indices for sockeye averaged 270,000 per day this week compared to 37,000 for yearling Chinook and 7,700 for steelhead during that same period. Subyearling Chinook indices at McNary Dam increased only slightly above last week with the average index increasing from 4,300 to 5,300 from last week to this week.

At Bonneville Dam the largest collections over the past week have been sockeye and steelhead followed by yearling Chinook. Yearling Chinook indices continued to decline this week with the index average 19,000 this week compared to 70,000 per day last week. For sockeye the passage index averaged 50,000 this week compared to 15,000 last week. Steelhead indices were up from last week; the passage index averaged 29,000 per day this week compared to 22,000 per day last week.

Hatchery Release:

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. Releases of Snake River subyearling fall Chinook surrogates that began in mid-May were scheduled to end sometime this week. In all, approximately 230,000 Snake River fall Chinook surrogates were scheduled for release this year. These Snake River surrogates are 100% unmarked, but are tagged with PIT-tags. In addition to the continued Snake River surrogate release, there was one other release of subyearling fall Chinook scheduled for this week. Approximately 500,000 subyearlings were scheduled to be released from the Nez Perce Tribal Hatchery into the Clearwater River

this week. Of these, about 40% are unmarked.

Three releases of subyearling fall Chinook juveniles to the Clearwater River and its tributaries are scheduled to take place over the next two weeks. In all, these releases total approximately 498,000 juveniles. Of these, 400,000 are production fall Chinook that will be released from the Cedar Flats and Lukes Gulch acclimation facilities in mid-June. All of these production subyearlings are marked with either an adipose fin clip or a coded-wire-tag. The remaining 98,000 subyearlings that are scheduled for release over the next two weeks are fall Chinook surrogates. These Clearwater River surrogate releases are scheduled to begin in mid-June and run through early July. As with the Snake River surrogates, the Clearwater River surrogates are 100% unmarked but are tagged with PIT-tags.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. There were no releases of juvenile salmonids scheduled to begin this week in this zone. However, several volitional releases of coho to the Yakima River that began in April were scheduled to end sometime this week. These coho releases are part of the Yakama Tribal Program to re-introduce coho to the Yakima River. This Yakama Tribal Program also released coho juveniles into the Methow, Wenatchee, and Mid-Columbia River this year.

Beginning next week, nearly 10.3 million subyearling fall Chinook are scheduled for release in this river zone. These fall Chinook subyearlings are to be released directly into the Mid-Columbia River from Ringgold Springs and Priest Rapids hatcheries, both of which are located below Priest Rapids Dam. These releases are volitional and are scheduled to run through mid to late June. The only other release of juvenile salmonids scheduled to begin over the next two weeks is a release of 800,000 subyearling summer Chinook from Turtle Rock Hatchery into the Mid-Columbia River. Of these subyearling summer Chinook, about 75% are unmarked.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were no releases of juvenile salmonids scheduled to begin this week in this zone. However, a volitional release of nearly 213,000 yearling spring Chinook to the Deschutes River was scheduled to end this week. This release began in mid-April.

Over the next two weeks, approximately 4.5 million subyearling fall Chinook will be released from Little White Salmon NFH into the Little White Salmon River. Currently, this release is scheduled to take place on June 17th.

Adult Fish Passage:

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam ranged between 3275 and 3804 adult summer Chinook in the last week. The 2010 summer Chinook count of 10358 is about 1.73 times greater than the 2009 count and 2.5 times greater than the 10 year average. The 2010 Bonneville Dam summer Chinook jack count of 978 is only about 36.8% of the 2009, however, it is 1.44 times greater than the 10 year average of 678. Adult spring Chinook counts at Bonneville Dam ended on May 31st. The total 2010 spring Chinook count of 244362 was about 2.13 times greater than the 2009 count and about 1.46 times greater than the 10 year average. The 2010 Bonneville Dam spring Chinook jack count of 12613 is only about 18.9% of the 2009 count and 72.9% of the 10 year average. At Willamette Falls 42169 adult spring Chinook have been counted so far this year. The 2010 adult spring Chinook count at Willamette Falls is 2.86 times greater than the 2009 count of 14770. At McNary Dam 142099 adult spring Chinook have been counted. The 2010 adult spring Chinook count at McNary Dam is about 2.22 times greater than the 2009 count and about 1.6 times greater than the 10 year average. The 2010 McNary Dam spring Chinook jack count of 8204 is only about 20.12% of the 2009 count and is only about 77.8% of the 10 year average count. The 2010 adult spring Chinook count at Rock Island Dam of 26417 is about 2.93 times greater than the 2009 count and 1.96 times greater than the 10 year average. The 2010 adult spring Chinook count at Lower Granite Dam of 82084 is about 2.38 times greater than the 2009 count and about 1.7 times greater than the 10 year average. The 2010 Lower Granite spring Chinook jack count of 5433 is only about 22.9% of the 2009 count and about 90.4% of the 10 year average.

The Bonneville Dam 2010 steelhead count of 8087 is about 1.6 times greater than the 2009 count of 5027. The 2010 steelhead count is about 1.67 times greater than of the 10 year average of 4839. In the Snake River, this year's Lower Granite steelhead count of 10476 is about 97.13% of the 2009 count. The 2010 LGR steelhead count is about 1.23 times greater than the 10 year average count of 8537. The 2010 LGR wild

steelhead count as of June 3rd was 4177. At Rock Island Dam, as of June 2nd, 114 adult steelhead had been counted and at Rocky Reach Dam 351 adult steelhead had been counted. At Willamette Falls Dam, the 2010 count for steelhead was 17635, as of May 28th. This year's steelhead count is only about 2.18 times greater than the 2009 count of 8059 at Willamette Falls Dam for the same date range.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 5 and 168 last week. The 2010 adult sockeye count at Bonneville Dam of 606 is about 1.98 times greater than the 2009 count of 306 and about 3.16 times greater than the 10 year average count of 192.

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	5/21/2010		to		06/03/10				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2010	230,000	05-11-10	05-29-10	Couse Creek	Snake River
National Marine Fisheries Service					230,000				
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	400,000	05-24-10	05-24-10	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	500,000	05-24-10	05-24-10	Cpt John Acclim Pond Big Canyon (Clearwater River)	Snake River Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2010	500,000	05-25-10	05-25-10	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2010	500,000	06-01-10	06-15-10		Clearwater River M F
Nez Perce Tribe Total					1,900,000				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	CH0	FA	2010	400,000	05-24-10	05-24-10	Grande Ronde River	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2010	212,760	04-13-10	06-01-10	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife					612,760				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2010	200,000	05-25-10	05-25-10	Couse Creek	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2010	200,000	05-25-10	05-25-10	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife					400,000				
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	15,846	04-07-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	37,806	04-12-10	06-01-10	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	45,060	04-12-10	06-01-10	Prosser Acclim Pond Lost Creek Acclim Pond	Yakima River Yakima River Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	134,850	04-12-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	135,086	04-12-10	06-01-10	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2010	205,926	04-12-10	06-01-10	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	38,159	04-12-10	06-01-10	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,342	04-07-10	06-01-10	Naches River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	74,438	04-12-10	06-01-10	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2010	137,659	04-12-10	06-01-10		Yakima River
Yakama Tribe Total					899,172				
Grand Total					4,041,932				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	6/4/2010		to		6/17/2010				
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	2,000,000	06-17-10	06-17-10	Little White Salmon Hatchery	Little White Salmon River
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					4,500,000				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2010	6,800,000	06-10-10	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	06-05-10	06-15-10	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					16,548,000				

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
05/21/2010	100.7	0.0	95.6	0.0	123.1	8.8	121.6	0.0	136.2	12.6	148.9	20.0	150.5	25.6
05/22/2010	78.7	0.0	83.7	0.0	102.1	7.6	100.3	0.0	112.4	12.0	119.6	19.1	125.6	26.2
05/23/2010	90.1	0.0	86.4	0.0	105.3	7.8	105.2	0.0	115.8	10.9	125.7	18.9	118.4	23.4
05/24/2010	102.9	0.0	107.5	0.0	130.8	8.9	132.4	0.0	142.4	13.6	149.6	18.7	147.8	25.5
05/25/2010	118.0	0.0	109.9	0.0	125.4	8.7	119.3	0.0	127.9	12.7	137.1	18.0	141.4	24.5
05/26/2010	103.7	0.0	108.4	0.0	124.7	8.5	123.7	0.0	134.0	13.6	134.8	18.5	127.5	24.0
05/27/2010	105.4	0.0	108.7	0.0	116.2	8.5	116.4	0.0	127.4	13.6	125.2	18.4	125.9	24.8
05/28/2010	97.5	0.0	101.8	0.0	113.2	8.3	110.5	0.0	122.0	12.8	112.8	19.2	107.6	26.0
05/29/2010	80.2	0.2	82.2	0.0	103.9	8.1	105.5	0.0	117.5	10.9	120.9	20.1	118.3	27.2
05/30/2010	69.4	0.1	74.2	0.0	92.5	7.1	93.5	0.0	104.1	10.9	109.5	20.0	111.4	27.1
05/31/2010	75.7	0.2	76.8	0.0	95.2	7.5	96.4	0.0	108.1	12.8	109.1	19.9	111.7	26.6
06/01/2010	121.5	0.2	106.4	0.6	128.7	8.5	127.8	0.0	138.7	12.2	140.0	20.1	132.6	26.5
06/02/2010	86.6	0.2	99.7	0.5	123.5	8.8	126.4	0.0	141.6	13.6	154.0	26.6	158.4	27.4
06/03/2010	64.3	0.1	74.1	0.0	104.6	7.9	107.2	0.0	121.7	12.6	132.3	19.0	128.5	24.5

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
05/21/2010	9.2	0.0	23.3	19.5	103.8	20.6	102.4	30.6	105.4	26.8	108.3	66.5
05/22/2010	1.2	0.0	23.4	20.9	89.7	20.7	86.1	26.0	85.1	25.6	87.4	37.9
05/23/2010	1.2	0.0	22.8	20.5	80.9	20.6	78.6	23.6	79.9	25.0	80.5	24.2
05/24/2010	1.2	0.0	24.2	22.9	74.1	20.6	72.2	21.5	72.9	25.7	73.4	22.0
05/25/2010	1.3	0.0	22.4	23.7	73.3	20.6	71.8	21.4	72.1	26.0	72.8	21.8
05/26/2010	1.3	0.0	21.7	24.4	69.1	20.5	68.4	20.5	66.8	25.7	68.6	20.5
05/27/2010	1.2	0.0	22.0	23.0	70.0	20.6	68.6	20.4	67.9	25.8	68.2	20.5
05/28/2010	1.2	0.0	21.8	23.0	71.5	20.6	70.0	20.9	70.3	26.1	71.8	45.7
05/29/2010	1.2	0.0	21.5	22.4	73.8	20.8	71.6	21.5	70.3	26.9	71.4	53.2
05/30/2010	1.2	0.0	20.5	22.5	75.9	20.7	75.4	22.6	74.9	25.9	77.1	53.4
05/31/2010	1.3	0.0	20.8	19.7	73.8	20.7	72.7	21.7	73.2	26.9	74.8	53.9
06/01/2010	1.2	0.0	21.0	22.0	78.8	20.7	77.0	23.0	76.5	26.2	77.3	32.8
06/02/2010	1.2	0.0	22.7	21.5	89.7	20.8	86.6	25.9	87.8	27.0	90.2	26.8
06/03/2010	1.2	0.0	---	---	128.6	41.4	122.5	35.4	123.8	31.3	124.3	55.2

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		
05/21/2010	267.8	107.2	276.1	109.9	263.2	102.3	270.8	99.2	64.8	94.3
05/22/2010	240.8	96.8	242.9	79.2	226.6	91.3	244.7	99.5	41.1	91.7
05/23/2010	209.8	84.4	215.8	64.8	207.5	83.1	219.2	99.4	16.8	90.6
05/24/2010	237.4	95.6	248.7	74.7	235.7	92.9	239.5	99.5	30.1	97.5
05/25/2010	219.0	88.3	225.6	67.6	212.6	85.4	235.4	99.4	29.2	94.5
05/26/2010	218.4	87.6	209.4	62.8	195.9	78.2	202.1	99.3	3.2	87.2
05/27/2010	211.1	84.4	218.7	65.6	205.3	81.7	217.3	99.4	10.7	94.8
05/28/2010	186.1	74.7	181.1	68.5	168.1	67.1	189.0	99.6	3.3	73.7
05/29/2010	175.1	70.3	166.5	66.6	153.4	61.1	171.9	99.6	5.7	54.2
05/30/2010	217.5	87.5	226.5	72.9	214.2	85.6	218.6	99.6	12.7	93.9
05/31/2010	194.5	78.2	197.2	59.3	185.0	74.7	212.5	99.6	15.0	85.5
06/01/2010	202.8	81.3	207.3	78.9	198.0	79.6	213.3	99.6	7.7	93.6
06/02/2010	233.2	93.7	230.5	92.2	213.8	85.4	227.1	96.4	26.4	91.9
06/03/2010	275.0	116.4	298.2	110.5	281.7	104.5	281.7	97.7	60.9	110.8

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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/21	98.1	98.8	99.1	23	110.2	111.9	113.6	21	106.7	107.2	107.6	24	103.8	104.4	104.7	21	105.1	105.7	106.1	24			
5/22	98.3	98.6	98.8	23	107.9	108.5	110.0	22	107.0	107.1	107.2	24	104.5	105.0	106.3	22	105.4	105.7	106.0	24			
5/23	97.3	97.6	98.1	22	107.4	108.0	109.4	20	106.8	106.9	107.1	24	104.7	105.2	105.6	20	104.9	105.4	105.6	24			
5/24	97.6	98.0	98.2	24	109.4	111.7	112.7	23	106.5	106.7	107.5	24	104.9	105.3	105.6	23	104.9	105.1	105.3	24			
5/25	97.5	97.7	98.1	24	109.8	111.1	111.5	24	106.2	106.5	106.8	23	104.9	105.5	105.7	24	104.9	105.4	105.6	24			
5/26	97.9	98.2	98.5	24	108.8	109.0	109.3	22	106.6	106.9	107.9	24	105.2	105.5	105.6	22	105.0	105.1	105.4	24			
5/27	97.9	98.1	98.5	23	110.3	111.4	112.4	22	106.5	106.7	107.0	24	104.8	105.1	105.5	22	104.5	104.8	104.9	24			
5/28	98.1	98.6	99.0	24	109.4	110.0	110.5	23	106.2	106.4	106.8	24	104.5	104.9	105.7	23	103.9	104.2	104.4	24			
5/29	97.3	97.6	97.8	23	109.4	109.6	109.9	20	105.7	105.9	106.2	24	103.9	104.3	105.3	20	103.8	104.3	104.5	24			
5/30	97.8	97.9	98.1	24	109.8	110.4	110.7	24	106.2	106.5	106.8	24	104.0	104.7	105.2	24	104.1	104.6	104.9	24			
5/31	98.4	98.8	99.1	24	109.8	110.1	110.4	24	106.6	106.7	107.2	24	104.9	105.4	105.8	24	104.2	105.4	105.7	24			
6/1	99.6	100.8	102.2	24	110.8	111.8	112.3	23	106.3	106.5	106.9	23	105.3	105.7	106.5	23	105.1	105.6	105.9	24			
6/2	103.7	105.3	105.8	24	113.3	114.8	115.9	24	107.2	107.5	107.9	24	105.2	105.5	106.0	24	105.8	106.2	106.3	24			
6/3	104.5	104.8	105.3	23	115.7	117.0	117.6	21	106.8	107.0	107.3	24	104.2	104.7	105.6	21	105.1	105.6	105.8	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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/21	104.8	105.3	106.0	24	104.4	105.2	105.9	23	105.9	106.8	107.5	23	106.0	106.3	106.5	24	105.3	105.6	105.9	24			
5/22	105.9	106.6	107.4	24	105.0	105.7	106.4	24	106.6	107.3	107.9	24	106.1	106.2	106.4	24	105.4	105.6	106.0	24			
5/23	105.4	105.9	106.4	24	104.9	105.4	106.1	24	106.5	106.8	107.4	24	105.9	106.0	106.2	24	105.3	105.5	105.7	24			
5/24	104.5	105.5	106.4	24	104.9	105.5	105.8	24	106.5	107.1	107.3	24	105.9	106.2	106.4	24	105.3	105.5	105.7	24			
5/25	105.0	105.5	106.7	24	104.8	105.3	105.7	24	106.2	107.0	107.2	24	106.3	106.5	106.8	24	105.6	105.9	106.2	24			
5/26	104.9	105.4	106.3	24	104.9	105.2	105.3	24	106.4	106.6	106.8	24	106.5	106.8	106.9	24	105.9	106.3	106.7	24			
5/27	104.5	104.8	105.1	24	104.2	104.4	104.5	24	106.1	106.3	106.4	24	106.3	106.4	106.7	24	105.6	105.9	106.0	24			
5/28	104.0	104.5	105.0	24	103.7	103.9	104.2	24	105.5	105.8	106.2	24	105.9	106.0	106.4	24	105.3	105.5	105.7	24			
5/29	103.9	104.3	105.2	24	103.7	104.2	104.5	24	105.6	106.2	106.5	24	105.4	105.6	105.8	24	104.7	104.9	105.1	24			
5/30	104.3	104.9	105.7	24	104.4	105.1	105.4	24	106.0	106.6	106.8	24	105.8	106.2	106.4	24	105.3	105.7	105.8	24			
5/31	105.0	105.9	106.7	24	105.2	105.8	106.0	24	106.8	107.3	107.6	24	106.5	106.9	107.1	24	105.9	106.2	106.4	24			
6/1	105.0	105.6	106.2	24	105.4	105.8	106.1	24	107.2	107.6	107.8	24	106.5	106.7	106.8	24	106.0	106.2	106.4	24			
6/2	106.4	107.1	109.4	24	105.7	106.1	106.4	24	107.5	107.9	108.2	24	107.3	107.6	107.8	24	106.6	106.9	107.0	24			
6/3	105.1	105.7	106.3	24	105.0	105.3	105.7	21	106.4	107.0	107.4	21	106.8	107.0	107.2	24	106.0	106.3	106.5	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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/21	104.6	106.1	106.5	24	108.3	109.0	109.4	24	108.0	108.7	109.3	24	110.0	110.3	112.4	24	111.0	111.2	111.9	24			
5/22	105.2	105.4	105.8	23	108.9	109.4	111.9	23	107.2	107.6	108.1	24	110.3	111.1	111.9	24	109.6	110.1	110.7	24			
5/23	105.0	105.4	105.8	24	108.1	108.9	109.8	24	106.0	106.4	106.7	24	109.2	109.9	110.7	24	108.0	108.2	108.5	24			
5/24	105.1	105.4	105.6	24	107.9	108.5	109.3	24	107.3	107.9	108.4	24	108.8	109.0	109.4	24	108.3	108.5	108.6	24			
5/25	105.5	106.1	106.3	24	108.7	109.4	110.2	24	108.3	109.4	110.3	24	109.2	109.5	111.4	24	109.1	109.3	109.7	24			
5/26	105.9	106.0	106.1	24	108.8	109.4	111.1	24	107.9	108.2	108.6	24	109.7	110.2	111.4	24	109.6	109.8	109.9	24			
5/27	104.9	105.9	106.2	24	108.8	109.5	112.9	24	108.0	108.2	108.9	24	109.9	110.4	111.0	24	109.3	109.5	109.7	24			
5/28	105.0	105.3	105.6	24	107.3	108.8	112.9	24	106.8	107.2	107.5	24	110.4	111.2	113.0	24	108.7	108.8	109.1	24			
5/29	104.8	105.1	105.2	24	106.8	107.8	108.4	24	104.7	104.9	105.3	24	109.3	109.9	111.6	24	108.0	108.1	108.4	24			
5/30	105.1	105.5	105.6	24	108.2	109.0	110.3	24	105.1	105.6	106.3	24	109.9	110.2	110.8	24	108.9	109.8	110.5	24			
5/31	105.8	105.9	105.9	24	109.5	110.1	112.2	24	107.1	107.7	108.3	24	110.5	110.8	112.2	24	110.4	110.7	111.1	24			
6/1	101.6	105.7	105.9	19	109.0	109.5	110.1	24	107.3	108.2	108.5	24	110.0	110.5	111.6	24	110.3	110.7	111.2	24			
6/2	---	---	---	0	108.8	109.4	110.1	24	108.7	108.9	109.3	24	110.9	111.4	114.8	24	110.5	110.7	110.9	24			
6/3	105.8	105.8	106.7	10	109.5	110.7	112.9	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				Clrwr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/21	112.4	112.6	112.8	24	107.9	109.2	109.6	24	96.1	96.7	99.5	24	101.1	101.8	102.2	24	103.7	104.3	104.6	24
5/22	111.3	111.8	112.3	24	109.0	109.5	110.1	24	106.3	108.7	110.0	24	102.0	102.7	103.2	24	103.3	103.6	104.1	24
5/23	110.0	110.5	111.1	24	107.4	108.0	108.4	24	106.9	108.2	110.1	24	102.1	103.2	104.2	24	103.4	104.3	104.8	24
5/24	110.9	111.2	111.4	24	107.6	108.9	109.5	24	106.5	107.4	109.4	24	101.8	102.3	102.7	24	103.3	103.9	104.6	24
5/25	111.5	111.8	112.1	24	108.9	109.7	110.0	24	107.2	107.4	109.1	14	102.5	103.8	104.5	24	103.2	104.0	104.5	24
5/26	111.8	112.0	112.3	24	109.2	109.6	109.9	24	105.0	105.0	109.0	12	101.7	102.0	102.5	24	103.0	103.3	103.5	24
5/27	111.5	111.9	112.2	24	108.2	108.6	109.0	24	107.5	107.9	108.1	24	101.3	101.6	102.2	24	102.5	102.6	102.7	24
5/28	110.9	111.3	111.7	24	106.8	107.1	107.4	24	107.8	108.5	109.5	24	101.6	102.2	102.7	24	102.4	102.9	103.3	24
5/29	110.2	110.5	110.8	24	106.5	107.5	108.2	24	106.6	106.8	106.9	24	101.5	102.3	102.7	24	102.8	103.6	104.0	24
5/30	110.3	110.8	111.2	24	107.8	109.0	109.5	24	106.9	108.1	109.7	24	102.9	104.0	104.8	24	103.5	104.2	104.6	24
5/31	111.9	112.3	112.6	24	108.8	109.4	110.1	24	106.8	108.3	109.8	24	102.0	102.3	102.7	24	103.1	103.4	103.6	24
6/1	112.5	112.7	113.0	24	109.0	109.7	110.1	24	107.8	108.1	108.3	24	101.9	102.7	103.1	24	103.0	103.6	103.9	24
6/2	112.4	112.7	113.0	24	108.8	109.1	109.3	24	106.3	106.6	107.0	24	101.9	102.3	102.5	24	103.3	103.7	104.7	24
6/3	---	---	---	0	107.9	109.3	109.8	24	102.7	104.7	105.5	24	102.8	104.2	104.8	24	103.1	103.8	104.1	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwr-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		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/21	101.4	102.0	102.7	20	102.6	103.1	103.3	24	109.7	110.0	110.2	24	106.0	106.3	106.8	24	113.1	113.5	113.7	24
5/22	101.7	102.6	103.5	22	102.6	102.7	102.8	24	109.5	109.7	109.9	24	105.5	105.8	106.1	24	111.9	112.3	112.4	24
5/23	102.1	103.4	104.3	23	102.6	103.0	103.1	24	109.6	109.8	110.0	24	104.8	105.2	105.5	24	111.3	111.5	111.8	24
5/24	102.1	103.3	104.7	23	102.5	102.6	102.8	24	109.6	109.8	109.9	24	105.2	105.6	106.2	24	111.9	112.6	113.1	24
5/25	102.5	104.2	105.2	23	103.1	103.5	104.0	24	109.7	109.8	110.1	24	106.0	106.5	107.2	24	110.8	111.8	112.6	24
5/26	101.9	102.6	103.6	24	103.7	103.8	103.9	24	110.2	110.3	110.6	24	107.6	108.0	108.5	24	109.7	110.5	110.9	24
5/27	100.8	101.4	102.0	24	103.4	103.8	104.0	24	110.0	110.3	110.4	24	108.6	108.9	109.2	24	110.0	110.7	111.0	24
5/28	101.5	102.7	103.5	22	102.5	102.9	103.1	24	109.3	109.4	109.5	24	108.6	108.8	109.0	24	109.8	110.2	110.4	24
5/29	101.3	102.1	102.6	22	101.0	101.2	101.6	24	109.1	109.3	109.5	24	107.3	107.4	107.8	24	109.4	109.7	109.9	24
5/30	102.9	104.4	105.6	24	101.1	101.5	102.3	24	109.8	110.0	110.1	24	107.3	107.8	108.1	24	109.9	110.2	110.5	24
5/31	102.0	102.7	103.3	24	102.6	102.8	103.0	24	110.1	110.1	110.3	24	108.1	108.6	108.9	24	109.9	110.1	110.3	24
6/1	101.6	102.6	103.8	24	103.5	103.8	104.3	24	110.3	110.5	110.5	24	108.3	108.7	108.9	24	110.3	110.4	110.8	24
6/2	101.4	101.7	102.2	24	103.7	104.1	104.5	24	110.6	110.7	110.7	24	108.9	109.1	109.2	24	111.4	111.8	111.9	24
6/3	101.6	102.6	103.0	24	102.4	102.7	102.9	24	115.8	121.1	127.4	24	108.4	108.9	109.6	24	114.3	116.6	121.5	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		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/21	111.4	112.1	112.7	24	118.9	119.0	119.5	24	111.4	111.7	112.0	24	117.9	119.2	120.1	24	---	---	---	0
5/22	112.7	112.8	113.0	24	118.7	119.2	119.9	24	112.1	112.4	112.6	24	115.2	116.2	117.8	24	---	---	---	0
5/23	111.4	111.8	112.3	24	118.6	119.4	119.7	24	111.9	112.1	112.3	24	114.0	114.2	114.5	24	---	---	---	0
5/24	110.4	110.5	110.8	24	118.7	119.3	119.5	24	111.7	111.9	112.1	24	114.1	114.4	114.6	24	---	---	---	0
5/25	110.7	111.1	111.5	24	118.6	119.0	119.9	24	112.8	113.4	113.8	24	114.5	114.8	115.0	24	---	---	---	0
5/26	111.7	111.8	112.0	24	118.2	118.7	119.1	24	114.3	114.6	114.8	24	115.0	115.4	115.8	24	---	---	---	0
5/27	112.0	112.3	112.5	24	117.9	118.6	119.1	24	114.9	115.4	115.8	24	113.9	115.1	115.4	24	---	---	---	0
5/28	110.0	110.3	110.9	24	117.7	118.2	118.4	24	113.9	114.1	114.3	24	115.1	115.5	115.7	24	---	---	---	0
5/29	108.7	108.9	109.2	24	118.0	118.1	118.3	24	112.2	112.5	112.9	24	115.4	115.7	116.0	24	---	---	---	0
5/30	109.3	109.7	110.1	24	118.0	118.4	118.5	24	112.0	112.4	113.0	24	115.9	116.0	116.1	24	---	---	---	0
5/31	110.5	110.7	110.9	24	118.7	118.8	119.1	24	113.5	113.9	114.2	24	115.8	116.0	116.1	24	---	---	---	0
6/1	111.1	111.3	111.4	24	118.3	118.8	119.0	24	114.0	114.2	114.3	24	115.2	115.5	116.2	24	---	---	---	0
6/2	111.5	111.6	111.7	24	118.7	119.1	119.4	24	114.6	114.9	115.1	24	116.1	116.6	116.8	24	---	---	---	0
6/3	110.9	111.3	111.8	24	118.5	118.8	119.9	24	113.7	114.0	114.3	24	118.0	119.8	122.4	24	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>						
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		<u>24h</u>	<u>12h</u>	<u>AVG</u>	<u>High</u>
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>AVG</u>	<u>High</u>
5/21	109.1	109.8	111.0	24	114.6	114.9	115.2	24	110.3	110.5	110.7	24	117.6	118.1	118.4	24	112.2	113.0	113.4	24			
5/22	108.5	108.8	109.3	24	114.6	114.9	115.3	24	108.3	108.8	109.6	24	113.8	114.9	117.2	24	109.7	110.5	112.2	24			
5/23	108.0	108.2	108.3	24	113.6	113.7	114.1	24	106.5	106.6	106.9	24	112.9	113.4	113.8	24	107.1	107.5	107.9	24			
5/24	107.9	108.2	108.3	24	113.8	114.2	114.4	24	106.0	106.3	106.6	24	114.5	115.2	115.5	24	108.2	108.9	109.5	24			
5/25	108.7	109.0	109.8	24	113.9	114.5	115.3	24	106.9	107.5	107.9	24	112.9	113.2	113.3	24	109.5	109.6	109.8	24			
5/26	109.7	110.0	110.2	24	114.7	115.4	116.7	24	107.1	107.2	107.5	24	113.6	114.0	114.9	24	109.3	109.6	109.7	24			
5/27	110.0	110.4	110.6	24	114.2	114.7	115.6	24	106.8	107.1	107.3	24	113.8	114.4	115.6	24	109.0	109.1	109.2	24			
5/28	108.6	109.0	109.3	24	113.9	114.4	115.0	24	106.7	106.8	106.9	24	113.2	114.1	114.5	24	107.6	108.3	109.0	24			
5/29	106.2	106.5	107.1	24	114.5	115.0	115.3	24	106.2	106.4	107.0	24	112.5	113.2	113.9	24	106.7	107.2	107.5	24			
5/30	106.6	107.1	107.6	24	113.8	114.1	114.9	24	106.5	107.0	107.2	24	113.3	113.7	114.2	24	109.5	111.1	111.8	24			
5/31	108.2	108.5	108.6	24	113.6	114.0	114.7	24	107.0	107.1	107.3	24	113.8	114.1	114.5	24	110.2	110.5	111.0	24			
6/1	109.3	109.9	110.0	24	114.0	114.5	115.3	24	106.4	106.6	106.7	24	114.8	115.5	116.3	24	109.6	110.0	110.4	24			
6/2	110.2	110.4	110.8	24	114.5	114.9	115.7	24	106.9	107.2	107.5	24	115.6	117.3	117.6	24	111.6	112.1	112.3	24			
6/3	109.1	109.5	109.8	24	115.2	116.4	117.1	24	107.0	107.7	108.4	24	117.2	118.6	119.3	24	110.2	111.1	112.1	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>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	<u>hr</u>
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>
5/21	116.9	117.9	118.4	24	113.9	114.3	114.7	24	115.4	115.5	115.7	24	112.8	114.0	114.5	24	118.5	118.7	118.9	24			
5/22	115.8	116.5	117.6	24	112.0	112.7	113.5	24	115.1	115.4	115.6	24	112.9	113.4	114.0	24	117.9	118.2	118.6	24			
5/23	114.2	114.4	114.6	24	110.2	110.3	110.5	24	114.8	115.2	115.8	24	112.3	112.8	113.1	24	117.4	117.5	117.6	24			
5/24	114.9	115.4	115.8	24	110.8	111.5	111.7	24	115.0	115.3	115.5	24	112.9	113.9	114.6	24	117.7	118.1	118.4	24			
5/25	116.0	116.5	117.0	24	113.2	114.1	114.4	24	115.5	116.1	116.2	24	112.6	113.7	114.0	24	117.9	118.0	118.1	24			
5/26	115.6	116.1	116.4	24	113.9	114.1	114.3	24	116.6	116.8	117.0	24	114.3	115.0	115.4	24	117.2	117.3	117.5	24			
5/27	115.3	115.8	116.2	24	113.1	113.4	113.6	24	116.4	116.7	117.0	24	114.8	115.7	116.6	24	117.3	117.5	117.6	24			
5/28	114.0	114.4	115.2	24	109.7	110.5	111.3	24	115.0	115.4	115.9	24	111.8	112.3	113.4	24	116.6	116.9	117.2	24			
5/29	113.2	113.6	113.9	24	107.5	107.8	108.1	24	115.1	115.5	115.8	24	111.2	112.5	113.8	24	116.4	116.5	116.7	24			
5/30	115.3	116.3	116.9	24	109.5	110.7	111.2	24	115.3	115.7	115.9	24	113.9	114.6	115.2	24	117.1	117.5	117.6	24			
5/31	115.8	116.1	116.5	24	112.8	113.5	113.9	24	116.1	116.7	117.1	24	113.3	114.2	114.9	24	117.3	117.6	117.8	24			
6/1	115.6	115.9	116.1	24	113.6	114.0	114.2	24	116.5	116.8	117.1	24	114.7	115.7	116.3	24	116.9	117.4	117.7	24			
6/2	116.5	117.2	117.6	24	112.9	113.2	113.5	24	115.5	116.6	116.8	24	113.7	114.3	114.8	24	117.4	117.8	118.0	24			
6/3	115.4	115.8	116.5	24	112.4	113.3	114.5	24	114.6	114.9	115.5	24	112.5	113.9	114.6	24	118.8	120.0	120.8	24			

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/21/2010 *	---	---	156	173	85,493	72,664	42,913	370	277,936	44,674	72,615
05/22/2010 *	---	28	86	200	49,236	51,591	45,085	331	---	58,879	59,243
05/23/2010 *	---	54	62	71	31,872	19,205	33,609	360	119,608	43,443	76,330
05/24/2010 *	---	31	33	25	18,456	16,221	15,175	277	---	19,971	83,524
05/25/2010 *	36	34	0	684	17,880	13,216	7,343	188	113,327	19,845	100,306
05/26/2010 *	33	33	0	983	11,434	10,576	10,875	173	---	15,804	60,458
05/27/2010 *	18	16	0	373	8,370	13,763	3,504	234	42,358	12,889	35,331
05/28/2010 *	53	21	---	306	6,105	9,446	797	90	---	13,058	27,977
05/29/2010 *	---	30	---	---	5,799	13,224	1,524	97	30,571	17,892	23,404
05/30/2010 *	---	31	---	---	3,945	11,848	2,005	100	---	14,440	23,285
05/31/2010 *	---	7	---	---	3,324	7,260	2,967	75	40,035	9,188	21,454
06/01/2010 *	---	11	---	---	2,762	4,545	2,322	46	---	10,540	14,653
06/02/2010	---	10	---	---	744	3,560	1,272	26	40,764	8,785	13,492
06/03/2010 *	---	---	---	---	1,674	6,644	2,440	58	---	14,045	10,103
06/04/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	140	306	337	2,815	247,094	253,763	171,831	2,425	664,599	303,453	622,175
# Days:	4	12	7	8	14	14	14	14	7	14	14
Average:	35	26	48	352	17,650	18,126	12,274	173	94,943	21,675	44,441
YTD	56,130	79,951	27,916	7,995	2,422,138	1,170,454	373,441	10,161	1,990,488	898,314	2,110,096

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)
05/21/2010 *	---	---	0	122	3,706	0	0	42	3,046	401	6,252
05/22/2010 *	---	0	0	160	4,040	0	140	67	---	575	6,090
05/23/2010 *	---	0	0	101	2,107	0	295	57	4,070	875	6,509
05/24/2010 *	---	0	0	58	1,628	0	304	72	---	477	3,350
05/25/2010 *	0	0	0	51	1,116	0	0	73	4,337	833	5,872
05/26/2010 *	0	0	0	69	706	929	0	63	---	1,035	4,827
05/27/2010 *	0	0	0	94	1,702	2,939	163	117	5,757	1,552	3,425
05/28/2010 *	0	0	---	104	4,259	572	2,311	93	---	2,805	4,700
05/29/2010 *	---	0	---	---	5,799	3,860	1,283	109	5,110	2,635	2,367
05/30/2010 *	---	1	---	---	12,043	790	1,283	75	---	3,733	3,162
05/31/2010 *	---	0	---	---	8,172	2,595	2,655	35	4,083	5,845	5,893
06/01/2010 *	---	0	---	---	14,560	1,682	3,173	29	---	3,995	7,612
06/02/2010	---	0	---	---	16,289	2,486	1,011	46	6,792	3,636	6,658
06/03/2010 *	---	---	---	---	50,552	10,668	1,536	105	---	5,618	7,518
06/04/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	1	0	759	126,679	26,521	14,154	983	33,195	34,015	74,235
# Days:	4	12	7	8	14	14	14	14	7	14	14
Average:	0	0	0	95	9,049	1,894	1,011	70	4,742	2,430	5,303
YTD	0	42	28	1,275	140,014	26,593	14,296	2,520	37,993	34,227	1,845,807

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)	
05/21/2010	*	---	---	0	2	5,683	4,291	397	634	2,200	2,074	13,465
05/22/2010	*	---	0	0	0	3,030	3,439	562	1,168	---	3,906	9,689
05/23/2010	*	---	0	0	0	2,371	1,146	442	2,313	5,601	1,034	10,763
05/24/2010	*	---	0	0	0	271	573	152	5,086	---	526	13,846
05/25/2010	*	0	0	0	0	0	1,143	160	3,361	5,020	950	12,477
05/26/2010	*	0	0	0	0	847	1,429	485	3,020	---	561	7,092
05/27/2010	*	0	0	0	0	142	502	0	4,217	3,725	722	6,691
05/28/2010	*	0	0	---	0	71	787	0	2,565	---	257	12,086
05/29/2010	*	---	0	---	---	70	286	0	1,567	3,913	254	2,630
05/30/2010	*	---	0	---	---	277	646	80	1,083	---	492	3,191
05/31/2010	*	---	0	---	---	346	215	156	1,167	6,112	1,432	3,776
06/01/2010	*	---	0	---	---	759	1,002	232	600	---	386	4,372
06/02/2010	*	---	0	---	---	270	1,512	149	753	8,831	895	4,916
06/03/2010	*	---	---	---	---	451	4,496	274	1,053	---	7,156	4,229
06/04/2010	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	2	14,588	21,467	3,089	28,587	35,402	20,645	109,223
# Days:		4	12	7	8	14	14	14	14	7	14	14
Average:		0	0	0	0	1,042	1,533	221	2,042	5,057	1,475	7,802
YTD		0	0	0	104	33,425	40,801	5,370	31,788	52,498	56,881	447,280

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)	
05/21/2010	*	---	---	151	179	130,216	86,685	22,516	1,339	16,084	7,430	18,995
05/22/2010	*	---	348	65	83	92,411	107,483	26,124	1,129	---	15,594	18,548
05/23/2010	*	---	345	46	171	57,949	60,762	18,573	1,007	14,082	13,012	32,695
05/24/2010	*	---	209	31	106	48,583	28,041	13,354	699	---	10,130	27,469
05/25/2010	*	134	195	0	150	49,493	28,146	6,704	531	21,957	6,118	24,954
05/26/2010	*	159	140	0	100	19,198	41,663	9,003	185	---	5,362	11,683
05/27/2010	*	102	210	0	36	23,409	65,878	6,846	237	16,092	7,046	22,675
05/28/2010	*	248	229	---	33	25,911	18,750	4,143	172	---	9,247	32,453
05/29/2010	*	---	163	---	---	10,060	26,234	1,363	118	10,768	5,016	36,026
05/30/2010	*	---	186	---	---	6,991	9,191	5,212	120	---	5,380	30,177
05/31/2010	*	---	120	---	---	11,704	12,103	2,187	112	6,667	5,364	38,984
06/01/2010	*	---	173	---	---	7,796	6,191	1,935	90	---	3,995	32,951
06/02/2010	*	---	180	---	---	6,827	6,906	2,190	151	5,946	2,911	17,505
06/03/2010	*	---	---	---	---	6,053	23,069	2,824	203	---	2,876	11,513
06/04/2010	*	---	---	---	---	---	---	---	---	---	---	---
Total:		643	2,498	293	858	496,601	521,102	122,974	6,093	91,596	99,481	356,628
# Days:		4	12	7	8	14	14	14	14	7	14	14
Average:		161	208	42	107	35,472	37,222	8,784	435	13,085	7,106	25,473
YTD		4,385	27,432	4,050	11,795	1,778,784	1,271,990	280,571	14,638	413,866	478,774	881,082

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)
05/21/2010 *	---	---	0	48	988	858	0	1,035	20,990	18,867	38,953
05/22/2010 *	---	0	0	58	0	0	140	2,172	---	16,373	21,316
05/23/2010 *	---	0	0	20	263	0	147	1,933	12,380	8,749	17,728
05/24/2010 *	---	0	0	6	0	430	0	7,730	---	3,631	9,603
05/25/2010 *	27	0	0	3	279	286	160	7,978	20,735	4,717	8,318
05/26/2010 *	12	0	0	6	423	214	162	2,330	---	3,535	5,142
05/27/2010 *	5	0	0	6	426	287	0	2,106	96,361	4,636	5,170
05/28/2010 *	1	0	---	2	0	1,217	0	653	---	13,550	3,581
05/29/2010 *	---	0	---	---	279	1,644	0	163	380,251	33,862	6,048
05/30/2010 *	---	0	---	---	415	287	80	84	---	33,769	17,936
05/31/2010 *	---	0	---	---	416	215	156	28	153,003	34,789	53,183
06/01/2010 *	---	0	---	---	345	501	155	24	---	27,578	82,578
06/02/2010	---	0	---	---	338	100	119	42	275,286	19,135	95,262
06/03/2010 *	---	---	---	---	64	487	192	211	---	27,154	63,201
06/04/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	45	0	0	149	4,236	6,526	1,311	26,489	959,006	250,345	428,019
# Days:	4	12	7	8	14	14	14	14	7	14	14
Average:	11	0	0	19	303	466	94	1,892	137,001	17,882	30,573
YTD	80	0	0	188	5,461	10,390	1,311	34,757	1,300,047	496,952	563,123

* 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:

6/4/10 10:33 AM

		05/21/10 TO 06/04/10						
		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	95,100	190,369	11,350	378,331	3,150	678,300	
	Sum of NumberBarged	95,016	187,889	11,348	371,737	3,148	669,138	
	Sum of NumberBypassed	0	2,291	0	6,477	0	8,768	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	6	10	0	7	0	23	
	Sum of FacilityMorts	78	135	2	105	2	322	
	Sum of ResearchMorts	0	44	0	5	0	49	
	Sum of TotalProjectMorts	84	189	2	117	2	394	
LGS	Sum of NumberCollected	18,524	177,253	14,995	363,952	4,560	579,284	
	Sum of NumberBarged	18,516	177,185	14,994	363,850	4,560	579,105	
	Sum of NumberBypassed	5	0	0	0	0	5	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	1	4	1	4	0	10	
	Sum of FacilityMorts	2	64	0	98	0	164	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	3	68	1	102	0	174	
LMN	Sum of NumberCollected	9,198	119,512	2,100	83,850	870	215,530	
	Sum of NumberBarged	9,176	119,400	2,100	83,597	869	215,142	
	Sum of NumberBypassed	18	42	0	140	0	200	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	2	0	0	1	0	3	
	Sum of FacilityMorts	2	70	0	112	1	185	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	4	70	0	113	1	188	
MCN	Sum of NumberCollected	19,561	392,021	20,858	53,992	564,584	1,051,016	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	19,559	391,834	20,849	53,965	564,454	1,050,661	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	0	22	1	0	28	51	
	Sum of FacilityMorts	2	165	8	27	102	304	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	2	187	9	27	130	355	
Total Sum of NumberCollected		142,383	879,155	49,303	880,125	573,164	2,524,130	
Total Sum of NumberBarged		122,708	484,474	28,442	819,184	8,577	1,463,385	
Total Sum of NumberBypassed		19,582	394,167	20,849	60,582	564,454	1,059,634	
Total Sum of Numbertrucked		0	0	0	0	0	0	
Total Sum of SampleMorts		9	36	2	12	28	87	
Total Sum of FacilityMorts		84	434	10	342	105	975	
Total Sum of ResearchMorts		0	44	0	5	0	49	
Total Sum of TotalProjectMorts		93	514	12	359	133	1,111	

YTD Transportation Summary

Source: Fish Passage Center

Updated:

6/4/10 10:33 AM

TO: 06/04/10

Site	Data	Species					Grand Total
		CH0	CH1	CO	SO	ST	
LGR	Sum of NumberCollected	103,858	1,605,978	24,700	4,060	1,215,027	2,953,623
	Sum of NumberBarged	103,046	1,412,434	24,694	4,048	1,168,291	2,712,513
	Sum of NumberBypassed	700	191,860	0	10	46,487	239,057
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	8	53	0	0	14	75
	Sum of FacilityMorts	104	1,216	6	2	218	1,546
	Sum of ResearchMorts	0	415	0	0	17	432
	Sum of TotalProjectMorts	112	1,684	6	2	249	2,053
LGS	Sum of NumberCollected	18,574	816,937	28,495	7,260	888,039	1,759,305
	Sum of NumberBarged	18,565	735,391	28,494	7,260	828,409	1,618,119
	Sum of NumberBypassed	5	81,373	0	0	59,473	140,851
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	26	1	0	9	38
	Sum of FacilityMorts	2	147	0	0	148	297
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	4	173	1	0	157	335
LMN	Sum of NumberCollected	9,238	254,167	3,475	870	150,041	417,791
	Sum of NumberBarged	9,235	252,747	3,475	869	145,076	411,402
	Sum of NumberBypassed	18	1,446	0	0	4,885	6,349
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	8	0	0	7	17
	Sum of FacilityMorts	2	164	0	1	172	339
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	4	172	0	1	179	356
MCN	Sum of NumberCollected	22,385	1,170,468	30,891	764,790	243,111	2,231,645
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	22,379	1,170,058	30,877	764,610	243,005	2,230,929
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	109	3	51	14	177
	Sum of FacilityMorts	6	301	11	129	92	539
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	6	410	14	180	106	716
Total Sum of NumberCollected		154,055	3,847,550	87,561	776,980	2,496,218	7,362,364
Total Sum of NumberBarged		130,846	2,400,572	56,663	12,177	2,141,776	4,742,034
Total Sum of NumberBypassed		23,102	1,444,737	30,877	764,620	353,850	2,617,186
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		12	196	4	51	44	307
Total Sum of FacilityMorts		114	1,828	17	132	630	2,721
Total Sum of ResearchMorts		0	415	0	0	17	432
Total Sum of TotalProjectMorts		126	2,439	21	183	691	3,460

Cumulative Adult Passage at Mainstem Dams Through: 06/03

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	06/03	244362	12613	114525	66631	167834	17301	10358	978	5959	2656	4140	678	0	0	0	0	0	0
TDA	06/03	189839	11546	93908	53646	121414	13776	0	0	0	0	0	0	0	0	0	0	0	0
JDA	06/03	174339	11304	74191	48638	99172	11712	0	0	0	0	0	0	0	0	0	0	0	0
MCN	06/03	142099	8204	63954	40758	88489	10539	0	0	0	0	0	0	0	0	0	0	0	0
IHR	06/03	96387	5706	46391	24969	58373	6305	0	0	0	0	0	0	0	0	0	0	0	0
LMN	06/03	91904	5561	54463	15730	55745	4878	0	0	0	0	0	0	0	0	0	0	0	0
LGS	06/03	85623	4884	38137	19612	50034	5187	0	0	0	0	0	0	0	0	0	0	0	0
LGR	06/03	82084	5433	34446	23713	48297	6008	0	0	0	0	0	0	0	0	0	0	0	0
PRD	06/02	27375	845	10636	2556	17266	705	0	0	0	0	0	0	0	0	0	0	0	0
RIS	06/02	26417	1202	9002	4594	13471	1187	0	0	0	0	0	0	0	0	0	0	0	0
RRH	06/02	8017	407	4308	644	5176	338	0	0	0	0	0	0	0	0	0	0	0	0
WEL	06/02	6479	488	2179	1161	2795	252	0	0	0	0	0	0	0	0	0	0	0	0
WFA	05/28	42169	940	14770	1048	-	-	-	-	-	-	-	-	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2010		2009		10-Yr Avg.		2010	2009	10-Yr Avg.	2010	2009	10-Yr Avg.	Wild 2010
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	606	306	192	8087	5027	4839	2168
TDA	0	0	0	0	0	0	271	124	78	2579	1465	1498	1172
JDA	0	0	0	0	0	0	145	52	49	2672	3298	3089	1481
MCN	0	0	0	0	0	0	31	12	8	2409	2489	2104	1258
IHR	0	0	0	0	0	0	-1	0	0	3076	3084	2289	1277
LMN	0	0	0	0	0	0	0	2	0	4138	4739	2598	2209
LGS	0	0	0	0	0	0	0	0	0	3146	5386	2694	1591
LGR	0	0	0	0	0	0	0	0	0	10476	10785	8537	4177
PRD	0	0	0	0	0	0	0	0	12	87	58	24	0
RIS	0	0	0	0	0	0	0	0	1	114	100	69	79
RRH	0	0	0	0	0	0	0	0	0	351	421	208	268
WEL	0	0	0	0	0	0	0	0	0	98	73	42	79
WFA	0	0	0	0	-	-	-	-	-	17635	8059	-	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											
	05/31/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	05/31/10	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Lower Monumental Dam											
	05/26/10	Chinook + Steelhead	100	5	5	5.00%	0.00%	5	0	0	0
McNary Dam											
	05/28/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/30/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/03/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/25/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/29/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/01/10	Chinook + Steelhead	80	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	05/25/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/27/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/02/10	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/03/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0