Fish Passage Center

Weekly Report #09 - 15

June 19, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 26% and 478% of average at individual sub-basins over June. Precipitation above The Dalles has been 140% of average over June. Over the entire water year, precipitation has generally been near 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 2009 June 1-15		Water Year 2009 October 1, 2008 to June 15, 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.69	58	17.18	89
Snake River Above Ice Harbor	2.25	308	16.25	113
Columbia Above The Dalles	1.25	140	18.58	99
Kootenai	0.48	39	16.48	83
Clark Fork	0.93	96	13.76	104
Flathead	0.72	54	15.52	89
Pend Oreille/ Spokane	0.92	84	24.45	93
Central Washington	0.29	90	6.67	87
Snake River Plain	2.29	478	10.28	113
Salmon/Boise/ Payette	1.88	256	16.04	95
Clearwater	1.37	110	27.77	109
SW Washington Cascades/Cowlitz	0.38	26	58.04	91
Willamette Valley	1.40	124	47.55	87

Table 2 displays the June Final and June Mid Month runoff volume forecasts for multiple reservoirs. The current forecast at The Dalles between January and July is 92000 Kaf (86% 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)	86	92000	86	92000
Grand Coulee (Jan-July)	85	53700	83	52300
Libby Res. Inflow, MT (Apr-Aug)	80	5000 5062*	74	4610
Hungry Horse Res. Inflow, MT (Jan-July)	93	2060	92	2050
Lower Granite Res. Inflow (Apr- July)	102	21900	108	23200
Brownlee Res. Inflow (Apr-July)	76	4780	81	5100
Dworshak Res. Inflow (Apr-July)	98	2590 2597*	99	2610

* Denotes COE Forecast

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite) and began on April 10th in the mid (Priest Rapids) and lower (McNary) Columbia River. According to the April Final Water Supply Forecast, the flow objectives this spring are 100 Kcfs at Lower Granite, 228 Kcfs at McNary, and 135 Kcfs at Priest Rapids. At Lower Granite flows from April 3-June 18 averaged 110.6 Kcfs and 102.6 Kcfs over the last week, flows at Priest Rapids from April 10-June 18 averaged 138.3 Kcfs and 133.0 Kcfs over the last week, and flows at McNary have averaged 270.3 Kcfs between April 10-June 18 and 249.3 Kcfs over the last week.

Grand Coulee Reservoir is at 1288.18 feet (6-18-09) and has refilled 4.4 feet over the last week. Outflows at Grand Coulee have ranged between 64.6 and 138.2 Kcfs over the last week. The Bureau of Reclamation would prefer to start the July 4th weekend with the reservoir at 3 feet from full, and then fill over the weekend.

The Libby Reservoir is currently at elevation 2426.9 feet (6-18-09) and has refilled 1.1 feet last week. Outflows at Libby have been 22.1-27.2 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3551.02 ft (6-18-09) and has refilled 4.72 feet last week. Outflows at Hungry Horse have been 2.4 to 3.2 Kcfs last week.

Dworshak is currently at an elevation of 1598.2 feet (6-18-09) and has refilled 4.9 feet last week. Outflows at Dworshak have ranged between 2.2 to 7.4 Kcfs over the last week. The proposed operation for Dworshak is to remain full through the July 4th weekend unless water is needed to abate temperatures at Lower Granite Dam. The large unit at Dworshak Dam was brought back into service on 6-17-09 after being repaired. The unit should be operable all summer.

The Brownlee Reservoir was at an elevation of 2076.1 feet on June 11th, 2009, filling 0.6 feet last week. Outflows at Brownlee Dam have been 24 to 26.25 Kcfs over the last week.

Spill:

Over the last week some spill has occurred at Dworshak Dam and ranged between 0-2.3 Kcfs.

The 2009 planned spring spill program at the lower Snake River Projects began on April 3 at 0001 hours and will continue through June 20, 2009. The following table shows the planned operations for 2009.

Project	Day/Night Spill
Lower Granite	20Kcfs/20Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	30%/30% vs 45Kcfs/Gas Cap Study

Flow in the Snake River has been decreasing over the past week. Last week spill at Lower Granite Dam was managed near the court order at approximately 20.7 Kcfs. Over the last week, spill at Little Goose Dam did meet the 30% court order. The test of bulk versus uniform spill patterns at Lower Monumental Dam ended on June 1st. Since this time, the spill pattern at Lower Monumental Dam has been bulk. For this week spill at Lower Monumental Dam has met the gas cap, which has increased from 20 to 23 Kcfs. The implementation of study-like conditions at Ice Harbor Dam began on April 30th, and spill management has attempted to alternate between 30% spill for 24 hours and 45 Kcfs Daytime spill and gas cap nighttime spill, in two day blocks. The project has been managed to the court order over the past week.

The 2009 spill program began at the lower Columbia River projects at 0001 hours on April 10th and will continue through June 30th. The following table shows the planned operations for 2009.

Project	Day/Night Spill
McNary	40%/40%
John Day	30%/30% on pre-test days; 30%/30% vs. 40%/40% on test days
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

McNary Dam spill has met the Court Order over the past week as high flows receded. The TSW has been moved from spill bay 4 to spill bay 19, so the TSWs are now located in spill bays 19 and 20. The COE plans to implement the summer spill of 50% beginning on June 20th and extending through August 31st. At John Day Dam the testing of 30% versus 40% spill has stopped and the TSW has been closed due to an avian predation issue. The current plan at John Day is to spill 30% without the TSW until more modeling work can be completed. John Day spill has been below the 30% level for most of the last week due to a spill cap of

80 Kcfs as a result of TDG at The Dalles forebay. The Dalles Dam met the court ordered 40% level over the past week. Bonneville Dam spill levels met the court ordered 100 Kcfs over the past week.

Total Dissolved Gas levels decreased throughout the Snake and Columbia rivers as flows receded. Earlier in the week the forebay monitor at Ice Harbor read slightly above the 115%, but was well below the 115% by week's end.

Gas bubble trauma (GBT) monitoring occurred at Lower Granite, Little Goose and Lower Monumental dams in the Snake River, Rock Island in the Mid Columbia River and at McNary and Bonneville dams in the lower Columbia. No fish were observed with signs of GBT in the samples this past week.

Adult Fish Passage:

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam ranged between 1960 and 2799 adult summer Chinook in the last week. The 2009 summer Chinook count of 40306 is about 1.22 times greater than the 2008 count and 1.42 times greater than the 10 year average. The summer Chinook jack count of 18420 is about 3.10 times greater than the 2008 of 5945 and about 5.74 times greater than the 10 year average.

At Willamette Falls Dam, 20208 adult spring Chinook have been counted so far this year. The 2009 adult spring Chinook count at Willamette Falls Dam is 2.45 times greater than the 2008 count of 8244. The 2009 adult spring Chinook count at Lower Granite Dam ended June 17th. The 2009 adult spring Chinook count at Lower Granite Dam was 49667. The LGR 2009 adult spring Chinook count was 99% of the 2008 count and 90.8% of the 10 year average. The 2009 Lower Granite spring Chinook jack count of 31064 is about 2.84 times greater than the 2008 count and 5.88 times greater than the 10 year average.

The Bonneville Dam 2009 steelhead count of 8660 is about 1.08 times greater than the 2008 count of 8013. The 2009 steelhead count is about 1.02 times greater then of the 10-year average of 8516. In the Snake River, this year's Lower Granite steelhead count of 10890 is 1.39 times greater than the 2008 count of 7798 and 1.39 times greater than the 10 year average of 7836. The 2009 wild steelhead count as of June 18th was 3393. At Rock Island Dam, as of June 9th, 119 adult steelhead have been counted and at Rocky Reach Dam, 449 adult steelhead have been counted so far this season. At Willamette Falls Dam, the 2009 count for steelhead was 11970, as of June 15th. This year's steelhead count is only about 80.3% of the 2008 count of 14911 at Willamette Falls Dam for the same date range.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 1554 and 7120 last week. The 2009 adult sockeye count at Bonneville Dam of 33974 is about 66.71% of the 2008 count of 50925 and about 1.97 times greater than the 10 year average of 17193. As of June 18th at Bonneville Dam, the adult Shad count was 1185676 which was 1.78 times greater than the 2008 count of 665865 and only about 52.9% of the 10 year average count of 2240124.

Smolt Monitoring:

Collection of Spring migrants continued to decline at all SMP sites in the Snake River and Lower Columbia this past week, while subyearling Chinook indices also declined in the Snake River, but increased at Lower Columbia River sites. The Imnaha Trap continued to capture a decreasing number of yearling Chinook and steelhead.

At Lower Granite Dam subyearling Chinook predominated with steelhead numbers having dropped off rapidly over the past week. PIT-tag detections at Lower Granite confirm that the acclimation released subyearling Chinook were arriving at the site over the past several weeks as well as wild marks from the USFWS marking in the Snake River as well as surrogate marks from that section of river.

At Rock Island dam the daily passage indices for coho predominated in the sample. But coho indices dropped below 300 per day over the past several days, compared to over 1,000 per day at the beginning of last week. Subyearling Chinook indices remained low compared to Coho but became higher than yearling Chinook over the past two weeks. Mid to late June is typically the time period when subyearlings predominate at Rock Island.

At McNary Dam subyearling Chinook became more prevalent in the sample than yearling Chinook over the past two weeks. The passage index for subyearling Chinook averaged over 80,000 per day over the past two sampling dates. McNary is still sampling every other day.

At Bonneville Dam all Spring migrant indices were down again and subyearling Chinook passage continued to increase. The subyearling average daily index again doubled this week from 8,000 per day average last week to over 16,000 per day this 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. Volitional releases of subyearling fall Chinook juveniles that began weeks ago continued this week. These releases are expected to end soon. A release of approximately 61,000 spring Chinook parr to the Lostine River was scheduled to begin this week. Because these are spring Chinook parr, these juveniles are not expected to out-migrate until spring of 2010.

Releases of subyearling fall Chinook surrogates to the Clearwater River have been postponed and are now expected to begin on or around June 29th. These releases are now expected to run through mid-July. Just over 117,000 fall Chinook surrogates are scheduled for release into the Clearwater River. In addition to the 61,000 spring Chinook parr that were scheduled for release this week, approximately 605,000 spring Chinook parr are scheduled for release into this zone over the next two weeks. About 305,000 of these parr are scheduled for release into Meadow Creek (via helicopter) on or around June 22nd. The remaining 300,000 parr are scheduled for release into the Selway River in early July. The parr being released into the Selway River are unmarked. These spring Chinook parr are not expected to out-migrate until spring of 2010. There are no other scheduled releases of juvenile salmonids to this zone over the next two weeks.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. About 6.7 million subyearling fall Chinook were scheduled for release from Priest Rapids Hatchery, beginning this week. This release is volitional and is expected to run through the end of June. About 72% of these subyearling fall Chinook are unmarked. In addition, nearly 750,000 subyearling summer Chinook were scheduled for release from Turtle Rock Hatchery into the Mid-Columbia River, beginning on or around June 15th. These releases are expected to run through the end of June. There were no other scheduled releases of juvenile salmonids to this zone this week. There are 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. A release of 4.5 million subyearling fall Chinook from Little White Salmon NFH was scheduled to begin this week. This was the only release of juvenile salmonids scheduled for this zone this week. There are no releases of juvenile salmonids to this zone scheduled over the next two weeks.

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/05/2009	137.6	0.2	138.4	0.0	170.4	10.0	166.5	0.0	178.3	19.1	185.6	58.7	183.4	51.7
06/06/2009	125.9	8.8	127.5	40.2	146.7	10.0	143.0	0.0	155.5	17.1	163.7	39.3	173.2	36.3
06/07/2009	133.3	0.1	131.2	0.0	148.2	9.2	145.2	0.0	159.8	16.2	168.3	28.6	162.8	24.3
06/08/2009	152.2	4.7	150.4	12.7	174.7	10.0	170.0	0.0	177.0	17.7	187.8	57.0	183.8	52.4
06/09/2009	140.4	0.2	143.1	0.0	163.5	10.0	161.8	0.0	172.0	17.1	180.1	52.0	184.2	49.6
06/10/2009	147.3	0.1	146.2	0.0	164.1	10.0	160.2	14.5	170.4	34.1	182.6	44.5	176.6	30.7
06/11/2009	133.5	0.2	135.7	0.0	149.1	9.4	147.8	13.3	157.7	31.1	161.9	26.5	160.2	20.8
06/12/2009	133.6	0.1	135.2	0.0	149.5	9.2	147.9	13.5	155.7	32.4	158.1	25.9	155.6	20.2
06/13/2009	110.2	0.1	117.7	0.0	130.7	9.5	132.8	11.0	144.3	25.5	141.7	21.0	132.0	22.9
06/14/2009	64.6	0.1	63.2	0.0	96.7	7.4	104.8	9.7	115.5	23.5	132.6	20.0	127.1	23.9
06/15/2009	99.0	0.2	94.8	0.0	97.3	7.1	94.1	13.0	103.5	30.2	126.9	18.4	138.9	19.9
06/16/2009	96.6	0.2	97.3	0.0	104.4	7.7	104.5	12.7	110.1	24.1	102.2	17.9	98.5	18.2
06/17/2009	119.0	0.1	115.4	0.0	126.9	7.7	129.9	11.8	136.6	28.3	132.5	20.0	123.8	19.6
06/18/2009	138.2	0.1	139.6	0.0	152.3	9.5	150.2	13.0	157.3	30.7	164.5	27.9	155.1	21.7

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/05/2009	7.2	2.9	28.3	29.4	147.6	40.1	137.4	29.3	143.4	27.1	145.8	66.3
06/06/2009	7.2	2.9	32.3	37.4	158.2	49.7	148.0	40.2	153.6	37.1	157.3	77.1
06/07/2009	7.2	2.9	35.3	40.1	171.2	61.4	158.7	49.7	166.4	49.3	170.6	87.6
06/08/2009	7.0	2.7	36.8	41.5	158.0	48.2	147.7	41.6	154.1	36.9	158.7	77.4
06/09/2009	6.9	2.6	34.0	35.2	138.5	29.5	130.9	30.1	137.1	29.9	143.3	60.9
06/10/2009	7.0	2.7	31.6	31.5	125.6	20.6	117.4	30.0	119.6	20.0	120.2	39.5
06/11/2009	7.0	2.7	28.2	26.0	109.5	20.5	102.7	29.0	103.3	19.7	106.8	52.9
06/12/2009	4.1	1.0	25.9	27.1	106.6	20.8	101.6	30.5	103.6	20.0	106.7	67.9
06/13/2009	2.2	0.0	24.0	24.6	96.7	20.7	94.0	28.2	93.8	19.5	96.2	41.8
06/14/2009	2.2	0.0	24.9	25.4	99.7	20.8	93.9	28.1	94.5	20.0	96.5	29.0
06/15/2009	3.5	0.0	26.3	26.0	101.0	20.6	97.2	29.2	97.8	20.2	99.6	53.8
06/16/2009	6.6	2.3	25.8	26.4	108.4	20.5	102.9	31.1	105.3	21.9	106.5	68.4
06/17/2009	7.1	1.8	25.5	24.7	104.2	20.5	97.5	29.1	98.5	21.3	100.8	41.8
06/18/2009	7.4	0.0	---	---	101.5	20.7	96.8	29.0	100.5	23.0	101.3	30.3

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

	McNary		John Day		The Dalles				Bonneville	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
06/05/2009	353.3	176.8	344.0	89.9	332.5	100.0	343.7	149.7	75.1	107.0
06/06/2009	348.5	172.3	338.4	89.9	336.5	104.8	343.0	149.3	74.8	106.8
06/07/2009	339.0	162.5	347.4	86.7	340.2	120.7	343.8	149.6	75.3	106.9
06/08/2009	352.9	176.0	353.0	84.9	341.4	135.7	354.4	158.7	75.6	108.3
06/09/2009	354.6	179.1	352.9	82.3	346.4	138.6	360.6	164.2	74.8	109.5
06/10/2009	311.0	135.7	307.2	80.0	306.4	123.0	338.4	144.1	74.4	107.7
06/11/2009	294.6	123.6	294.3	78.3	285.1	113.7	288.0	101.5	73.3	101.1
06/12/2009	263.8	105.6	245.3	72.7	238.8	95.7	257.6	100.0	60.1	85.5
06/13/2009	256.0	102.5	253.3	74.7	246.4	98.6	259.8	99.7	61.6	86.5
06/14/2009	248.6	99.6	240.5	70.4	237.2	94.8	250.4	99.6	50.9	87.8
06/15/2009	240.2	96.6	229.9	66.6	222.0	88.8	241.8	99.7	42.7	87.3
06/16/2009	255.2	102.3	243.2	72.9	236.5	94.4	252.5	99.5	53.5	87.4
06/17/2009	224.6	90.2	217.8	65.1	212.2	85.0	231.3	99.5	33.8	85.9
06/18/2009	256.5	102.7	246.6	70.3	241.6	96.5	248.9	99.6	43.7	93.5

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											
	06/17/09	Chinook + Steelhead	20	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	06/15/09	Chinook + Steelhead	71	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	06/09/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/16/09	Chinook + Steelhead	65	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	06/11/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/15/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	06/09/09	Chinook + Steelhead	40	1	1	2.50%	0.00%	1	0	0	0
	06/13/09	Chinook + Steelhead	92	0	0	0.00%	0.00%	0	0	0	0
	06/16/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	06/09/09	Chinook + Steelhead	35	0	0	0.00%	0.00%	0	0	0	0

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 6/5/2009 to 06/18/09

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Lookingglass Hatchery	CH0	SP	2010	61,000	06-15-09	07-01-09	Lostine River	Wallowa River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2009	200,000	06-10-09	06-10-09	Cedar Flats Acclim.	Selway River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2009	200,000	06-10-09	06-10-09	Lukes Gulch Acclim.	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2009	800,000	06-01-09	06-15-09	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					**1,261,000**				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2009	4,500,000	06-18-09	06-18-09	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	2009	6,700,000	06-15-09	06-30-09	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2009	3,450,000	06-08-09	06-23-09	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2009	325,000	06-15-09	06-30-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2009	418,000	06-15-09	06-30-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**10,893,000**				
Grand Total					**16,654,000**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 6/19/2009 to 7/2/2009

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2009	117,362	06-29-09	07-20-09	Big Canyon (Clearwater River)	Clearwater River M F
National Marine Fisheries Service Total					**117,362**				
Nez Perce Tribe	Clearwater Hatchery	CH0	SP	2010	300,000	07-01-09	07-15-09	Selway River	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH0	SP	2010	61,000	06-15-09	07-01-09	Lostine River	Wallowa River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2010	305,000	06-22-09	06-26-09	Meadow Creek - CLES	S Fk Clearwater River
Nez Perce Tribe Total					**666,000**				
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2009	6,700,000	06-15-09	06-30-09	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2009	3,450,000	06-08-09	06-23-09	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2009	325,000	06-15-09	06-30-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2009	418,000	06-15-09	06-30-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					**10,893,000**				
Grand Total					**11,676,362**				

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

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	107	108	108	24	127	128	128	21	113	113	114	24	111	112	113	21	110	111	111	24
6/6	106	107	107	24	126	127	127	23	113	113	114	24	111	112	113	23	110	111	111	24
6/7	105	106	106	24	126	126	127	21	113	114	115	24	111	112	112	21	110	110	110	24
6/8	105	106	106	24	124	125	126	24	114	114	115	24	111	112	113	24	109	109	110	11
6/9	105	105	106	24	122	123	125	20	114	114	115	24	111	112	113	20	110	111	111	24
6/10	105	106	106	24	121	122	122	20	115	115	115	24	111	112	113	20	111	111	111	24
6/11	105	105	106	24	121	121	122	20	115	115	115	24	111	112	113	20	111	111	112	24
6/12	105	106	106	24	120	120	121	24	115	115	115	24	112	113	115	24	111	112	112	24
6/13	106	106	107	24	118	119	120	22	116	116	116	24	111	112	114	22	112	112	112	24
6/14	106	106	106	24	117	117	119	23	116	116	116	24	110	111	113	23	113	114	116	24
6/15	106	106	107	24	119	120	122	23	116	116	116	24	112	113	114	23	112	112	113	24
6/16	106	106	106	24	121	122	123	22	116	116	116	24	113	113	114	22	112	113	113	24
6/17	105	106	106	24	120	120	121	15	116	117	117	23	112	113	114	22	112	113	114	24
6/18	106	106	106	24	---	---	---	0	117	118	118	24	111	113	114	22	113	113	114	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	110	110	110	24	111	111	112	24	113	113	114	24	111	112	113	24	109	109	110	24
6/6	115	120	121	24	110	111	111	24	112	112	113	24	112	112	112	24	109	110	110	24
6/7	110	110	115	24	111	112	113	24	112	113	114	24	110	110	110	24	108	108	109	24
6/8	112	112	118	11	110	111	112	24	112	113	114	24	110	111	112	24	108	108	108	24
6/9	110	110	111	24	110	111	111	24	112	112	113	24	112	112	112	24	108	109	109	24
6/10	110	110	111	24	110	111	111	24	112	112	113	24	111	112	112	24	110	112	112	24
6/11	110	110	111	24	111	111	112	20	112	112	113	20	111	112	112	24	112	113	113	24
6/12	110	111	111	24	111	111	112	20	112	113	114	20	111	112	112	24	112	114	115	24
6/13	111	112	112	24	111	112	113	24	113	114	115	24	111	112	112	24	112	113	114	24
6/14	112	113	114	24	111	112	113	24	113	113	114	24	111	112	112	24	111	112	112	24
6/15	112	112	113	24	111	112	113	23	113	113	114	23	112	112	112	24	111	112	112	24
6/16	112	112	113	24	111	113	113	24	113	114	115	24	111	112	112	24	112	113	114	24
6/17	112	113	113	23	111	112	113	24	114	115	115	24	111	112	112	24	113	114	115	24
6/18	112	113	113	24	112	113	113	24	113	114	115	24	112	112	113	24	112	113	114	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	110	111	111	24	113	113	114	24	113	114	116	23	114	115	116	23	113	114	116	23
6/6	110	110	110	24	112	113	113	24	110	111	112	23	113	113	114	23	111	111	113	23
6/7	109	109	109	24	111	112	112	24	111	111	113	23	112	112	112	23	111	111	112	23
6/8	109	109	110	24	111	111	112	24	111	112	114	23	113	113	114	23	111	112	113	23
6/9	110	111	112	24	112	113	113	24	112	113	116	23	113	113	114	23	112	113	113	23
6/10	111	112	113	24	115	116	117	24	113	114	116	23	113	113	114	23	113	114	116	23
6/11	111	112	112	24	115	116	116	24	113	115	116	23	113	114	114	23	113	114	115	23
6/12	111	112	113	24	115	116	117	24	114	115	116	23	114	115	115	23	113	114	114	23
6/13	111	112	112	24	115	116	116	24	115	116	118	23	115	116	116	23	115	115	116	23
6/14	111	111	111	24	115	116	117	24	114	114	115	24	115	115	116	24	113	114	114	24
6/15	111	112	112	24	115	116	116	24	114	114	115	24	115	115	115	24	113	114	115	24
6/16	111	112	112	24	114	115	116	24	112	113	114	24	114	115	116	24	113	114	115	24
6/17	111	111	112	24	115	116	117	24	---	---	---	0	---	---	---	0	---	---	---	0
6/18	111	112	113	24	116	117	118	24	---	---	---	0	---	---	---	0	---	---	---	0

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

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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	117	117	118	23	114	115	116	24	109	109	110	24	104	106	110	24	107	108	109	24
6/6	113	115	116	23	112	112	113	24	108	109	109	24	103	103	104	24	107	107	108	24
6/7	113	113	115	23	109	110	110	24	108	109	109	23	104	104	105	24	108	108	108	24
6/8	115	116	116	23	110	111	111	24	107	108	108	24	103	103	104	24	108	108	109	24
6/9	116	116	117	23	112	113	113	24	107	107	108	24	103	104	105	24	107	108	108	24
6/10	115	115	116	23	112	113	113	24	107	108	108	24	103	104	104	24	106	107	107	24
6/11	114	114	115	23	112	112	113	24	107	108	108	24	103	104	105	24	106	106	107	24
6/12	114	114	115	23	110	111	112	24	104	106	107	24	102	103	103	24	105	106	106	24
6/13	115	115	116	23	110	111	111	24	102	102	103	23	102	103	103	24	105	106	107	24
6/14	114	115	115	24	110	111	111	24	102	102	103	24	102	102	103	24	105	105	106	24
6/15	114	114	115	24	110	111	111	24	101	102	102	24	101	102	102	24	105	105	106	24
6/16	113	113	114	24	111	111	112	24	106	107	108	24	103	104	105	24	105	106	107	24
6/17	---	---	---	0	110	111	111	24	105	107	108	24	103	103	104	24	105	105	106	24
6/18	---	---	---	0	109	110	111	24	102	102	102	23	102	103	104	24	105	106	107	24

Total Dissolved Gas Saturation Data at Snake River Sites

	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	104	105	105	24	107	108	108	24	118	118	119	24	116	116	116	24	115	116	116	24
6/6	102	103	103	24	107	107	108	24	120	122	122	24	113	114	116	24	117	118	120	24
6/7	102	103	104	24	105	105	106	24	123	124	124	24	111	112	113	24	119	119	119	24
6/8	102	103	104	24	106	107	107	24	119	120	121	24	115	116	117	24	117	118	119	24
6/9	103	104	104	24	107	107	107	24	114	117	118	24	116	116	116	23	115	116	116	24
6/10	103	104	104	24	107	107	107	24	111	111	111	24	114	115	115	24	115	115	116	24
6/11	102	104	105	24	106	107	107	24	110	111	111	24	112	113	113	24	114	114	115	24
6/12	102	103	104	24	106	106	106	24	110	111	111	24	110	111	111	24	114	114	114	24
6/13	102	103	104	24	106	106	106	24	110	110	111	24	110	110	110	24	114	114	114	24
6/14	101	102	103	24	105	105	105	24	110	110	111	24	110	110	110	24	114	114	114	24
6/15	101	102	103	24	105	105	105	24	110	110	111	24	109	109	110	24	114	114	114	24
6/16	102	104	105	24	104	105	105	24	110	110	110	24	109	109	110	24	114	114	115	24
6/17	102	103	104	24	105	105	105	24	110	110	110	24	109	109	109	24	114	114	115	24
6/18	102	103	104	22	105	105	105	24	110	110	111	24	108	108	108	24	113	114	114	24

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

	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	118	118	119	24	121	121	123	24	118	119	119	24	120	121	122	24	---	---	---	0
6/6	115	116	117	24	119	120	121	24	116	117	118	24	122	122	123	24	---	---	---	0
6/7	116	118	119	24	120	120	123	24	115	115	116	24	122	123	123	24	---	---	---	0
6/8	118	118	119	24	121	122	122	24	117	118	118	24	120	121	122	24	---	---	---	0
6/9	118	118	118	24	118	119	120	24	118	118	118	24	119	120	120	24	---	---	---	0
6/10	117	117	118	24	118	118	119	24	117	117	118	24	117	117	119	24	---	---	---	0
6/11	116	116	116	24	117	117	118	24	116	116	116	24	117	118	118	24	---	---	---	0
6/12	115	115	116	24	117	117	117	24	116	116	116	24	119	120	121	24	---	---	---	0
6/13	115	115	115	24	116	116	116	24	116	116	116	24	118	119	121	24	---	---	---	0
6/14	115	115	115	24	116	116	116	24	115	115	116	24	116	117	117	24	---	---	---	0
6/15	114	114	115	24	116	117	118	24	114	114	115	24	117	118	120	24	---	---	---	0
6/16	114	114	114	24	117	117	118	24	114	114	114	24	118	120	120	24	---	---	---	0
6/17	113	114	114	24	116	117	118	24	114	114	115	24	117	118	119	24	---	---	---	0
6/18	112	113	113	24	116	116	117	24	114	114	115	24	117	117	117	24	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
6/5	113	114	114	24	119	120	120	24	115	116	116	24	120	120	120	24	115	115	115	23
6/6	113	114	114	24	119	119	120	24	113	114	115	24	120	120	120	24	111	112	113	24
6/7	111	111	112	24	119	119	120	24	110	110	111	24	120	120	120	24	111	112	112	24
6/8	111	112	112	24	120	120	120	24	109	109	110	24	120	120	121	24	111	112	113	24
6/9	111	112	113	24	120	120	120	24	111	112	112	24	120	120	120	24	112	113	114	24
6/10	112	113	114	24	118	118	119	24	113	114	114	24	119	120	120	24	112	113	114	24
6/11	113	114	114	24	118	118	118	24	114	114	115	24	119	120	120	24	113	114	114	24
6/12	112	113	114	24	116	117	117	24	115	115	115	24	119	119	120	24	113	114	115	24
6/13	112	113	113	24	116	116	117	24	115	115	115	24	119	120	120	24	115	115	115	24
6/14	112	112	113	24	116	117	117	24	113	113	114	24	119	120	120	24	112	113	114	24
6/15	111	112	112	24	116	117	117	24	111	111	112	24	118	119	120	24	111	111	112	24
6/16	110	110	111	24	116	117	117	24	110	111	111	24	119	120	120	24	111	112	112	24
6/17	111	111	112	24	114	114	115	24	109	110	110	24	117	118	119	24	111	111	112	24
6/18	112	112	113	24	115	115	116	24	107	108	108	24	118	120	121	24	109	110	111	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/5	117	117	118	23	114	115	116	24	---	---	---	0	117	117	117	24	124	124	124	24
6/6	115	115	116	24	110	111	112	24	---	---	---	0	114	114	115	24	123	123	124	24
6/7	116	116	117	24	110	111	112	24	---	---	---	0	113	114	114	24	123	124	124	24
6/8	117	118	119	24	113	114	115	24	---	---	---	0	115	116	117	24	124	124	124	24
6/9	118	118	119	24	116	117	117	24	---	---	---	0	118	118	119	24	124	124	124	24
6/10	118	118	118	24	115	115	116	24	---	---	---	0	117	117	117	24	123	124	124	24
6/11	118	118	119	24	113	113	114	24	---	---	---	0	115	115	116	24	119	120	120	24
6/12	117	117	118	24	113	114	114	24	---	---	---	0	113	114	115	24	119	119	119	24
6/13	118	118	119	24	114	114	114	24	---	---	---	0	113	114	115	24	119	119	119	24
6/14	117	117	117	24	112	113	114	24	---	---	---	0	113	113	114	24	118	118	119	24
6/15	116	116	116	24	111	111	112	24	---	---	---	0	113	113	114	24	118	118	119	24
6/16	116	116	117	24	111	112	112	24	---	---	---	0	113	113	114	24	118	118	119	24
6/17	115	116	116	24	111	112	112	24	---	---	---	0	113	113	114	24	118	118	118	24
6/18	115	116	117	24	111	111	112	24	---	---	---	0	113	114	115	24	118	119	119	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)
06/05/2009	*	---	21	---	---	1,057	1,001	669	30	---	9,467	6,898
06/06/2009	*	---	---	---	---	1,848	1,162	750	11	5,692	8,822	3,720
06/07/2009	*	---	---	---	---	1,741	2,292	145	11	---	11,983	3,210
06/08/2009		---	2	---	---	1,145	581	676	9	4,423	8,045	2,712
06/09/2009	*	---	11	---	---	2,241	682	746	2	---	3,661	3,757
06/10/2009		---	14	---	---	982	394	286	8	4,182	3,446	2,586
06/11/2009	*	---	---	---	---	1,203	340	293	0	---	2,493	1,532
06/12/2009		---	---	---	---	683	498	125	0	6,423	3,041	2,782
06/13/2009	*	---	29	---	---	562	245	70	5	---	2,895	2,049
06/14/2009		---	44	---	---	477	186	79	4	4,458	2,502	1,265
06/15/2009	*	---	20	---	---	127	388	161	1	---	2,097	1,606
06/16/2009		---	13	---	---	467	546	175	0	2,130	1,427	1,131
06/17/2009	*	---	---	---	---	62	432	167	0	---	953	673
06/18/2009		---	---	---	---	281	428	128	3	1,191	995	864
06/19/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**154**	**0**	**0**	**12,876**	**9,175**	**4,470**	**84**	**28,499**	**61,827**	**34,785**
# Days:		**0**	**8**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**19**	**0**	**0**	**920**	**655**	**319**	**6**	**4,071**	**4,416**	**2,485**
YTD		**37,667**	**44,616**	**20,207**	**29,713**	**3,079,328**	**2,431,836**	**447,981**	**9,183**	**2,241,544**	**1,022,616**	**1,711,427**

				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)
06/05/2009	*	---	0	---	---	29,937	54,730	21,222	110	---	5,115	6,331
06/06/2009	*	---	---	---	---	19,375	19,984	23,059	47	21,322	4,653	6,096
06/07/2009	*	---	---	---	---	32,027	59,021	20,074	73	---	8,250	6,780
06/08/2009		---	0	---	---	26,567	46,763	21,911	36	24,358	10,564	4,825
06/09/2009	*	---	0	---	---	39,503	43,190	26,141	31	---	16,184	9,619
06/10/2009		---	0	---	---	22,346	29,994	15,085	11	24,054	15,036	11,538
06/11/2009	*	---	---	---	---	17,498	30,590	7,254	10	---	15,079	13,462
06/12/2009		---	---	---	---	13,221	10,176	2,355	36	30,838	14,744	13,057
06/13/2009	*	---	0	---	---	14,489	4,423	4,300	70	---	9,749	13,404
06/14/2009		---	0	---	---	17,748	9,630	2,911	64	50,874	7,969	12,706
06/15/2009	*	---	0	---	---	13,170	10,907	2,800	42	---	10,180	14,695
06/16/2009		---	0	---	---	25,139	22,622	6,169	83	86,461	15,312	15,156
06/17/2009	*	---	---	---	---	23,148	19,737	10,789	44	---	19,552	20,226
06/18/2009		---	---	---	---	38,830	15,510	10,932	121	86,011	17,106	22,776
06/19/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**332,998**	**377,277**	**175,002**	**778**	**323,918**	**169,493**	**170,671**
# Days:		**0**	**8**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**23,786**	**26,948**	**12,500**	**56**	**46,274**	**12,107**	**12,191**
YTD		**0**	**15**	**15**	**545**	**704,802**	**852,439**	**290,811**	**1,493**	**352,637**	**184,162**	**2,185,406**

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)
06/05/2009	*	---	0	---	---	352	497	0	1,438	---	6,193	4,158
06/06/2009	*	---	---	---	---	685	515	62	1,293	2,436	10,902	1,969
06/07/2009	*	---	---	---	---	606	501	145	1,416	---	10,769	1,851
06/08/2009		---	0	---	---	763	144	406	420	2,619	14,447	1,167
06/09/2009	*	---	0	---	---	420	136	391	263	---	5,820	2,235
06/10/2009		---	0	---	---	246	723	215	327	2,268	7,251	1,649
06/11/2009	*	---	---	---	---	301	67	110	298	---	5,278	1,856
06/12/2009		---	---	---	---	124	142	37	139	3,408	3,086	2,952
06/13/2009	*	---	0	---	---	62	136	0	52	---	5,210	3,190
06/14/2009		---	0	---	---	64	172	20	175	2,112	1,387	1,565
06/15/2009	*	---	0	---	---	286	157	123	160	---	3,098	2,198
06/16/2009		---	0	---	---	280	273	60	482	1,614	2,281	1,367
06/17/2009	*	---	---	---	---	185	143	26	233	---	976	1,642
06/18/2009		---	---	---	---	406	143	77	288	1,103	1,181	1,100
06/19/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**4,780**	**3,749**	**1,672**	**6,984**	**15,560**	**77,879**	**28,899**
# Days:		**0**	**8**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**341**	**268**	**119**	**499**	**2,223**	**5,563**	**2,064**
YTD		**0**	**0**	**0**	**332**	**80,542**	**72,388**	**15,234**	**36,722**	**122,247**	**225,865**	**493,126**

				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)
06/05/2009	*	---	89	---	---	20,569	13,302	5,169	120	---	2,899	1,291
06/06/2009	*	---	---	---	---	28,549	14,928	5,187	84	2,665	4,155	1,157
06/07/2009	*	---	---	---	---	31,421	20,418	4,203	64	---	7,328	802
06/08/2009		---	5	---	---	38,094	9,307	5,748	61	1,365	10,550	442
06/09/2009	*	---	13	---	---	16,319	14,834	8,702	52	---	9,270	1,166
06/10/2009		---	19	---	---	6,200	17,345	6,557	52	1,239	3,329	1,078
06/11/2009	*	---	---	---	---	6,614	7,486	3,919	49	---	2,447	619
06/12/2009		---	---	---	---	6,083	2,915	2,343	22	1,588	1,452	624
06/13/2009	*	---	55	---	---	3,310	2,780	1,305	30	---	2,626	468
06/14/2009		---	31	---	---	4,040	2,604	1,222	23	1,564	719	262
06/15/2009	*	---	59	---	---	3,722	3,194	719	28	---	492	1,549
06/16/2009		---	40	---	---	4,517	4,479	1,227	18	1,185	488	658
06/17/2009	*	---	---	---	---	4,914	2,052	1,223	18	---	700	274
06/18/2009		---	---	---	---	2,870	1,785	1,022	39	762	530	393
06/19/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**311**	**0**	**0**	**177,222**	**117,429**	**48,546**	**660**	**10,368**	**46,985**	**10,783**
# Days:		**0**	**8**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**39**	**0**	**0**	**12,659**	**8,388**	**3,468**	**47**	**1,481**	**3,356**	**770**
YTD		**1,833**	**24,102**	**9,611**	**8,297**	**4,496,347**	**3,552,994**	**724,069**	**17,480**	**801,211**	**933,301**	**671,357**

Two-Week Summary of Passage Indices

				COMBINED SOCKEYE								
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date		(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
06/05/2009	*	---	0	---	---	423	249	304	59	---	2,509	1,890
06/06/2009	*	---	---	---	---	411	129	62	51	2,842	6,024	844
06/07/2009	*	---	---	---	---	76	430	362	47	---	3,889	1,472
06/08/2009		---	0	---	---	0	75	68	44	1,066	2,428	851
06/09/2009	*	---	0	---	---	140	137	196	38	---	2,107	259
06/10/2009		---	0	---	---	0	0	0	22	1,239	1,249	545
06/11/2009	*	---	---	---	---	120	135	0	37	---	1,278	530
06/12/2009		---	---	---	---	0	142	0	15	1,134	453	341
06/13/2009	*	---	0	---	---	0	64	0	23	---	402	59
06/14/2009		---	0	---	---	0	0	8	9	549	391	218
06/15/2009	*	---	0	---	---	0	29	10	16	---	293	164
06/16/2009		---	0	---	---	31	29	28	32	254	178	127
06/17/2009	*	---	---	---	---	0	0	13	38	---	63	148
06/18/2009		---	---	---	---	63	0	51	19	339	57	59
06/19/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**0**	**1,264**	**1,419**	**1,102**	**450**	**7,423**	**21,321**	**7,507**
# Days:		**0**	**8**	**0**	**0**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**90**	**101**	**79**	**32**	**1,060**	**1,523**	**536**
YTD		**170**	**0**	**0**	**177**	**46,070**	**46,129**	**21,522**	**4,535**	**188,782**	**110,375**	**73,527**

* 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: 6/19/09 9:53 AM

06/05/09 TO 06/19/09

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	251,400	9,525	3,525	126,895	925	392,270
	Sum of NumberBarged	232,960	10,290	3,297	133,927	1,063	381,537
	Sum of NumberBypassed	234	0	0	1,686	0	1,920
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	78	2	1	2	2	85
	Sum of FacilityMorts	1,067	7	2	69	11	1,156
	Sum of ResearchMorts	10	1	0	4	0	15
	Sum of TotalProjectMorts	1,155	10	3	75	13	1,256
LGS	Sum of NumberCollected	275,528	6,668	2,765	86,528	1,038	372,527
	Sum of NumberBarged	321,144	7,490	3,165	99,620	1,432	432,851
	Sum of NumberBypassed	1,812	0	0	0	0	1,812
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	41	5	0	4	1	51
	Sum of FacilityMorts	4,483	70	0	48	4	4,605
	Sum of ResearchMorts	6	0	0	0	0	6
	Sum of TotalProjectMorts	4,530	75	0	52	5	4,662
LMN	Sum of NumberCollected	136,248	3,515	1,290	38,102	836	179,991
	Sum of NumberBarged	145,087	4,652	1,528	42,743	1,096	195,106
	Sum of NumberBypassed	2,537	7	0	1,351	0	3,895
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	17	0	0	3	0	20
	Sum of FacilityMorts	216	4	2	36	0	258
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	233	4	2	39	0	278
MCN	Sum of NumberCollected	184,899	15,488	8,509	5,632	3,904	218,432
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	184,591	15,382	8,500	5,619	3,899	217,991
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	30	26	0	3	1	60
	Sum of FacilityMorts	272	80	9	10	4	375
	Sum of ResearchMorts	6	0	0	0	0	6
	Sum of TotalProjectMorts	308	106	9	13	5	441
Total Sum of NumberCollected		848,075	35,196	16,089	257,157	6,703	1,163,220
Total Sum of NumberBarged		699,191	22,432	7,990	276,290	3,591	1,009,494
Total Sum of NumberBypassed		189,174	15,389	8,500	8,656	3,899	225,618
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		166	33	1	12	4	216
Total Sum of FacilityMorts		6,038	161	13	163	19	6,394
Total Sum of ResearchMorts		22	1	0	4	0	27
Total Sum of TotalProjectMorts		6,226	195	14	179	23	6,637

YTD Transportation Summary

Source: Fish Passage Center Updated: 6/19/09 9:53 AM

TO: 06/19/09

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	485,682	2,350,987	57,383	33,151	3,418,820	6,346,023
	Sum of NumberBarged	436,238	1,499,058	54,991	25,829	1,828,315	3,844,431
	Sum of NumberBypassed	15,272	847,954	1,951	7,068	1,587,772	2,460,017
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	126	117	2	22	30	297
	Sum of FacilityMorts	3,147	2,728	114	183	392	6,564
	Sum of ResearchMorts	10	1,035	0	0	19	1,064
	Sum of TotalProjectMorts	3,283	3,880	116	205	441	7,925
LGS	Sum of NumberCollected	621,857	1,719,383	53,263	33,487	2,510,333	4,938,323
	Sum of NumberBarged	595,015	902,117	46,336	25,614	984,903	2,553,985
	Sum of NumberBypassed	6,264	751,922	2,825	5,826	1,460,070	2,226,907
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	59	49	0	4	15	127
	Sum of FacilityMorts	5,174	1,621	2	43	301	7,141
	Sum of ResearchMorts	6	4	0	0	0	10
	Sum of TotalProjectMorts	5,239	1,674	2	47	316	7,278
LMN	Sum of NumberCollected	221,742	320,367	11,298	15,925	515,778	1,085,110
	Sum of NumberBarged	210,283	311,243	11,223	15,709	503,256	1,051,714
	Sum of NumberBypassed	2,551	8,786	9	114	11,494	22,954
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	17	14	0	2	7	40
	Sum of FacilityMorts	262	237	5	6	247	757
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	279	251	5	8	254	797
MCN	Sum of NumberCollected	199,784	1,298,650	67,441	105,337	466,422	2,137,634
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	199,454	1,297,077	67,384	105,281	466,255	2,135,451
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	36	146	1	2	14	199
	Sum of FacilityMorts	287	1,404	56	53	150	1,950
	Sum of ResearchMorts	7	23	0	1	3	34
	Sum of TotalProjectMorts	330	1,573	57	56	167	2,183
Total Sum of NumberCollected		1,529,065	5,689,387	189,385	187,900	6,911,353	14,507,090
Total Sum of NumberBarged		1,241,536	2,712,418	112,550	67,152	3,316,474	7,450,130
Total Sum of NumberBypassed		223,541	2,905,739	72,169	118,289	3,525,591	6,845,329
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		238	326	3	30	66	663
Total Sum of FacilityMorts		8,870	5,990	177	285	1,090	16,412
Total Sum of ResearchMorts		23	1,062	0	1	22	1,108
Total Sum of TotalProjectMorts		9,131	7,378	180	316	1,178	18,183

Cumulative Adult Passage at Mainstem Dams Through: 06/18

		Spring Chinook						Summer Chinook						Fall Chinook					
		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.	
DAM	EndDate	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	**06/18**	**114525**	**66631**	**125543**	**17554**	**160243**	**11507**	**40306**	**18420**	**32903**	**5945**	**28293**	**3211**	**0**	**0**	**0**	**0**	**0**	**0**
TDA	**06/17**	**93908**	**53646**	**95438**	**15801**	**113852**	**9048**	**31654**	**10500**	**18376**	**4211**	**18515**	**2015**	**0**	**0**	**0**	**0**	**0**	**0**
JDA	**06/18**	**76806**	**49733**	**81772**	**14925**	**95147**	**7579**	**23866**	**10089**	**18381**	**3934**	**15359**	**1586**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**06/18**	**70413**	**43328**	**68080**	**12133**	**86998**	**7409**	**16167**	**6447**	**12220**	**3043**	**11402**	**1276**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**06/18**	**55435**	**28223**	**53142**	**7757**	**59050**	**4663**	**7313**	**3786**	**7376**	**1543**	**4766**	**615**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**06/18**	**66931**	**20009**	**54512**	**6885**	**57079**	**4270**	**7162**	**1685**	**5343**	**856**	**3395**	**340**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**06/18**	**52642**	**24331**	**50396**	**7805**	**54016**	**4453**	**3275**	**1344**	**2867**	**565**	**1789**	**245**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**06/18**	**49667**	**31064**	**50146**	**10946**	**54673**	**5280**	**658**	**557**	**784**	**211**	**542**	**87**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**06/16**	**13469**	**2910**	**12178**	**620**	**18164**	**621**	**1815**	**76**	**828**	**58**	**883**	**32**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**06/17**	**12634**	**6003**	**12490**	**1119**	**14914**	**1069**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**06/17**	**5503**	**1033**	**3983**	**365**	**5546**	**421**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**06/17**	**2832**	**1658**	**2299**	**393**	**3103**	**265**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**06/15**	**20208**	**1880**	**8244**	**145**	**-**	**-**	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**0**	**0**	**0**	**-**	**-**

	Coho						Sockeye			Steelhead			
	2009		2008		10-Yr Avg.				10-Yr			10-Yr	Wild
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2009	2008	Avg.	2009	2008	Avg.	2009
BON	**0**	**0**	**0**	**0**	**0**	**0**	**33974**	**50925**	**17193**	**8660**	**8013**	**8516**	**1800**
TDA	**0**	**0**	**0**	**0**	**0**	**0**	**16337**	**19531**	**7590**	**2455**	**2307**	**2513**	**652**
JDA	**0**	**0**	**0**	**0**	**0**	**0**	**15597**	**17157**	**7099**	**4831**	**4527**	**4200**	**1897**
MCN	**0**	**0**	**0**	**0**	**0**	**0**	**7321**	**3253**	**3203**	**3155**	**2801**	**2569**	**1162**
IHR	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**1**	**0**	**3406**	**3325**	**2270**	**1084**
LMN	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**5099**	**4107**	**2350**	**2283**
LGS	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**5578**	**2649**	**2336**	**2205**
LGR	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10890**	**7798**	**7836**	**3393**
PRD	**0**	**0**	**0**	**0**	**0**	**0**	**1096**	**166**	**379**	**78**	**211**	**43**	**0**
RIS	**0**	**0**	**0**	**0**	**0**	**0**	**260**	**43**	**93**	**119**	**356**	**82**	**63**
RRH	**0**	**0**	**0**	**0**	**0**	**0**	**96**	**19**	**46**	**449**	**622**	**194**	**224**
WEL	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**4**	**6**	**91**	**218**	**46**	**63**
WFA	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**0**	**-**	**11970**	**14911**	**-**	**-**

BON and LGR have switched to video counts so the data is delayed.
*PRD is not posting 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: 05/21/09

BON counts from January 1, 2009 to March 14, 2009 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2009	19	-1	321	109
2008	42	0	568	273