Fish Passage Center

Weekly Report #09 - 09

May 8, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 57% and 103% of average at individual sub-basins over April. Precipitation above The Dalles has been 91% of average over April. Over the entire water year, precipitation has generally been near average.

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

Location	Water Year 2009 April 1-27		Water Year 2009 October 1, 2008 to April 27, 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.16	78	14.80	94
Snake River Above Ice Harbor	1.25	95	12.07	104
Columbia Above The Dalles	1.35	91	15.49	98
Kootenai	1.29	82	14.40	89
Clark Fork	0.65	58	11.31	112
Flathead	1.07	75	12.92	95
Pend Oreille/ Spokane	1.50	74	20.62	93
Central Washington	0.33	57	5.60	86
Snake River Plain	0.96	103	6.65	94
Salmon/Boise/ Payette	0.95	66	12.46	88
Clearwater	1.42	59	23.14	110
SW Washington Cascades/ Cowlitz	3.90	81	50.82	87
Willamette Valley	3.20	74	40.52	82

Average snowpack in the Columbia River for basins above the Snake River confluence is 97% of average, for Snake River Basins the average snowpack is 93% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 187% of average.

Table 2 displays the April Final and May Final runoff volume forecasts for multiple reservoirs. Water Supply Forecasts have generally decreased slightly between the April Final and May Final forecasts, with the exception of Lower Granite which has increased slightly. The current forecast at The Dalles between January and July is 91100 Kaf (85% of average).

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

Location	April Final		May Final	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	86	92000	85	91100
Grand Coulee (Jan-July)	89	56200	87	55000
Libby Res. Inflow, MT (Apr-Aug)	88 90*	5500 5672*	84	5270
Hungry Horse Res. Inflow, MT (Jan-July)	94	2100	92	2050
Lower Granite Res. Inflow (Apr- July)	95	20400	97	20900
Brownlee Res. Inflow (Apr-July)	79	4970	79	5000
Dworshak Res. Inflow (Apr-July)	102 99*	2710 2662	99 98*	2610 2631

* 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. Flows at Lower Granite Dam from April 3-May 7 have averaged 89.1 Kcfs and 88.9 Kcfs over the last week; flows at Priest Rapids from April 10-May 7 averaged 127.0 Kcfs and 104.1 Kcfs over the last week; and flows at McNary have averaged 239.2 Kcfs between April 10-May 7 and 212.3 Kcfs over the last week.

Grand Coulee Reservoir is at 1258.8 feet (5-7-09) and has refilled 1.5 feet in the last week. Outflows at Grand Coulee have ranged between 69.0 and 120.4 Kcfs over the last week. The COE stated at the May 6th TMT Meeting that the Initial Control Flow date is May 8th, 2008. According to the COE, the refill of Grand Coulee can begin one day prior to the Initial Control Flow date.

The Libby Reservoir is currently at elevation 2405.7 feet (5-7-09) and has held relatively steady last week. Outflows at Libby have ranged between 4.5-6.7 Kcfs over the last week, the COE stated at the May 6th TMT Meeting that Libby will be passing inflows for the near future.

Hungry Horse is currently at an elevation of 3519.7 ft (5-7-09) and has drafted 0.3 feet last week. Outflows at Hungry Horse have increased from 2.9 Kcfs to 5.9 Kcfs last week.

Dworshak is currently at an elevation of 1530.3 feet (5-7-09) and has refilled 5.1 feet last week. Outflows at Dworshak have been reduced from 10 Kcfs to 1.6 Kcfs over the last week. The COE stated at the May 6th TMT Meeting that their analysis of current water supply at Dworshak has led them to recommend decreasing outflows at Dworshak to the minimum outflow of 1.6 Kcfs to ensure refill by the end of June/ Early July. Outflows were reduced to the 1.6 Kcfs minimum late on May 6th, 2009.

The Brownlee Reservoir was at an elevation of 2055.4 feet on May 7th, 2009, refilling 4.2 feet last week. Outflows at Brownlee Dam have been 24.2 to 29.6 Kcfs over the last week.

Spill:

No spill occurred at Dworshak Dam over the past week. 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 gradually increased over the past week. Spill at Lower Granite Dam has averaged an instantaneous 20 Kcfs. Spill at Little Goose Dam has met the 30% on a daily average basis. Spill to the gas cap at Lower Monumental Dam has occurred over the past week during a comparison of bulk versus uniform spill pattern test. Spill is higher during uniform spill pattern testing. The implementation of study-like conditions at Ice Harbor Dam began on April 30th, and spill has alternated between 30% spill for 24 hours and 45 Kcfs Daytime spill and gas cap nighttime spill, in two day blocks.

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 met the Court Order over the past week. At John Day Dam the testing of 30% versus 40% spill has occurred. The Dalles Dam spill has been spilling an instantaneous 40% of flow. At Bonneville dam there was a reduction in the spill cap on May 4th due to forebay TDG levels at Camas/Washougal, followed by a return to the Court Ordered spill level by midday on May 5th .

Total dissolved gas measurements at the Snake River federal hydroprojects were generally under the waiver limits over this past week with the exception of a few days of slight increases at the Ice Harbor Dam forebay.

In the Lower Columbia TDG at the Bonneville

Dam forebay exceeded the 115% by less than 1% on four days. The TDG at the Camas/Washougal monitor exceeded 115% on May 3rd.

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. A few fish with minor signs of GBT were detected in the samples at Rock Island and Bonneville dams this past week.

Adult Fish Passage:

Adult counts at Bonneville Dam have been updated through May 7th. Daily adult spring Chinook counts at Bonneville Dam ranged from 3028 to 7036 adult salmon per day. Between March 15th and May 7th, 56579 spring Chinook have been counted at Bonneville Dam. In 2008, 72385 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2009 adult spring Chinook count at Bonneville Dam is 78.2% of the 2008 count. The Bonneville spring Chinook adult count is only about 46.9% of the 10 year average of 120490. The 2009 Bonneville Dam spring Chinook jack count of 12119 is about 5.09 times greater than the 2008 count of 2381 and 3.24 times greater than the 10 year average of 3741. At Willamette Falls Dam 3013 adult spring Chinook have been counted so far this year. The 2009 adult spring Chinook count at Willamette Falls Dam is 3.07 times greater than the 2008 count of 981. At The Dalles Dam the 2009 adult spring Chinook count is 27103 and at McNary Dam 11308 adult spring Chinook have been counted. The 2009 spring Chinook count at McNary Dam is 63.2% of the 2008 count and only about 23.2% of the 10 year average. The 2009 McNary Dam spring Chinook jack count of 1684 is 4.1 times greater than the 2008 count of 410 and 1.63 times greater than the 10 year average count of 1028.

The Bonneville Dam 2009 steelhead count of 2407 is about 1.1 times greater than the 2008 count of 2171. The 2009 steelhead count is about 98.16% of the 10-year average of 2452. At upriver sites, adult steelhead continue to move through the hydro system to reach their tributaries and spawning sites. The majority of these fish over-wintered in pools and will complete their trip to their spawning grounds in March through early May. Daily adult steelhead counts at Lower Granite Dam ranged from 18 to 47 adults per day last week. This year's Lower Granite steelhead count of 10435 is 1.41 times greater than the 2008 count of 7393 and 1.36 times greater than the 10 year average of 7642. The 2009 wild steelhead count as of May 6th was 3114. At Rock Island Dam, as of April 29th, 66 adult steelhead have been counted and at Rocky Reach Dam, 326 adult steelhead have been counted so far this season. At Willamette Falls Dam, the 2009 count for steelhead was 3667, as of May 2nd. This year's steelhead count is only about 60.97% of the 2008 count of 6014 at Willamette Falls Dam for the same date range.

Stansell et al. reported that as of May 1st, that as many as 26 California sea lions and 26 Steller sea lions have been counted at Bonneville Dam on a single day. The highest daily abundance of sea lions at Bonneville Dam occurred on April 21st when 47 sea lions were observed at the dam. There has been an increase in the number of California sea lions over the past few weeks. However, California sea lion numbers are lower when compared to recent years. Sea lion trapping began on March 10th. To date, 7 animals have been euthanized, 4 have been relocated and 6 have been tagged and released. All of the 7 euthanized sea lions were infected with Gammaherpes virus and found to be unsuited for zoos or aquariums. The traps will continue to be used to mark sea lions not previously seen at the dam and to remove animals that meet the removal criteria granted to the states by NOAA Fisheries under Section 120 of the Marine Mammal Protection Act.

Stansell, Robert; Tackley, Sean; and Gibbons, Karrie. 2009. Status Report – Pinniped Predation and Deterrent Activities at Bonneville Dam, 2009. Fisheries Field Unit, US Army Corps of Engineers, Bonneville Lock and Dam, Cascade Locks, Oregon. Available online at http://www.nwd-wc.usace.army.mil/tmt/documents/fish/2009/ update20090501.pdf.

Smolt Monitoring: Yearling Chinook collection at the Salmon River and Imnaha River SMP traps appears to be declining rapidly consistent with historic patterns. Steelhead collection at all the traps continues to increase which is also consistent with past years. This is typically the time period when steelhead predominate in the sample at the traps as well as at that the dams. At the Lower Snake River dams, the opposite is occurring however as steelhead numbers have continued to decline rapidly while yearling Chinook collection has remained steady or decreased more slowly. This is unusual in that yearling Chinook typically predominate in the Snake River until around May 1. However an early release of 1 million steelhead from Dworshak NF Hatchery has resulted in a large number of steelhead

being collected at the Snake River sites. Transportation has begun at Lower Granite and Little Goose dams. Lower Monumental Dam will also begin transport May 9; at which point smolt monitoring at the site will begin 24 hour sampling. At Bonneville Dam subyearling Chinook predominated the collection as the latest release from Spring Creek National Fish Hatchery passed this past week.

The Salmon River Trap collection of yearling Chinook remained relatively low with the average daily collection at about 40 fish, while steelhead collection averaged nearly 100 fish per day. Based on past years timing, this is typically the peak week for steelhead collection at the Salmon River Trap. Flows in the Salmon River were at 26 Kcfs on May 8 as measured at the White Bird USGS gauge and are forecast to continue increasing over the next several days. Likely this peak in flows will be accompanied by increased numbers of steelhead. At the Imnaha River Trap a similar pattern is occurring with diminishing numbers of yearling Chinook being collected and at the same time relatively larger collection of steelhead is beginning.

The steelhead numbers at the Imnaha Trap typically remain high later than on the Salmon River, so there may a few more weeks of high steelhead collection to come at that site. Unlike the Salmon River, flows in the Imnaha River appear to have reached a peak on May 8 of about 2 Kcfs and are forecast to decline over the next several days to below historic median levels for this time of year. The Grande Ronde River, which has had relatively high flows most of April is showing another rapid increase in flows over the past week. Flows dipped to near historic median on May 1 at 7,000 cfs but then increased well above historic median to 14 Kcfs on May 7. The Trap has had continued high collection of yearling Chinook this past week, with over 600 fish collected on May 6; yearling Chinook smolt collection was well above average for this time of year. Steelhead collection has also been relatively high over the past week with over 300 fish in the trap each day. The Lewiston Trap on the Snake River captured relatively large numbers of yearling Chinook and steelhead the past few days of sampling, during recent high flow event. On May 6 flows rose to 70 Kcfs as measured at Anatone, and have remained there through May 8. Median flows for this time period are closer to 50 Kcfs. The Trap collected over 1,300 yearling Chinook on May 7 and over 600 steelhead also.

Over the past few days at Lower Granite Dam yearling Chinook indices have begun to increase to a level well above that of steelhead. Typically, steelhead indices don't increase above those of Chinook until early May, but due an early release of steelhead from Dworshak hatchery steelhead have predominated until now. Steelhead indices reached as season high of 236,000 on April 23 and have steadily declined to 57,000 on April 30. The weekly average passage index for yearling Chinook has also declined over the past week but, again to a lesser extent than steelhead with the average index for Chinook at 78,000 compared to 64,000 for steelhead. Small numbers of subyearling Chinook were collected this past week; those were all fish below 60mm in length.

At Rock Island dam the daily passage indices have remained relatively low over the past week. The average daily index for yearling Chinook decreased to 130 per day compared to over 200 per day last week. Steelhead indices average just over 130 per day as well, compared to about 70 per day last week.

McNary Dam began sampling on April 9. The predominant salmonids in the sample at McNary Dam the past week were yearling Chinook, and steelhead. The passage index for yearling Chinook rose to 155,000 on May 7, while steelhead index for that date was at 109,000. Lamprey numbers in the sample have remained low but steady over the past two weeks with the numbers averaging over 20 per day. At Bonneville Dam a peak index of 390,000 subyearling Chinook passed the project on May 3 as the latest Spring Creek release of subyearling Chinook went out May 1. Yearling Chinook passage remained steady over the past week as nearby releases from Carson NFH, Willard NFH, Klickitat NFH, and releases in the Hood River passed the project. Smaller, but increasing numbers of steelhead were also captured at the site this past 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. Two releases of subyearling fall Chinook to the Snake River (below Hells Canyon Dam) began this week. In all, these releases totaled 962,821 juveniles. One of these two releases is expected to run through mid-May. Two releases of sockeye smolts to the Snake River zone were expected to begin last week. However, these releases were postponed until May 7th. In all, about 173,000 sockeye smolts were released this week, with 57% being released into the Salmon River

and 43% into Redfish Lake. Finally, several releases of summer steelhead that began weeks ago were scheduled to end this week. In all, these releases totaled approximately 1.0 million steelhead juveniles. Of these, about 82% were released into the Pahsimeroi River and 18% were released into Salmon River. In addition to these older releases, about 112,000 summer steelhead were scheduled for release into the Wallowa River.

Approximately 402,000 subyearling fall Chinook from Lyons Ferry Hatchery are scheduled for release into Couse Creek, a tributary of the Snake River, above Lower Granite Dam. These releases are scheduled to begin in mid-May and are expected to run through early June. Approximately 50% of these subyearling fall Chinook are unmarked. Two releases of summer steelhead to the Salmon River that began several weeks ago are scheduled to end on or around May 11th. These two releases are expected to total about 302,000 juveniles, of which 50% are unmarked. In addition, a release of summer steelhead to the Grande Ronde River is scheduled to begin on or around May 11th.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. A release of yearling summer Chinook to the Okanogan River that began several weeks ago was scheduled to end this week. In all, this release is expected to total about 520,000 yearling summer Chinook. The Yakama Tribal Program to re-establish Coho runs in the Yakima, Methow, and Wenatchee basins continued its releases this week. In all, just over 352,000 coho juveniles were scheduled for release into the Wenatchee River this week. There were no other scheduled releases of juvenile salmonids to this zone this week.

Approximately 653,000 subyearling summer Chinook are scheduled for release into this zone over the next two weeks. Of these, about 69% are scheduled for release into the Mid-Columbia River and 31% to the Yakima River. Several releases of yearling spring Chinook that began several weeks ago are scheduled to end over the next two weeks. In all, these releases total about 1.07 million juveniles. Of these, about 72% are being released from acclimation facilities on the Yakima River and 28% are being released into the Wenatchee River. In several releases of yearling summer Chinook that began weeks ago are scheduled to end over the next two weeks. In all, these releases will total 495,000 yearling summer Chinook, all of which are being released to the Mid-Columbia River.

As mentioned above, most of the releases for the Yakama Tribal Program to re-establish Coho runs in the Yakima, Methow, and Wenatchee river basins have already begun and will continue over the next few weeks. Finally, several releases of summer steelhead to the Wenatchee River that began several weeks ago are scheduled to end over the next two weeks. In all, these releases are expected to total about 327,000 juveniles, all of which were tagged with green or pink Elastomer tags.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately 20,000 summer steelhead juveniles were scheduled for release from Blackberry Acclimation Pond into Hood River this week. There were no other releases of juvenile salmonids scheduled for this week for the Lower Columbia Zone.

Approximately 600,000 subyearling fall Chinook are scheduled for release into the Umatilla River on or around May 16th. In addition, about 1 million coho juveniles are scheduled for release into the Klickitat River, beginning on or around May 10th. All of these coho juveniles are clipped. A release of 90,000 summer steelhead to the Klickitat River that began several weeks ago is scheduled to end over the next two weeks. Finally, about 12,500 winter steelhead juveniles are scheduled for release into Hood River on May 14th. There are no other scheduled released to this zone 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
04/24/2009	130.4	0.0	133.9	1.1	150.1	12.6	151.1	13.6	157.2	14.0	167.5	32.3	167.1	12.4
04/25/2009	124.3	0.0	121.7	0.0	133.8	9.5	127.6	0.0	133.0	14.3	147.5	19.7	144.4	0.0
04/26/2009	132.8	0.0	140.6	0.0	145.2	9.3	139.6	0.0	145.7	14.3	144.4	19.7	144.5	0.0
04/27/2009	143.5	0.0	150.1	0.0	151.9	10.0	144.2	2.3	150.1	14.3	152.6	30.4	146.7	12.8
04/28/2009	132.9	0.0	117.9	21.2	143.1	9.6	146.0	0.3	152.4	15.1	161.3	34.0	160.6	22.6
04/29/2009	130.7	0.0	140.5	22.3	150.0	10.0	142.4	0.0	145.9	14.4	149.9	21.1	151.8	20.2
04/30/2009	126.3	0.0	126.7	38.6	138.1	10.0	133.0	0.0	138.4	14.3	148.4	20.3	141.6	20.9
05/01/2009	115.0	0.0	118.1	27.3	122.6	8.6	118.3	0.0	123.1	13.6	142.4	19.4	143.5	23.4
05/02/2009	78.1	0.0	86.1	0.0	101.6	7.5	103.5	0.0	109.5	9.8	122.0	18.5	118.0	24.1
05/03/2009	65.1	0.0	54.6	0.0	59.2	4.8	56.4	0.0	59.4	9.8	97.7	16.3	106.8	23.2
05/04/2009	120.4	0.0	115.5	0.0	128.2	8.6	123.5	0.0	124.7	11.7	91.4	16.5	80.9	21.3
05/05/2009	79.8	0.0	90.7	0.0	98.2	6.7	95.5	0.0	101.1	12.5	111.3	18.6	107.8	23.4
05/06/2009	69.0	0.0	66.9	0.0	74.1	5.5	73.6	0.0	77.8	10.6	109.3	17.3	106.8	23.9
05/07/2009	92.2	0.0	90.5	0.0	87.1	6.2	81.6	0.0	82.6	9.0	69.1	16.2	64.9	22.9

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/24/2009	13.9	3.2	32.8	34.9	139.8	36.3	134.8	44.9	142.0	28.2	145.9	75.4
04/25/2009	10.6	0.0	31.6	34.8	120.8	21.1	113.9	31.3	119.4	29.0	122.8	62.3
04/26/2009	10.6	0.0	29.1	31.9	108.8	20.4	103.2	30.5	108.6	29.1	109.9	60.2
04/27/2009	11.7	1.1	26.8	29.8	98.2	19.7	96.1	28.9	99.6	28.7	102.8	63.1
04/28/2009	15.0	4.3	26.0	24.2	91.1	20.5	86.3	25.9	88.3	26.3	89.4	60.1
04/29/2009	13.8	3.2	25.7	26.4	87.6	20.5	84.5	27.4	85.7	26.1	88.7	59.2
04/30/2009	11.3	0.9	25.7	26.4	81.5	20.5	78.6	24.0	80.7	32.6	81.5	34.8
05/01/2009	10.0	0.0	25.3	25.4	78.9	20.5	74.9	22.3	77.2	36.2	78.7	23.7
05/02/2009	10.0	0.0	25.4	24.5	74.9	20.5	73.5	22.0	74.3	30.9	75.6	46.9
05/03/2009	10.0	0.0	26.9	25.8	77.1	20.5	73.6	22.0	74.3	28.9	75.8	55.2
05/04/2009	10.0	0.0	27.9	26.1	86.0	22.8	83.9	25.2	85.9	33.7	88.1	36.0
05/05/2009	9.8	0.0	30.7	29.1	89.0	20.4	84.8	25.4	84.8	37.0	85.7	25.7
05/06/2009	7.9	0.0	33.7	31.0	109.2	20.6	104.5	30.8	109.7	27.2	112.0	54.3
05/07/2009	1.6	0.0	---	---	107.1	20.7	104.4	30.9	108.1	25.5	109.4	69.9

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
04/24/2009	317.0	143.4	329.3	98.7	317.7	115.3	324.1	108.4	75.2	129.1
04/25/2009	292.0	120.9	289.3	87.1	280.4	112.5	316.6	108.2	75.3	121.7
04/26/2009	279.1	111.6	300.1	90.0	293.1	117.2	298.1	94.6	75.3	116.8
04/27/2009	269.5	108.0	276.4	83.0	270.2	107.9	293.1	99.8	74.1	107.8
04/28/2009	271.2	108.6	270.8	82.1	264.3	105.8	275.2	96.7	70.5	96.6
04/29/2009	251.8	100.9	249.0	74.9	240.3	96.2	281.2	99.6	70.1	100.2
04/30/2009	241.7	97.2	259.3	77.9	252.2	100.4	255.7	100.8	49.6	93.9
05/01/2009	220.4	88.2	226.8	86.4	216.9	86.6	233.9	101.3	27.6	93.6
05/02/2009	229.2	91.6	211.4	84.5	204.0	81.8	226.8	101.4	21.6	92.5
05/03/2009	188.5	75.5	183.8	73.5	178.3	71.7	205.2	101.3	9.6	82.9
05/04/2009	190.5	76.3	195.4	78.0	186.6	74.7	201.7	97.5	14.7	78.1
05/05/2009	195.9	78.4	196.0	63.1	192.1	76.8	215.9	96.5	29.2	78.9
05/06/2009	237.9	95.6	247.8	74.3	236.4	94.1	245.5	101.2	50.0	82.9
05/07/2009	223.5	89.4	241.8	91.5	240.7	96.1	283.7	100.9	74.2	97.2

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											
	04/27/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/04/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	04/27/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/04/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	04/29/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/06/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	04/30/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/04/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	04/28/09	Chinook + Steelhead	95	2	2	2.10%	0.00%	2	0	0	0
	05/02/09	Chinook + Steelhead	10	0	0	0.00%	0.00%	0	0	0	0
	05/05/09	Chinook + Steelhead	108	2	2	1.85%	0.00%	2	0	0	0
Rock Island Dam											
	04/28/09	Chinook + Steelhead	50	1	1	2.00%	0.00%	1	0	0	0
	04/30/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/05/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/07/09	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0

Hatchery Releases Last Two Weeks

Hatchery Release Summary

From: 4/24/2009 to 05/07/09

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Cassimer Bar Hatchery	ST	SU	2009	2,000	04-15-09	04-30-09	Okanogan River	Okanogan River
Colville Tribe	Cassimer Bar Hatchery	ST	SU	2009	14,000	04-15-09	04-30-09	Omak Creek	Okanogan River
Colville Tribe	Eastbank Hatchery	CH1	SU	2009	100,000	04-15-09	04-30-09	Bonaparte Acclimation Pond	Okanogan River
Colville Tribe Total					**116,000**				
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	31,222	04-30-09	04-30-09	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	31,382	05-01-09	05-01-09	Slate Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	61,994	04-30-09	05-01-09	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	62,336	04-28-09	04-28-09	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	62,588	04-27-09	04-28-09	Slate Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2009	67,821	04-24-09	04-27-09	East Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2009	178,849	04-09-09	05-04-09	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2009	825,525	04-13-09	05-03-09	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Oxbow-Idaho	CH0	FA	2009	192,471	05-06-09	05-06-09	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Oxbow-Oregon	SO	UN	2009	74,000	05-07-09	05-07-09	Redfish Lake	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2009	99,000	05-07-09	05-07-09	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game Total					**1,687,188**				
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2009	50,250	04-28-09	04-28-09	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	CO	UN	2009	230,000	04-30-09	04-30-09	Clear Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	CO	UN	2010	60,000	05-01-09	05-31-09	Lapwai Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	CO	UN	2010	500,000	05-01-09	05-31-09	Clear Creek	Clearwater River M F
Nez Perce Tribe	Nez Perce Tribal Hatchery	CO	UN	2010	50,000	04-01-09	04-30-09	Orofino Creek	Clearwater River M F
Nez Perce Tribe Total					**890,250**				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2009	112,000	05-07-09	05-07-09	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2009	146,000	04-28-09	04-28-09	Little Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2010	300,000	05-01-09	05-01-09	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2010	300,000	05-01-09	05-01-09	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH0	FA	2009	770,350	05-07-09	05-10-09	Hells Canyon Dam	Snake River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2009	57,571	04-26-09	04-26-09	Meacham Creek	Umatilla River
Oregon Dept. of Fish and Wildlife Total					**1,685,921**				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	150,000	05-01-09	05-11-09	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	152,000	05-01-09	05-11-09	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	766,000	04-13-09	05-01-09	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2009	1,685,038	04-28-09	04-28-09	Icicle Creek	Wenatchee River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2009	4,773,958	05-01-09	05-01-09	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service Total					**7,526,996**				
Umatilla Tribe	Cascade Hatchery	CO	UN	2009	1,055,029	04-26-09	04-26-09	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2009	50,000	04-25-09	04-25-09	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2009	54,736	04-26-09	04-26-09	Minthorn Acclimation Pond	Umatilla River
Umatilla Tribe Total					**1,159,765**				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2009	20,000	05-02-09	05-02-09	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2009	12,500	04-30-09	04-30-09	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2009	25,000	04-30-09	04-30-09	E Fk Irrig Dist Sand Trap	Hood River
Warm Springs Tribe Total					**57,500**				

Hatchery Releases Last Two Weeks - Continued

Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2009	296,000	05-01-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SP	2009	140,000	05-01-09	05-31-09	Lake Wenatchee	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2009	462,000	04-15-09	04-30-09	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2009	520,000	04-15-09	05-07-09	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	44,000	04-15-09	04-30-09	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	60,000	04-15-09	04-30-09	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	85,000	04-15-09	04-30-09	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	100,000	04-15-09	04-30-09	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	100,000	04-15-09	04-30-09	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2009	168,000	04-01-09	04-30-09	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2009	58,000	04-15-09	04-30-09	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2009	122,000	04-15-09	04-30-09	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2009	131,000	04-15-09	04-30-09	Chewuch Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2009	434,000	04-15-09	04-30-09	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2009	24,000	04-15-09	05-01-09	White Salmon River	White Salmon River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2009	90,000	05-01-09	05-15-09	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	WI	2009	20,000	04-15-09	05-01-09	White Salmon River	White Salmon River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2009	61,000	05-01-09	05-15-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2009	116,000	04-15-09	05-15-09	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	11,000	04-15-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	30,500	04-15-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	50,000	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	50,500	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	68,000	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	117,000	04-15-09	05-15-09	Nason Creek	Wenatchee River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2009	318,000	04-13-09	05-15-09	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	04-20-09	05-31-09	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	04-20-09	05-31-09	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	05-01-09	05-31-09	Chewuch River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	130,000	04-20-09	05-31-09	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife Total					**4,136,000**				
Yakama Tribe	Cascade Hatchery	CO	UN	2009	64,590	05-01-09	05-15-09	Wenatchee River	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	77,658	05-01-09	05-15-09	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	77,734	05-01-09	05-15-09	Coulter Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	116,624	05-01-09	05-15-09	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	251,067	03-16-09	05-15-09	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	254,889	03-16-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	266,044	03-16-09	05-15-09	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	50,000	04-06-09	05-15-09	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	72,000	04-06-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	97,000	04-06-09	05-15-09	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	150,000	04-06-09	05-15-09	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	170,000	04-06-09	05-15-09	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2009	1,200,000	04-30-09	04-30-09	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	37,659	04-06-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	68,473	04-06-09	05-15-09	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	73,217	04-06-09	05-15-09	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	74,124	04-06-09	05-15-09	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	109,549	04-06-09	05-15-09	Prosser Acclim Pond	Yakima River
Yakama Tribe	Washougal Hatchery	CO	UN	2009	120,000	04-06-09	05-15-09	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2009	19,352	05-01-09	05-15-09	Wenatchee River	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	21,388	05-01-09	05-15-09	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	26,782	05-01-09	05-15-09	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	48,664	05-01-09	05-15-09	Winthrop Hatchery	Methow River
Yakama Tribe	Willard Hatchery	CO	UN	2009	352,140	05-04-09	05-04-09	Icicle Creek	Wenatchee River
Yakama Tribe	Winthrop NFH	CO	UN	2009	50,445	05-01-09	05-15-09	Twisp Acclim Pond	Methow River
Yakama Tribe Total					**3,849,399**				
Grand Total					**21,109,019**				

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 5/8/2009 to 5/21/2009

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2009	202,369	05-11-09	05-29-09	Couse Creek	Snake River
National Marine Fisheries Service Total					**202,369**				
Nez Perce Tribe	Dworshak NFH	CO	UN	2010	60,000	05-01-09	05-31-09	Lapwai Creek	Clearwater River M F
Nez Perce Tribe	Dworshak NFH	CO	UN	2010	500,000	05-01-09	05-31-09	Clear Creek	Clearwater River M F
Nez Perce Tribe Total					**560,000**				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2009	156,000	05-11-09	05-11-09	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH0	FA	2009	600,000	05-16-09	05-16-09	Umatilla River	Umatilla River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH0	FA	2009	770,350	05-07-09	05-10-09	Hells Canyon Dam	Snake River
Oregon Dept. of Fish and Wildlife Total					**1,526,350**				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	150,000	05-01-09	05-11-09	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2009	152,000	05-01-09	05-11-09	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service Total					302,000				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2009	12,500	05-14-09	05-14-09	Parkdale Acclim Pond	Hood River
Warm Springs Tribe Total					**12,500**				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2009	296,000	05-01-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SP	2009	140,000	05-01-09	05-31-09	Lake Wenatchee	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2009	200,000	05-15-09	06-01-09	Couse Creek	Snake River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2009	90,000	05-01-09	05-15-09	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2009	61,000	05-01-09	05-15-09	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2009	116,000	04-15-09	05-15-09	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	11,000	04-15-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	30,500	04-15-09	05-15-09	Chiwawa River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	50,000	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	50,500	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	68,000	04-15-09	05-15-09	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	ST	SU	2009	117,000	04-15-09	05-15-09	Nason Creek	Wenatchee River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2009	318,000	04-13-09	05-15-09	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2009	453,000	05-15-09	05-31-09	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	04-20-09	05-31-09	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	04-20-09	05-31-09	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	110,000	05-01-09	05-31-09	Chewuch River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2009	130,000	04-20-09	05-31-09	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife Total					**2,461,000**				

Hatchery Releases Next Two Weeks - Continued

Yakama Tribe	Cascade Hatchery	CO	UN	2009	64,590	05-01-09	05-15-09	Wenatchee River	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	77,658	05-01-09	05-15-09	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	77,734	05-01-09	05-15-09	Coulter Creek	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2009	116,624	05-01-09	05-15-09	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	251,067	03-16-09	05-15-09	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	254,889	03-16-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2009	266,044	03-16-09	05-15-09	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	50,000	04-06-09	05-15-09	Boone Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	72,000	04-06-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	97,000	04-06-09	05-15-09	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	150,000	04-06-09	05-15-09	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2009	170,000	04-06-09	05-15-09	Stiles Pond	Yakima River
Yakama Tribe	Klickitat Hatchery	CO	NO	2009	1,000,000	05-10-09	05-15-09	Klickitat Hatchery	Klickitat River
Yakama Tribe	Prosser Acclim. Pond	CH0	SU	2009	200,000	05-16-09	05-16-09	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	37,659	04-06-09	05-15-09	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	68,473	04-06-09	05-15-09	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	73,217	04-06-09	05-15-09	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	74,124	04-06-09	05-15-09	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2009	109,549	04-06-09	05-15-09	Prosser Acclim Pond	Yakima River
Yakama Tribe	Washougal Hatchery	CO	UN	2009	120,000	04-06-09	05-15-09	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2009	19,352	05-01-09	05-15-09	Wenatchee River	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	21,388	05-01-09	05-15-09	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	26,782	05-01-09	05-15-09	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2009	48,664	05-01-09	05-15-09	Winthrop Hatchery	Methow River
Yakama Tribe	Winthrop NFH	CO	UN	2009	50,445	05-01-09	05-15-09	Twisp Acclim Pond	Methow River
Yakama Tribe Total					**3,497,259**				
Grand Total					**8,561,478**				

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 Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
4/24	100	101	101	24	107	107	108	20	108	108	108	24	105	106	107	20	105	105	105	24
4/25	100	101	101	24	107	107	108	22	108	108	108	24	106	107	108	22	105	106	106	24
4/26	100	100	101	24	106	107	107	24	108	108	110	24	105	106	106	24	105	106	106	24
4/27	100	100	100	21	108	109	110	23	109	110	111	24	106	107	108	23	106	106	107	24
4/28	100	100	101	24	108	109	109	24	109	109	109	24	106	107	108	24	106	106	106	24
4/29	100	100	100	24	106	107	109	24	108	109	109	24	105	106	107	24	105	105	106	24
4/30	101	103	109	24	108	110	110	23	108	108	108	24	106	106	107	23	106	106	106	24
5/1	97	97	98	24	110	112	113	23	109	110	111	24	107	107	108	23	106	107	107	24
5/2	98	98	98	24	110	111	112	23	110	111	112	24	108	108	110	23	107	108	108	24
5/3	99	99	99	24	110	111	112	23	111	112	113	24	108	109	109	23	107	108	108	24
5/4	99	99	100	24	108	109	111	22	111	112	113	24	108	109	110	22	108	108	109	24
5/5	100	100	101	24	107	108	109	22	111	112	112	24	109	109	110	22	108	109	109	24
5/6	99	99	100	24	108	109	111	20	110	110	110	24	107	107	109	20	109	109	109	24
5/7	99	99	99	24	107	108	108	24	109	109	110	24	108	109	110	24	108	108	109	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
4/24	105	106	109	24	105	105	106	24	108	109	109	24	107	108	108	24	107	109	111	23
4/25	105	106	106	24	106	106	107	24	107	108	109	24	108	108	108	24	106	106	107	24
4/26	105	105	106	24	105	105	106	24	107	108	108	24	107	108	108	24	105	105	106	24
4/27	106	106	106	24	106	106	107	24	108	109	109	24	108	108	109	24	105	106	106	24
4/28	108	110	114	24	105	106	107	24	107	108	108	24	107	108	108	24	105	106	106	24
4/29	109	112	117	24	105	106	108	24	107	108	109	24	106	107	107	24	104	105	105	24
4/30	109	113	117	24	107	109	111	24	109	111	112	24	107	107	108	24	105	105	105	24
5/1	110	114	117	24	110	111	112	24	111	113	113	24	109	109	110	24	106	107	107	24
5/2	107	108	108	24	110	111	111	24	111	112	112	24	111	111	111	24	108	108	109	24
5/3	108	109	110	24	109	110	110	24	111	111	112	24	111	112	112	24	108	108	109	24
5/4	107	108	109	24	108	109	109	24	110	110	111	24	112	112	113	24	110	111	111	24
5/5	109	109	109	24	108	109	109	24	110	110	111	24	111	112	112	24	109	110	111	24
5/6	108	109	110	24	107	107	107	24	108	108	109	24	109	110	110	24	107	108	108	24
5/7	107	108	109	23	106	107	107	24	108	108	109	24	108	109	109	24	106	107	107	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
Date	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
4/24	109	111	115	24	111	113	116	23	108	109	109	24	112	114	124	24	108	109	113	24
4/25	107	107	108	24	110	110	112	24	108	108	109	24	110	110	111	24	112	114	119	24
4/26	107	108	108	24	110	110	110	24	108	111	113	24	110	111	112	24	108	109	110	24
4/27	108	108	108	24	110	110	111	24	109	110	111	24	112	112	114	24	110	111	112	24
4/28	107	108	109	24	110	110	111	24	108	109	109	24	---	---	---	0	110	111	112	24
4/29	106	106	107	24	109	109	111	23	107	107	107	24	110	110	110	24	109	109	110	24
4/30	106	107	107	24	109	110	110	24	108	110	111	24	110	110	110	24	110	110	111	24
5/1	108	109	110	24	110	112	112	24	109	110	111	24	111	111	112	24	111	111	112	24
5/2	110	110	111	24	112	113	113	24	110	111	112	24	112	112	112	24	111	111	112	24
5/3	110	111	111	24	108	113	115	24	110	110	111	24	111	111	112	24	110	111	111	24
5/4	111	112	112	24	109	114	114	24	110	112	112	24	112	113	114	24	111	112	113	24
5/5	110	111	112	24	113	114	117	24	111	111	112	24	113	113	114	24	110	111	112	24
5/6	109	109	110	24	112	113	115	24	111	112	112	24	112	113	113	24	111	112	112	24
5/7	108	108	109	24	108	111	111	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
4/24	108	111	113	24	105	106	107	24	104	107	107	24	102	103	104	24	124	144	144	24
4/25	111	114	118	24	106	107	107	24	96	97	97	24	101	101	102	24	103	104	104	24
4/26	107	107	108	24	107	107	108	24	96	96	97	24	100	101	101	24	103	104	104	24
4/27	111	112	113	24	105	105	105	24	100	102	108	24	101	102	103	24	103	103	104	24
4/28	113	113	113	24	105	105	106	24	107	107	108	24	103	103	103	24	102	102	103	24
4/29	111	111	112	24	105	105	106	24	104	106	107	24	102	103	103	24	102	102	103	24
4/30	112	112	112	24	106	107	108	24	98	99	99	24	102	102	102	24	102	102	103	24
5/1	113	113	114	24	108	110	110	24	97	97	98	24	101	102	102	24	103	103	104	24
5/2	113	113	114	24	109	109	110	24	97	98	98	24	102	102	102	24	102	102	102	24
5/3	112	113	113	24	108	109	109	24	96	97	97	24	101	101	101	24	101	102	102	24
5/4	112	113	114	24	108	108	109	24	97	98	98	24	101	102	102	24	102	103	103	24
5/5	112	113	113	24	107	107	108	24	98	98	99	24	101	102	102	24	102	102	102	24
5/6	112	113	114	24	107	109	112	24	98	99	99	24	101	101	102	24	102	103	103	24
5/7	---	---	---	0	107	108	108	24	101	102	103	24	101	102	102	24	102	102	103	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
4/24	102	103	103	24	102	102	103	24	116	116	119	24	107	107	108	24	116	117	117	24
4/25	100	101	102	24	103	103	104	24	109	110	114	24	109	109	110	24	114	114	115	24
4/26	100	101	101	24	103	103	104	24	109	109	109	24	109	109	109	24	114	114	114	24
4/27	100	101	102	24	103	103	104	24	109	109	109	24	107	107	108	24	113	113	113	24
4/28	101	102	102	24	103	104	104	24	109	109	109	24	106	107	107	24	112	112	112	24
4/29	102	103	104	24	102	102	102	24	109	109	109	24	106	106	106	24	112	113	120	24
4/30	101	102	103	24	101	101	101	24	109	109	109	24	106	106	107	24	112	113	116	24
5/1	101	103	104	24	102	103	104	24	109	109	109	24	107	108	108	24	112	113	113	24
5/2	101	101	102	24	104	104	105	24	109	109	110	24	108	109	109	24	113	113	113	24
5/3	100	101	102	24	103	103	103	24	109	109	109	24	108	109	109	24	113	113	113	24
5/4	101	102	104	24	103	103	104	24	110	111	121	24	109	109	110	24	113	114	114	24
5/5	101	101	102	24	102	102	103	24	109	109	109	24	109	109	110	24	113	113	113	24
5/6	100	101	102	24	102	102	102	24	109	109	110	24	108	109	109	24	113	114	114	24
5/7	101	101	102	24	101	101	101	24	108	109	109	24	105	106	106	24	113	113	113	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
4/24	115	116	116	24	120	120	121	24	113	114	114	24	120	120	121	24	---	---	---	0
4/25	116	117	117	24	120	120	120	24	115	115	115	24	119	119	120	24	---	---	---	0
4/26	113	114	115	24	119	119	119	24	115	115	116	24	119	119	121	24	---	---	---	0
4/27	114	114	115	24	119	119	120	24	116	116	116	24	120	122	123	24	---	---	---	0
4/28	113	113	114	24	117	119	119	24	114	115	116	24	116	117	119	24	---	---	---	0
4/29	111	111	111	24	116	118	119	24	113	113	113	24	116	116	117	24	---	---	---	0
4/30	111	111	111	24	116	117	119	24	113	113	113	24	115	116	116	24	---	---	---	0
5/1	113	114	114	24	115	115	116	24	114	115	116	24	115	115	115	24	---	---	---	0
5/2	114	114	114	24	118	119	120	24	116	116	116	24	116	116	116	24	---	---	---	0
5/3	112	113	113	24	119	119	119	24	115	115	115	24	116	116	117	24	---	---	---	0
5/4	113	113	114	24	116	117	119	24	115	116	116	24	116	117	117	24	---	---	---	0
5/5	113	113	114	24	116	116	117	24	115	116	116	24	115	116	117	24	---	---	---	0
5/6	111	112	112	24	117	118	119	24	113	113	113	24	117	118	120	24	---	---	---	0
5/7	111	111	111	24	118	118	118	24	111	111	112	24	118	120	122	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
4/24	110	111	111	24	118	119	119	24	110	110	111	24	117	117	118	24	111	112	113	24
4/25	110	110	111	24	118	118	119	24	109	110	110	24	115	116	116	24	110	111	113	24
4/26	108	109	111	24	117	118	118	24	107	108	108	24	116	116	117	24	109	110	111	24
4/27	111	112	112	24	117	118	118	24	109	110	110	24	115	116	116	24	111	111	111	24
4/28	110	110	112	24	116	117	117	24	109	110	110	24	115	116	116	24	111	111	111	24
4/29	108	108	109	24	115	116	116	24	108	109	109	24	115	115	115	24	110	111	111	24
4/30	109	110	111	24	115	116	117	24	110	110	111	24	115	115	115	24	111	112	113	24
5/1	112	112	113	24	115	116	117	24	111	112	113	24	115	117	117	24	113	113	115	24
5/2	112	112	113	24	115	116	117	24	112	112	113	24	114	115	116	24	114	115	115	24
5/3	112	112	112	24	114	114	116	24	110	111	111	24	114	115	116	24	113	113	114	24
5/4	113	113	114	24	114	115	116	24	111	112	113	24	115	115	115	24	113	114	115	24
5/5	112	112	113	24	114	115	115	24	112	112	113	24	114	114	115	24	113	114	115	24
5/6	111	111	112	24	115	116	116	24	111	111	112	24	115	115	116	24	112	112	112	24
5/7	108	109	110	24	115	115	117	24	109	109	110	24	116	116	117	24	110	111	112	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
4/24	115	116	117	24	112	113	113	24	---	---	---	0	112	113	113	24	120	121	121	24
4/25	115	116	116	24	112	112	113	24	---	---	---	0	113	113	113	24	120	121	122	24
4/26	115	116	116	24	111	112	112	24	---	---	---	0	112	113	114	24	119	120	120	24
4/27	116	117	117	24	113	114	114	24	---	---	---	0	113	113	114	24	120	120	124	24
4/28	116	117	117	24	113	114	114	24	---	---	---	0	113	114	115	24	119	120	120	24
4/29	116	116	116	24	114	114	115	24	---	---	---	0	113	114	115	24	120	120	120	24
4/30	116	117	117	24	115	115	116	24	---	---	---	0	115	116	118	24	119	120	120	24
5/1	117	117	118	24	115	116	116	24	---	---	---	0	113	114	115	24	118	119	119	24
5/2	117	117	118	24	116	116	116	24	---	---	---	0	114	114	115	24	118	118	119	24
5/3	115	116	116	24	115	115	115	24	---	---	---	0	115	116	117	24	118	118	119	24
5/4	116	117	117	24	115	115	115	24	---	---	---	0	114	115	116	24	117	117	118	24
5/5	116	116	116	24	113	113	114	24	---	---	---	0	112	113	113	24	117	118	118	24
5/6	116	116	117	24	113	113	113	24	---	---	---	0	113	114	114	24	118	119	119	24
5/7	115	116	116	24	112	112	113	24	---	---	---	0	112	113	114	24	119	119	120	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)
04/24/2009	*	---	0	---	2,115	93,372	50,481	86	234	---	14,200	29,827
04/25/2009	*	---	205	---	3,055	110,564	51,653	149	77	28,530	17,902	32,965
04/26/2009	*	---	221	279	992	111,523	67,894	94	72	---	17,243	18,490
04/27/2009	*	214	123	246	1,343	103,786	77,612	134	44	37,300	15,275	24,306
04/28/2009	*	306	97	257	464	76,284	97,443	204	54	---	19,461	26,733
04/29/2009	*	147	94	190	64	92,873	70,572	289	122	34,196	22,682	17,640
04/30/2009	*	99	92	255	51	71,022	89,455	257	811	---	24,793	19,489
05/01/2009	*	91	146	419	75	62,703	70,657	121	203	34,390	23,716	21,919
05/02/2009	*	32	112	325	57	36,195	72,046	161	144	---	16,807	19,258
05/03/2009	*	33	72	355	35	63,624	75,912	461	122	64,776	14,944	24,094
05/04/2009	*	30	85	510	78	87,489	78,166	789	119	---	11,752	14,121
05/05/2009	*	9	62	462	123	89,343	79,313	562	98	87,868	10,863	12,681
05/06/2009	*	39	---	604	724	104,134	100,257	339	115	---	18,262	19,702
05/07/2009	*	49	0	419	1,348	105,266	80,116	410	104	155,507	34,907	22,561
05/08/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**1,049**	**1,309**	**4,321**	**10,524**	**1,208,178**	**1,061,577**	**4,056**	**2,319**	**442,567**	**262,807**	**303,786**
# Days:		**11**	**13**	**12**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**95**	**101**	**360**	**752**	**86,298**	**75,827**	**290**	**166**	**63,224**	**18,772**	**21,699**
YTD		**37,452**	**43,806**	**14,726**	**22,203**	**1,589,214**	**1,260,842**	**11,062**	**2,659**	**502,958**	**305,674**	**523,573**

				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)
04/24/2009	*	---	0	---	1	2,128	0	0	7	---	83	10,432
04/25/2009	*	---	0	---	5	4,990	0	0	17	46	0	8,724
04/26/2009	*	---	0	0	2	1,701	1,113	0	15	---	0	3,373
04/27/2009	*	0	0	0	5	745	1,141	0	4	0	0	2,620
04/28/2009	*	0	0	0	15	253	1,720	0	1	---	72	3,011
04/29/2009	*	0	0	0	1	0	574	0	11	84	0	1,986
04/30/2009	*	0	0	0	4	0	1,185	0	4	---	0	1,423
05/01/2009	*	0	0	0	1	4,306	290	0	5	85	0	1,241
05/02/2009	*	0	0	0	2	1,361	286	0	3	---	0	35,227
05/03/2009	*	0	0	0	0	275	4	0	0	84	67	390,742
05/04/2009	*	0	0	0	0	849	0	0	1	---	234	129,440
05/05/2009	*	0	0	0	5	0	0	0	3	2	0	35,151
05/06/2009	*	0	---	0	1	0	0	0	1	---	42	14,977
05/07/2009	*	0	0	0	0	0	0	0	4	338	0	14,767
05/08/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**42**	**16,608**	**6,313**	**0**	**76**	**639**	**498**	**653,114**
# Days:		**11**	**13**	**12**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**3**	**1,186**	**451**	**0**	**5**	**91**	**36**	**46,651**
YTD		**0**	**6**	**13**	**258**	**24,987**	**6,370**	**0**	**248**	**914**	**549**	**1,898,780**

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)
04/24/2009	*	---	0	---	6	0	0	0	3	---	215	4,156
04/25/2009	*	---	0	---	5	0	0	0	17	878	173	5,787
04/26/2009	*	---	0	0	6	486	556	0	28	---	107	5,259
04/27/2009	*	0	0	0	4	497	0	0	16	762	382	3,111
04/28/2009	*	0	0	0	2	253	573	0	15	---	358	4,103
04/29/2009	*	0	0	0	1	260	0	0	29	507	359	2,470
04/30/2009	*	0	0	0	0	524	1,185	2	18	---	645	1,156
05/01/2009	*	0	0	0	1	807	579	0	18	255	577	2,218
05/02/2009	*	0	0	0	0	0	286	0	32	---	167	2,185
05/03/2009	*	0	0	0	3	275	286	2	24	253	200	3,143
05/04/2009	*	0	0	0	2	283	286	2	20	---	67	1,344
05/05/2009	*	0	0	0	2	0	287	2	19	424	167	1,750
05/06/2009	*	0	---	0	4	510	286	0	30	---	371	1,602
05/07/2009	*	0	0	0	8	738	0	4	20	847	836	3,514
05/08/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**44**	**4,633**	**4,324**	**12**	**289**	**3,926**	**4,624**	**41,798**
# Days:		**11**	**13**	**12**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**3**	**331**	**309**	**1**	**21**	**561**	**330**	**2,986**
YTD		**0**	**0**	**0**	**82**	**4,966**	**4,360**	**13**	**309**	**5,468**	**5,029**	**72,905**

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)
04/24/2009	*	---	0	---	230	333,054	248,726	155	37	---	5,363	1,631
04/25/2009	*	---	639	---	485	234,522	223,305	148	43	35,605	11,282	2,682
04/26/2009	*	---	504	217	202	270,426	295,500	313	49	---	14,560	2,932
04/27/2009	*	82	392	340	165	171,570	332,545	378	44	66,939	25,255	4,338
04/28/2009	*	113	239	456	113	100,346	136,418	474	66	---	32,483	3,468
04/29/2009	*	56	171	439	82	95,735	92,368	607	107	45,783	21,605	6,517
04/30/2009	*	71	237	356	118	57,394	117,289	632	84	---	24,721	9,611
05/01/2009	*	89	459	384	86	76,428	79,634	273	105	66,939	21,914	4,436
05/02/2009	*	57	309	197	142	49,258	50,888	388	97	---	20,654	7,489
05/03/2009	*	89	242	157	127	54,259	63,018	704	85	57,259	29,486	23,397
05/04/2009	*	100	417	291	149	44,452	55,832	337	102	---	15,468	26,561
05/05/2009	*	106	385	224	388	58,971	47,683	505	173	49,549	17,548	3,858
05/06/2009	*	179	---	323	560	81,163	57,004	561	166	---	24,562	18,474
05/07/2009	*	37	0	230	604	84,115	69,320	158	211	109,286	50,848	22,051
05/08/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**979**	**3,994**	**3,614**	**3,451**	**1,711,693**	**1,869,530**	**5,633**	**1,369**	**431,360**	**315,749**	**137,445**
# Days:		**11**	**13**	**12**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**89**	**307**	**301**	**247**	**122,264**	**133,538**	**402**	**98**	**61,623**	**22,554**	**9,818**
YTD		**1,482**	**11,165**	**7,007**	**5,784**	**2,549,832**	**2,227,985**	**8,231**	**1,419**	**453,830**	**327,786**	**142,672**

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)
04/24/2009	*	---	0	---	0	798	3	1	27	---	129	0
04/25/2009	*	---	0	---	0	1,576	587	1	45	231	115	0
04/26/2009	*	---	0	0	0	972	556	1	12	---	107	0
04/27/2009	*	0	0	0	0	497	0	0	24	506	239	0
04/28/2009	*	0	0	0	0	253	573	1	24	---	215	0
04/29/2009	*	0	0	0	0	0	574	0	10	677	215	28
04/30/2009	*	0	0	0	0	262	592	3	32	---	143	0
05/01/2009	*	0	0	0	0	538	0	0	30	3,738	360	88
05/02/2009	*	0	0	0	0	544	572	2	23	---	84	0
05/03/2009	*	0	0	0	0	275	0	2	25	6,842	0	350
05/04/2009	*	0	0	0	0	566	573	2	10	---	0	0
05/05/2009	*	0	0	0	0	262	861	0	36	6,358	167	0
05/06/2009	*	0	---	0	1	255	573	0	80	---	718	160
05/07/2009	*	0	0	0	0	246	1,420	4	22	8,119	1,758	0
05/08/2009		---	---	---	---	---	---	---	---	---	---	---
Total:		**0**	**0**	**0**	**1**	**7,044**	**6,884**	**17**	**400**	**26,471**	**4,250**	**626**
# Days:		**11**	**13**	**12**	**14**	**14**	**14**	**14**	**14**	**7**	**14**	**14**
Average:		**0**	**0**	**0**	**0**	**503**	**492**	**1**	**29**	**3,782**	**304**	**45**
YTD		**0**	**0**	**0**	**1**	**12,696**	**10,351**	**186**	**406**	**27,763**	**4,676**	**796**

* 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: 5/8/09 11:11 AM

04/24/09 TO 05/08/09

		Species					
Site	Data	**CH0**	**CH1**	CO	ST	SO	**Grand Total**
LGR	Sum of NumberCollected	12,600	932,299	3,600	1,327,301	5,400	2,281,200
	Sum of NumberBarged	2,733	395,914	1,807	349,822	1,807	752,083
	Sum of NumberBypassed	9,846	535,989	1,790	977,407	3,554	1,528,586
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	20	0	5	3	30
	Sum of FacilityMorts	19	376	3	67	36	501
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	21	396	3	72	39	531
LGS	Sum of NumberCollected	4,403	737,749	3,000	1,295,707	4,802	2,045,661
	Sum of NumberBarged	0	126,207	200	88,478	1,400	216,285
	Sum of NumberBypassed	4,400	576,220	2,800	1,054,994	3,000	1,641,414
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	3	0	1	0	4
	Sum of FacilityMorts	3	116	0	34	2	155
	Sum of ResearchMorts	0	3	0	0	0	3
	Sum of TotalProjectMorts	3	122	0	35	2	162
LMN	Sum of NumberCollected		2,643	7	3,693	12	6,355
	Sum of NumberBarged		0	0	0	0	0
	Sum of NumberBypassed		2,642	7	3,692	12	6,353
	Sum of Numbertrucked		0	0	0	0	0
	Sum of SampleMorts		1	0	1	0	2
	Sum of FacilityMorts		0	0	1	0	1
	Sum of ResearchMorts		0	0	0	0	0
	Sum of TotalProjectMorts		1	0	2	0	3
MCN	Sum of NumberCollected	376	260,160	2,278	253,209	15,628	531,651
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	374	260,061	2,275	253,165	15,624	531,499
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	23	0	5	1	30
	Sum of FacilityMorts	1	61	3	37	3	105
	Sum of ResearchMorts	0	15	0	2	0	17
	Sum of TotalProjectMorts	2	99	3	44	4	152
Total Sum of NumberCollected		17,379	1,932,851	8,885	2,879,910	25,842	4,864,867
Total Sum of NumberBarged		2,733	522,121	2,007	438,300	3,207	968,368
Total Sum of NumberBypassed		14,620	1,374,912	6,872	2,289,258	22,190	3,707,852
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		3	47	0	12	4	66
Total Sum of FacilityMorts		23	553	6	139	41	762
Total Sum of ResearchMorts		0	18	0	2	0	20
Total Sum of TotalProjectMorts		26	618	6	153	45	848

YTD Transportation Summary

Source: Fish Passage Center Updated: 5/8/09 11:11 AM

TO: 05/08/09

		Species					
Site	Data	**CH0**	**CH1**	CO	SO	ST	**Grand Total**
LGR	Sum of NumberCollected	19,090	1,226,383	3,850	9,810	1,984,282	3,243,415
	Sum of NumberBarged	4,022	436,416	1,899	2,696	414,412	859,445
	Sum of NumberBypassed	15,038	789,492	1,948	7,038	1,569,794	2,383,310
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	11	59	0	17	9	96
	Sum of FacilityMorts	19	416	3	59	67	564
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	30	475	3	76	76	660
LGS	Sum of NumberCollected	4,443	877,562	3,025	7,234	1,547,914	2,440,178
	Sum of NumberBarged	0	126,207	200	1,400	88,478	216,285
	Sum of NumberBypassed	4,440	716,000	2,825	5,426	1,307,181	2,035,872
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	27	0	3	5	35
	Sum of FacilityMorts	3	124	0	5	50	182
	Sum of ResearchMorts	0	4	0	0	0	4
	Sum of TotalProjectMorts	3	155	0	8	55	221
LMN	Sum of NumberCollected		7,378	8	117	5,489	12,992
	Sum of NumberBarged		0	0	0	0	0
	Sum of NumberBypassed		7,338	8	113	5,477	12,936
	Sum of NumberTrucked		0	0	0	0	0
	Sum of SampleMorts		7	0	2	1	10
	Sum of FacilityMorts		0	0	0	1	1
	Sum of ResearchMorts		0	0	0	0	0
	Sum of TotalProjectMorts		7	0	2	2	11
MCN	Sum of NumberCollected	546	295,814	3,198	16,398	266,483	582,439
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	543	295,694	3,195	16,394	266,431	582,257
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	34	0	1	6	42
	Sum of FacilityMorts	1	66	3	3	43	116
	Sum of ResearchMorts	1	20	0	0	3	24
	Sum of TotalProjectMorts	3	120	3	4	52	182
Total Sum of NumberCollected		24,079	2,407,137	10,081	33,559	3,804,168	6,279,024
Total Sum of NumberBarged		4,022	562,623	2,099	4,096	502,890	1,075,730
Total Sum of NumberBypassed		20,021	1,808,524	7,976	28,971	3,148,883	5,014,375
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		12	127	0	23	21	183
Total Sum of FacilityMorts		23	606	6	67	161	863
Total Sum of ResearchMorts		1	24	0	0	3	28
Total Sum of TotalProjectMorts		36	757	6	90	185	1,074

Cumulative Adult Passage at Mainstem Dams Through: 05/07

		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	**05/07**	**56579**	**12119**	**72385**	**2381**	**120490**	**3741**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TDA	**05/06**	**27103**	**4356**	**44838**	**1033**	**75087**	**1751**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
JDA	**05/06**	**19393**	**3535**	**29993**	**750**	**58378**	**1203**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
MCN	**05/07**	**11308**	**1684**	**17874**	**410**	**48729**	**1028**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IHR	**05/07**	**6247**	**515**	**12329**	**156**	**30944**	**539**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LMN	**05/06**	**3406**	**231**	**6137**	**45**	**26249**	**328**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LGS	**05/07**	**2464**	**93**	**4985**	**34**	**23975**	**346**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
LGR	**05/06**	**703**	**36**	**2486**	**53**	**20387**	**209**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PRD	**05/05**	**149**	**7**	**1683**	**14**	**7448**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RIS	**05/06**	**25**	**0**	**1047**	**4**	**4098**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
RRH	**05/06**	**3**	**0**	**147**	**0**	**1171**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WEL	**05/06**	**0**	**0**	**3**	**0**	**299**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
WFA	**05/02**	**3013**	**11**	**981**	**4**	-	-	**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**	**0**	**0**	**0**	**2407**	**2171**	**2452**	**761**
TDA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1033**	**1171**	**975**	**449**
JDA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2645**	**2599**	**2549**	**1549**
MCN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2266**	**2197**	**1644**	**1053**
IHR	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2995**	**3083**	**1991**	**1030**
LMN	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4469**	**3738**	**2106**	**2079**
LGS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5137**	**2344**	**2162**	**2036**
LGR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10435**	**7393**	**7642**	**3114**
PRD	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	**34**	**5**	**0**
RIS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**174**	**42**	**33**
RRH	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**326**	**331**	**136**	**154**
WEL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**22**	**15**	**10**
WFA	**0**	**0**	**0**	**0**	-	-	**0**	**0**	-	**3667**	**3014**	-	-

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: 03/27/09

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