



Fish Passage Center

Weekly Report #09 - 11

May 22, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 92% and 248% of average at individual sub-basins over May. Precipitation above The Dalles has been 141% of average over May. Over the entire water year, precipitation has generally been near average.

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

Location	Water Year 2009 May 1-18		Water Year 2009 October 1, 2008 to May 18, 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.50	116	16.15	94
Snake River Above Ice Harbor	1.50	136	13.77	107
Columbia Above The Dalles	1.62	141	17.17	101
Kootenai	1.61	125	15.73	89
Clark Fork	1.09	92	12.43	109
Flathead	1.62	115	14.51	96
Pend Oreille/ Spokane	2.11	139	22.99	96
Central Washington	0.68	153	6.41	92
Snake River Plain	1.12	130	7.93	99
Salmon/Boise/ Payette	1.79	172	14.36	93
Clearwater	2.42	138	26.20	114
SW Washington Cascades/Cowlitz	5.46	248	57.39	94
Willamette Valley	4.96	242	46.37	89

Average snowpack in the Columbia River for basins above the Snake River confluence is 108% of average, for Snake River Basins the average snowpack is 65% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 212% of average.

Table 2 displays the May Final and May Mid-Month runoff volume forecasts for multiple reservoirs. Water Supply Forecasts have generally held steady between the May Final and May Mid-Month forecasts. The current forecast at The Dalles between January and July is 92000 Kaf (86% of average).

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

Location	May Final		May Mid-Month	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	85	91100	86	92000
Grand Coulee (Jan-July)	87	55000	87	54900
Libby Res. Inflow, MT (Apr-Aug)	84	5270	84	5220
Hungry Horse Res. Inflow, MT (Jan-July)	92	2050	93	2070
Lower Granite Res. Inflow (Apr- July)	97	20900	97	21000
Brownlee Res. Inflow (Apr-July)	79	5000	79	4990
Dworshak Res. Inflow (Apr-July)	99 98*	2610 2631	93	2470

* 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 and McNary Dam have increased over the last week. At Lower Granite flows from April 3-May 21 have averaged 94.1 Kcfs and 123.2 Kcfs over the last week, flows at Priest Rapids from April 10-May 21 averaged 126.1 Kcfs and 125.0 Kcfs over the last week, and flows at McNary have averaged 242.6 Kcfs between April 10-May 21 and 267.4 Kcfs over the last week.

Grand Coulee Reservoir is at 1261.5 feet (5-21-09) and has refilled 3.2 feet over the last week. Outflows at Grand Coulee have ranged between 97.9 and 119.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2408.1 feet (5-21-09) and has refilled 2.1 feet last week. Outflows at Libby have ranged between 8.0-13.4 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3524.4 ft (5-21-09) and has refilled 4.3 feet last week. Outflows at Hungry Horse have been 6.2 Kcfs last week.

Dworshak is currently at an elevation of 1556.6 feet (5-21-09) and has refilled 13.2 feet last week. Outflows at Dworshak were reduced last week from 6.6 Kcfs to 1.6 Kcfs.

The Brownlee Reservoir was at an elevation of 2072.8 feet on May 21st, 2009, refilling 3.2 feet last week. Outflows at Brownlee Dam have been 15.9 to 23.5 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 increased significantly over the past week. Spill at Lower Granite Dam averaged an instantaneous 20 Kcfs until the morning of May 19th when higher flows resulted in spill in excess of hydraulic capacity. Spill at Little Goose Dam has not met the 30% average spill since May 18th due to the lowering of spill caps because of TDG levels in the forebay of Lower Monumental Dam. 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. Some uncontrolled spill has occurred due to the high river flows. 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. Some uncontrolled spill has also occurred at this project due to the high river flows.

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 or exceeded the Court Order over the past week. At John Day Dam the testing of 30% versus 40% spill has occurred. The Dalles Dam spill was considerably less than the 40% over the past week after spill caps were reduced due to the TDG at the Bonneville Dam forebay. At Bonneville dam there was a reduction in the spill cap on May 16th due to forebay TDG levels at Camas/Washougal (a non required monitoring site) after which spill levels dropped as low as 77 Kcfs. This was followed by a return to the Court Ordered spill level by midday on May 19th. Spill levels quickly exceeded the 100 Kcfs and are presently above 140 Kcfs.

The high river flows have resulted in total dissolved gas measurements at the Snake River federal hydroprojects that exceeded the waiver limits over this past week at various forebay and tailrace monitors.

In the Lower Columbia TDG exceeded the waiver limits at the Bonneville Dam forebay and tailrace on several days. The Camas/Washougal monitor also read higher than 115%. Although the COE manages spill at Bonneville Dam to the Camas/Washougal monitor, it is not required.

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 this past week.

Adult Fish Passage:

Adult counts at Bonneville Dam have been updated through May 21st. Daily adult spring Chinook counts at Bonneville Dam ranged from 2110 to 4166 adult salmon per day. Between March 15th and May 21st, 97220 spring Chinook have been counted at Bonneville Dam. In 2008, 113980 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2009 adult spring Chinook count at Bonneville Dam is 85.3% of the 2008 count. The Bonneville spring Chinook adult count is only about 65.5% of the 10 year average of 148232. The 2009 Bonneville Dam spring Chinook jack count of 58410 is about 3.98 times greater than the 2008 count of 14665 and 6.04 times greater than the 10 year average of 9663. At Willamette Falls Dam 10060 adult spring Chinook have been counted so far this year. The 2009 adult spring Chinook count at Willamette Falls Dam is 2.22 times greater than the 2008 count of 4531. At The Dalles Dam the 2009 adult spring Chinook count is 70142 and at McNary Dam 44513 adult spring Chinook have been counted. The 2009 spring Chinook count at McNary Dam is 85.5% of the 2008 count and only about 61.5% of the 10 year average. The 2009 McNary Dam spring Chinook jack count of 26199 is 3.73 times greater than the 2008 count of 7025 and 5.5 times greater than the 10 year average count of 4721. The 2009 adult spring Chinook count at Lower Granite Dam of 21729 is 1.09 times greater than the 2008 count and 59.6% of the 10 year average. The 2009 Lower Granite spring Chinook jack count of 10572 is 5.08 times greater than the 2008 count and 5.46 times greater than the 10 year average.

The Bonneville Dam 2009 steelhead count of 3526 is about 1.21 times greater than the 2008 count of 2902. The 2009 steelhead count is about 1.08 times greater than of the 10-year average of 3261. 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 10762 is 1.39 times greater than the 2008 count of 7733 and 1.39 times greater than the 10 year average of 7742. The 2009 wild steelhead count as of May 21st was 3364. At Rock Island Dam, as of May 20th, 89 adult steelhead have been counted and at Rocky Reach Dam, 383 adult steelhead have been counted so far this season. At Willamette Falls Dam, the 2009 count for steelhead was 6275, as of May 19th. This year's steelhead count is only about 74.6% of the 2008 count of 8405 at Willamette Falls Dam for the same date range.

Stansell et al. reported that as of May 22nd, that as many as 26 California sea lions and 26 Steller sea lions have been counted at Bonneville Dam on a single day. The biologists observed 53 different California sea lions, 26 different Steller sea lions and 2 harbor seals this season at Bonneville Dam. The highest daily abundance of sea lions at Bonneville Dam occurred on April 21st when 47 sea lions were observed at the dam. These numbers may change slightly as the biologists review the remainder of their photos and videos. There has been an increase in the number of California sea lions over the past few weeks. Sea lion trapping began on March 10th and will continue through the end of May. Steller sea lions have taken at least 298 salmonids this year, making up about 10% of the salmonids observed caught this year. This is much higher than the 3.8% observed last year. To date, 10 sea lions have been euthanized, 4 have been relocated and 8 have been tagged and released. All of the 10 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 through the end of May.

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/update20090522.pdf>.

Smolt Monitoring:

Collection of yearling Chinook at the SMP traps this week, similar to last week, appears to be decreasing at the Salmon River and Imnaha traps consistent with historic patterns; while at the Grande Ronde and Lewiston traps yearling Chinook collection remains relatively high for this time of year. Steelhead collection at the Salmon River Trap was relatively low over the past week compared to historic patterns, while steelhead collection at the Grande Ronde and Lewiston traps appears to be declining at typical historic patterns. The Imnaha Trap had a relatively high collection of steelhead the past week of sampling, which is typical for this time of year, and coincided with a spike in flows in the Imnaha River. Sockeye passage numbers have decreased at the Salmon Trap and showed a similar pattern of passage at the Lewiston Trap over the past ten days of sampling. Sockeye releases from the Sawtooth Lakes area were collected at these sites based on PIT-tag recaptures.

At the Lower Granite Dam sockeye collection increased over the past week, reflecting the passage of the Salmon River basin sockeye passage. PIT-tag detections at Lower Granite confirm that the Salmon River sockeye were passing in large numbers over the past few days, with over 5,000 detections in the past four days. Steelhead and yearling Chinook collection increased rapidly over the past few days concurrent with the increased flows in the Snake River. Yearling Chinook passage numbers increased above those of steelhead this week, with the average daily index at 107,000 compared to 70,000 per day for steelhead. This is unusual in that typically yearling Chinook predominate in the Snake River until around May 1 when steelhead predominate.

At Rock Island dam the daily passage indices for coho and steelhead have risen above 1,000 per day over the past few days while the daily index for yearling Chinook increased to nearly 400 per day compared to 300 per day last week. Sockeye indices were also relatively higher this week with the average index for those species at 120 per day compared to 64 per day last week.

The predominant salmonids in the sample at McNary Dam the past week were yearling Chinook, with the passage index for yearling Chinook averaging 220,000 per day compared to 160,000 last week. Steelhead indices averaged 30,000. Coho and Sockeye indices were up also with the index for coho averaging over 5,000 per day and the sockeye index averaging

over 14,000 per day. At Bonneville Dam yearling Chinook passage predominated over the past week with index averaging 51,000 per day. Coho and sockeye indices increased over the past week while Steelhead indices have begun to decrease at the project.

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. No releases were scheduled to end this week. The scheduled release of approximately 402,000 subyearling fall Chinook from Lyons Ferry Hatchery into Couse Creek continued this week and is expected to run through early June; approximately 50% of these subyearling fall Chinook are unmarked. There were no other scheduled releases of juvenile salmonids to this zone this week.

Approximately 1.4 million subyearling fall Chinook are expected to be released during the last week of May. These are planned as a 900,000 fish release (56% unmarked) into the Snake River at Pittsburg landing and Captain John's Acclimation Pond, and a 500,000 fish release (33% unmarked) into the Clearwater River at Big Canyon Creek Acclimation Pond. Two releases of subyearling fall Chinook are scheduled in the first half of June. About 800,000 will be released into the Clearwater River and 200,000 into the Snake River; 63% of those released into the Clearwater will be unmarked. Finally, a 500,000 fish release of subyearling spring Chinook (40% unmarked) are scheduled for release into the Snake River around May 30th. There are no other scheduled releases 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. Approximately 200,000 subyearling summer Chinook were scheduled for release from Stiles Pond into the Yakima River on May 16th; of these, 15% were unmarked. The release of 450,000 subyearling summer Chinook from Wells Hatchery into the Mid Columbia continued this week and should be completed at the end of the month. Several releases that began in late April or early May will continue until about May 31st. These releases are: 140,000 unmarked yearling spring Chinook into the Wenatchee River, 330,000 summer steelhead into the Methow River, and 130,000 summer steelhead into the Okanogan River. Thirty percent of the Methow River summer steelhead release is marked with VIE (LE Yellow) tags. There were no other

scheduled releases of juvenile salmonids to this zone this week or 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. About 600,000 subyearling fall Chinook were slotted to be released into the Umatilla River on the 16th of May from the Umatilla hatchery. There were no other scheduled releases of juvenile salmonids to this zone this week or over the next two weeks.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/08/2009	121.6	0.0	122.9	0.0	128.8	8.2	121.0	0.0	124.2	10.5	102.1	18.6	97.0	22.0
05/09/2009	108.0	0.0	107.9	0.0	119.4	8.2	120.9	0.0	128.4	11.5	130.8	20.5	123.0	24.5
05/10/2009	97.2	0.0	96.9	0.0	103.2	7.0	98.1	0.0	103.7	10.1	117.8	20.0	118.9	24.0
05/11/2009	115.9	0.0	117.0	0.0	122.6	8.3	118.4	0.0	121.1	11.0	122.9	19.4	123.9	19.3
05/12/2009	113.2	0.0	109.5	0.0	126.3	8.6	124.1	0.0	129.2	9.8	141.5	18.9	131.4	21.6
05/13/2009	124.3	0.0	124.5	0.0	131.2	8.7	125.9	0.0	132.4	23.6	145.8	18.8	142.4	22.8
05/14/2009	117.9	0.0	121.9	0.0	127.3	9.0	119.4	0.0	123.1	23.5	128.1	18.2	129.1	22.0
05/15/2009	119.3	0.0	124.8	0.0	137.8	8.9	133.4	0.0	138.4	25.5	135.5	19.2	127.5	22.1
05/16/2009	100.9	0.0	99.0	0.0	110.8	7.6	108.4	0.0	112.6	11.0	129.0	18.6	125.3	22.7
05/17/2009	114.1	0.0	111.9	0.0	116.6	7.7	112.1	0.0	118.9	11.4	113.7	19.1	111.3	20.6
05/18/2009	105.8	0.0	108.8	0.0	120.7	8.3	118.2	0.0	126.1	13.5	131.1	19.6	128.6	18.6
05/19/2009	97.9	0.0	96.8	0.0	121.1	8.7	120.6	0.0	130.8	14.0	132.2	20.4	121.1	22.6
05/20/2009	105.8	0.0	112.4	0.0	116.3	8.0	109.6	0.0	118.6	12.3	131.1	20.5	127.9	23.5
05/21/2009	101.5	0.0	101.2	0.0	117.9	8.8	119.5	0.0	127.9	12.3	137.6	19.5	133.3	22.7

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/08/2009	1.6	0.0	35.2	25.9	107.3	20.5	103.4	31.2	108.8	33.9	109.5	46.8
05/09/2009	1.7	0.0	34.1	24.1	98.4	20.6	91.9	27.4	93.9	33.5	95.2	28.5
05/10/2009	1.7	0.0	30.1	13.0	87.2	20.5	85.8	25.7	88.9	35.1	90.5	27.2
05/11/2009	1.7	0.0	29.1	15.9	78.5	20.4	76.0	22.8	77.2	34.4	76.8	22.7
05/12/2009	1.7	0.0	28.6	13.7	82.5	20.6	77.7	23.1	81.0	26.9	81.8	47.7
05/13/2009	2.2	0.0	28.4	18.9	84.5	20.3	83.5	25.0	84.6	24.9	85.6	56.7
05/14/2009	7.7	0.0	27.0	23.2	90.1	20.5	85.5	25.5	87.1	31.8	89.1	37.8
05/15/2009	6.6	0.1	26.1	23.4	95.1	20.5	91.7	27.4	93.5	32.8	93.4	27.9
05/16/2009	5.7	0.0	24.1	23.7	96.2	20.6	93.8	28.1	97.1	27.5	99.2	51.8
05/17/2009	4.6	0.0	22.9	21.9	99.3	20.6	95.4	28.7	98.0	26.3	100.8	64.3
05/18/2009	4.6	0.0	23.2	23.1	108.6	20.6	104.2	31.1	106.7	25.6	108.1	66.1
05/19/2009	1.7	0.0	23.9	19.2	139.8	31.4	132.6	35.8	139.2	28.9	140.1	70.7
05/20/2009	1.6	0.0	27.2	22.6	162.2	59.1	150.0	40.5	156.0	39.8	160.5	81.4
05/21/2009	1.7	0.0	---	---	161.1	51.7	152.1	42.1	162.4	46.0	167.1	84.2

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
05/08/2009	214.4	85.9	221.6	88.6	217.9	87.3	251.9	99.5	46.6	94.3
05/09/2009	240.1	96.2	242.6	78.5	237.5	95.0	244.3	97.6	45.0	90.3
05/10/2009	215.1	86.0	210.2	63.2	203.2	81.5	224.5	94.7	39.4	79.0
05/11/2009	226.8	91.0	232.0	87.6	224.6	80.9	234.8	91.6	54.2	77.6
05/12/2009	252.0	100.8	244.9	98.2	234.2	86.8	252.0	94.6	64.5	81.5
05/13/2009	248.4	99.5	264.0	85.0	260.5	102.5	273.6	100.5	63.2	98.5
05/14/2009	223.9	89.7	222.7	66.6	217.0	86.8	247.4	99.9	45.9	90.2
05/15/2009	239.7	96.0	234.7	89.7	227.9	91.0	252.5	99.7	51.9	89.5
05/16/2009	250.8	100.4	245.4	97.6	237.6	92.8	253.4	96.3	57.0	88.7
05/17/2009	232.3	92.9	238.3	76.1	230.3	85.8	258.7	92.2	68.9	86.2
05/18/2009	258.9	103.7	259.8	78.0	253.1	81.3	255.9	84.9	61.5	98.1
05/19/2009	279.4	112.0	268.2	80.4	262.8	83.2	282.9	91.7	65.2	114.2
05/20/2009	297.3	128.0	304.6	91.6	289.2	94.0	307.9	119.4	65.6	110.9
05/21/2009	313.3	139.8	307.5	102.4	302.3	116.8	320.2	131.3	69.0	107.8

Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
Lower Granite Dam											
	05/18/09	Chinook + Steelhead	99	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	05/18/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	05/13/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/19/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	05/14/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/18/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/12/09	Chinook + Steelhead	108	1	1	0.92%	0.00%	1	0	0	0
	05/16/09	Chinook + Steelhead	108	1	1	0.92%	0.00%	1	0	0	0
	05/19/09	Chinook + Steelhead	108	3	2	1.85%	0.00%	2	0	0	0
Rock Island Dam											
	05/12/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/14/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/19/09	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	05/21/09	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:		5/8/2009		to		05/21/09			
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	Irrigation 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 Last 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				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:		5/22/2009		to		6/4/2009			
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	Lyons Ferry Hatchery	CH0	FA	2009	400,000	05-26-09	05-27-09	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2009	500,000	05-26-09	05-26-09	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2009	500,000	05-27-09	05-27-09	Big Canyon (Clearwater River)	Clearwater River M F
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	Nez Perce Tribal Hatchery	CH0	SP	2009	500,000	05-30-09	05-30-09	Clearwater River	Snake River
Nez Perce Tribe Total					3,260,000				
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	Lyons Ferry Hatchery	CH0	FA	2009	200,000	06-01-09	06-15-09	Lyons Ferry Hatchery	Snake 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					1,453,000				
Grand Total					4,915,369				

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
5/8	98	98	99	24	107	107	108	24	108	108	108	24	108	109	110	24	107	107	108	24
5/9	98	98	98	24	109	110	111	23	108	108	109	24	108	108	109	23	108	108	109	24
5/10	98	98	98	24	111	112	112	24	109	109	109	24	108	109	110	24	108	108	109	24
5/11	98	98	99	24	111	111	115	21	110	111	111	24	110	110	111	21	108	108	108	15
5/12	99	99	99	24	112	113	118	24	110	110	111	24	109	110	112	24	108	109	109	20
5/13	99	99	99	24	114	118	119	23	109	109	110	24	109	109	110	23	108	108	108	16
5/14	100	100	100	24	112	114	118	24	109	110	110	24	109	110	112	24	108	108	108	24
5/15	98	99	99	24	114	118	119	24	108	108	108	24	107	108	109	24	107	107	108	24
5/16	98	99	99	24	114	117	119	18	108	108	109	24	108	109	109	18	107	108	108	24
5/17	99	99	99	24	114	119	120	23	110	111	111	24	109	110	110	23	108	108	109	24
5/18	99	99	100	24	115	119	120	21	110	110	111	24	109	110	111	21	109	110	110	24
5/19	99	99	100	24	116	119	119	23	110	111	111	24	108	110	112	23	109	109	109	24
5/20	98	98	99	23	117	118	118	18	108	108	108	23	105	105	106	18	108	108	108	22
5/21	98	98	98	24	114	118	118	23	108	109	110	24	105	106	106	23	107	108	108	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
5/8	106	107	108	24	107	108	108	24	109	109	110	24	107	108	108	24	106	107	107	24
5/9	107	108	109	24	107	108	108	24	109	110	110	24	108	109	110	24	106	106	107	24
5/10	107	108	109	24	108	109	110	24	110	111	112	24	110	110	110	24	107	107	108	24
5/11	108	108	108	15	109	109	110	24	111	111	111	24	111	111	111	24	108	109	109	24
5/12	107	108	108	20	108	108	108	24	110	110	110	24	110	111	111	24	108	108	108	24
5/13	106	107	107	16	106	107	107	23	108	109	109	23	108	109	109	24	106	107	107	24
5/14	107	107	108	24	107	107	108	24	109	109	110	24	108	109	109	24	106	107	107	24
5/15	105	106	106	24	106	107	107	24	108	108	109	24	107	108	108	24	106	106	107	24
5/16	105	107	108	24	107	108	108	24	109	110	110	24	108	109	109	24	106	107	107	24
5/17	107	107	108	24	108	109	109	24	110	110	111	24	109	109	110	24	107	107	108	24
5/18	108	109	109	24	109	110	110	24	111	112	112	24	111	111	112	24	108	109	109	24
5/19	107	108	109	23	108	108	109	24	110	110	111	24	110	110	111	24	108	108	108	24
5/20	107	107	108	22	107	107	107	22	108	109	109	22	108	108	109	22	106	107	107	22
5/21	107	108	108	24	107	108	108	24	109	110	110	24	108	108	109	24	106	106	107	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
5/8	107	108	108	24	110	111	115	24	109	109	111	24	112	112	112	24	110	111	112	24
5/9	108	108	109	24	110	111	111	24	112	114	115	24	112	112	113	24	112	112	112	24
5/10	109	110	110	24	112	113	114	24	113	114	114	24	113	113	113	24	113	113	114	24
5/11	110	111	111	24	112	113	114	24	112	113	114	24	113	114	115	24	113	113	113	24
5/12	109	110	110	24	112	113	115	24	110	110	111	24	112	112	113	24	111	111	112	24
5/13	108	108	109	24	112	113	114	24	108	108	109	17	110	111	112	24	109	109	110	24
5/14	108	108	108	24	113	113	114	24	---	---	---	0	111	112	112	24	109	109	110	24
5/15	107	108	108	24	112	112	114	24	110	112	113	24	111	112	113	24	108	109	111	24
5/16	108	109	109	24	111	112	114	24	111	112	112	24	112	112	113	24	111	112	113	24
5/17	109	110	110	24	111	112	113	24	114	115	116	24	113	114	115	24	113	114	117	24
5/18	110	111	111	24	112	113	114	24	114	115	116	24	114	115	116	24	113	114	116	24
5/19	109	110	111	24	112	113	114	24	111	111	112	24	113	113	114	24	111	112	113	24
5/20	108	108	108	22	110	111	112	22	---	---	---	0	---	---	---	0	---	---	---	0
5/21	107	108	108	24	110	110	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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clwrtr-Peck</u>			<u>Anatone</u>							
	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/8	111	112	112	24	109	110	111	24	104	107	110	24	102	103	104	24	102	103	104	24
5/9	113	114	114	24	110	112	112	24	106	107	108	24	103	104	104	24	102	103	104	24
5/10	114	115	115	24	111	112	113	24	107	108	109	24	103	104	104	24	102	103	104	24
5/11	114	114	114	24	111	111	112	24	107	108	109	24	103	103	104	24	102	103	104	24
5/12	113	113	114	24	108	109	110	24	105	106	106	24	102	102	103	24	102	102	104	24
5/13	112	112	113	24	107	109	109	24	105	108	113	24	102	104	104	24	102	104	104	24
5/14	112	113	113	24	108	108	108	24	100	101	103	24	101	102	103	24	102	103	103	24
5/15	111	112	113	24	108	109	109	24	100	101	104	24	102	103	103	24	102	103	104	24
5/16	113	114	114	24	109	110	111	24	101	101	103	24	102	103	104	24	103	104	104	24
5/17	114	115	115	24	110	111	112	24	104	104	105	24	103	104	105	24	103	104	105	24
5/18	115	115	116	24	112	113	114	24	104	105	106	24	103	105	105	24	104	105	105	24
5/19	113	114	114	24	109	109	112	24	104	104	105	24	103	104	104	24	104	104	105	24
5/20	---	---	---	0	108	109	110	23	103	104	105	23	104	105	106	23	106	107	108	23
5/21	---	---	---	0	109	110	110	24	104	105	106	24	104	105	105	24	107	108	109	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/8	102	103	104	24	101	101	102	24	108	109	109	24	104	104	105	24	112	113	113	24
5/9	102	104	105	24	102	102	102	24	109	109	110	24	104	105	106	24	112	112	113	24
5/10	102	104	105	24	103	104	104	24	109	110	110	24	106	106	107	24	113	113	113	24
5/11	102	103	104	24	104	105	105	24	110	110	110	24	108	108	108	24	112	113	113	24
5/12	101	101	101	24	104	104	105	24	109	110	110	24	107	107	108	24	112	113	113	24
5/13	102	104	106	24	103	103	104	24	109	109	110	24	106	107	108	24	113	113	113	24
5/14	102	103	104	24	102	103	103	24	109	109	109	24	107	107	107	24	112	112	113	24
5/15	102	103	105	24	102	103	103	24	109	109	110	24	106	107	107	24	113	113	113	24
5/16	102	104	105	24	103	103	103	24	109	109	110	24	107	107	108	24	113	113	113	24
5/17	103	104	105	24	104	104	105	24	109	110	110	24	107	108	109	24	113	113	114	24
5/18	103	104	105	24	105	106	106	24	110	110	111	24	110	111	111	24	114	115	115	24
5/19	102	103	103	24	105	105	106	24	114	116	117	24	109	109	110	24	114	115	115	24
5/20	103	104	104	23	102	103	104	23	122	123	125	23	106	106	107	23	115	116	118	23
5/21	103	104	105	24	105	106	107	24	120	121	122	24	110	113	116	24	116	117	118	24

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>	<u>24 h</u>	<u>12 h</u>		<u>#</u>
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/8	110	110	111	24	116	117	118	24	110	111	112	24	117	118	122	24	---	---	---	0
5/9	111	112	112	24	115	116	116	24	113	113	114	24	116	116	116	24	---	---	---	0
5/10	113	113	114	24	115	116	117	24	114	115	115	24	116	116	117	24	---	---	---	0
5/11	113	114	114	24	115	115	116	24	115	115	116	24	115	115	116	24	---	---	---	0
5/12	112	113	113	24	117	118	119	24	113	114	115	24	115	116	117	24	---	---	---	0
5/13	110	110	110	24	117	118	118	24	111	111	112	24	116	116	117	24	---	---	---	0
5/14	110	110	110	24	116	116	118	24	112	112	112	24	115	116	117	24	---	---	---	0
5/15	110	110	110	24	115	115	115	24	111	111	111	24	115	115	116	24	---	---	---	0
5/16	111	112	113	24	118	119	119	24	112	113	113	24	116	117	118	24	---	---	---	0
5/17	114	114	115	24	118	119	121	24	114	114	116	24	117	118	119	24	---	---	---	0
5/18	115	115	116	24	119	120	121	24	117	117	118	24	118	119	120	24	---	---	---	0
5/19	114	114	115	24	118	118	119	24	115	116	117	24	119	120	121	24	---	---	---	0
5/20	112	112	112	13	119	119	121	13	111	112	113	23	120	121	121	23	---	---	---	0
5/21	112	113	113	24	120	120	121	24	113	114	114	24	121	121	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

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#		
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	AVG
5/8	107	108	110	24	114	115	116	24	108	108	108	24	115	116	117	24	111	112	113	24
5/9	110	112	115	24	115	115	116	24	109	109	109	24	115	115	115	24	113	113	114	24
5/10	113	114	115	24	115	116	116	24	110	110	111	24	115	115	115	24	112	112	113	24
5/11	113	113	113	24	115	116	116	24	109	110	110	24	116	116	117	24	111	112	112	24
5/12	110	112	113	24	115	116	116	24	108	108	109	24	116	117	117	24	110	111	111	24
5/13	107	108	108	24	115	116	117	24	108	109	110	24	115	115	116	24	111	112	113	24
5/14	108	108	108	24	115	116	117	24	108	109	109	24	114	115	115	24	111	112	113	24
5/15	108	109	110	24	115	116	117	24	106	107	107	24	115	117	117	24	110	111	112	24
5/16	110	111	112	24	116	116	117	24	107	107	108	24	116	116	117	24	113	113	114	24
5/17	112	113	113	24	115	117	117	24	108	109	110	24	114	115	115	24	114	114	114	24
5/18	114	115	116	24	116	117	118	24	110	111	111	24	115	116	117	24	112	113	113	24
5/19	113	114	116	24	116	117	117	24	110	110	111	24	114	115	116	24	110	110	112	24
5/20	110	110	111	23	117	118	118	23	109	110	110	23	114	115	116	23	111	111	112	23
5/21	112	113	114	24	118	119	119	24	110	111	111	24	115	116	116	24	113	113	115	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>CamasWashougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#		
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	AVG
5/8	116	117	117	24	113	113	114	24	---	---	---	0	114	115	116	24	119	120	120	24
5/9	117	117	118	24	114	115	116	24	---	---	---	0	115	116	117	24	118	119	119	24
5/10	116	116	117	24	116	117	117	24	---	---	---	0	116	117	118	24	118	118	119	24
5/11	115	116	116	24	115	116	117	24	---	---	---	0	116	116	116	24	117	118	118	24
5/12	115	115	116	24	111	112	113	24	---	---	---	0	112	112	113	24	117	118	118	24
5/13	116	117	117	24	111	112	114	24	---	---	---	0	112	112	113	24	118	119	119	24
5/14	116	117	118	24	113	114	114	24	---	---	---	0	112	113	114	24	118	119	119	24
5/15	115	116	116	24	113	114	114	24	---	---	---	0	114	116	117	24	118	119	119	24
5/16	117	118	118	24	114	115	116	24	---	---	---	0	115	116	117	24	118	119	119	24
5/17	117	117	118	24	117	118	118	24	---	---	---	0	116	118	119	24	118	119	119	24
5/18	116	116	117	24	116	117	117	24	---	---	---	0	117	118	119	24	117	117	119	24
5/19	114	114	115	24	112	113	114	24	---	---	---	0	113	113	115	24	117	119	120	24
5/20	114	115	116	23	110	111	111	24	---	---	---	0	112	114	114	24	120	120	121	24
5/21	117	118	120	24	113	114	115	24	---	---	---	0	114	115	116	24	122	123	123	24

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 5/22/2009 10:42

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.

See Sampling Comments: <http://www.fpc.org/currentDaily/smpcomments.htm>

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmpsubmitdata.asp>

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/08/2009 *	25	---	375	639	91,852	90,708	9,083	175	---	30,454	35,994
05/09/2009	18	39	246	683	90,551	57,017	26,566	318	125,605	22,799	30,095
05/10/2009 *	13	35	238	466	55,642	40,633	22,419	343	---	24,589	38,598
05/11/2009	8	32	300	129	32,948	33,077	13,304	187	150,252	17,285	33,936
05/12/2009 *	7	37	468	146	77,089	50,156	9,370	315	---	15,876	42,513
05/13/2009	33	99	496	122	108,219	47,178	16,886	358	213,150	21,180	47,858
05/14/2009 *	23	30	305	232	156,651	30,463	24,212	340	---	21,022	40,146
05/15/2009	32	40	337	450	160,216	75,589	13,869	399	220,448	28,151	38,278
05/16/2009 *	19	59	344	499	108,574	49,689	11,817	388	---	16,643	33,599
05/17/2009	15	59	315	552	55,429	39,703	19,995	560	193,263	21,133	46,560
05/18/2009 *	22	30	549	580	56,170	58,329	13,739	508	---	24,186	40,507
05/19/2009 *	---	---	488	1,704	88,481	44,410	17,782	279	243,844	31,062	63,089
05/20/2009 *	---	---	323	1,308	161,611	51,782	49,187	394	---	31,506	73,362
05/21/2009 *	---	---	145	---	118,680	92,241	34,352	261	223,013	37,638	63,158
05/22/2009	---	---	90	---	---	---	---	---	---	38,090	---
Total:	215	460	5,019	7,510	1,362,113	760,975	282,581	4,825	1,369,575	381,614	627,693
# Days:	11	10	15	13	14	14	14	14	7	15	14
Average:	20	46	335	578	97,294	54,355	20,184	345	195,654	25,441	44,835
YTD	37,667	44,313	19,745	29,713	2,951,327	2,021,817	293,643	7,484	1,872,533	687,288	1,151,266

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/08/2009 *	0	---	0	1	0	286	0	1	---	0	11,340
05/09/2009	0	0	0	0	248	286	0	3	0	0	5,110
05/10/2009 *	0	0	0	0	0	0	49	4	---	0	2,719
05/11/2009	0	0	1	2	0	0	0	2	1,186	0	2,516
05/12/2009 *	0	0	0	4	271	1	0	1	---	112	2,655
05/13/2009	0	1	0	6	267	0	0	11	0	0	4,779
05/14/2009 *	0	0	0	6	0	0	0	1	---	0	6,822
05/15/2009	0	0	0	10	255	0	0	1	170	0	3,420
05/16/2009 *	0	1	0	7	0	0	0	2	---	0	5,147
05/17/2009	0	0	0	24	511	0	138	4	169	0	3,713
05/18/2009 *	0	0	0	25	253	286	0	0	---	0	2,077
05/19/2009 *	---	---	1	142	1,214	143	0	8	169	0	2,310
05/20/2009 *	---	---	0	60	4,947	2,316	136	17	---	72	2,943
05/21/2009 *	---	---	0	---	6,045	7,533	137	4	409	72	2,513
05/22/2009	---	---	0	---	---	---	---	---	---	0	---
Total:	0	2	2	287	14,011	10,851	460	59	2,103	256	58,064
# Days:	11	10	15	13	14	14	14	14	7	15	14
Average:	0	0	0	22	1,001	775	33	4	300	17	4,147
YTD	0	8	15	545	38,998	17,221	460	307	3,017	805	1,956,844

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/08/2009 *	0	---	0	8	495	572	1	33	---	335	6,142
05/09/2009	0	0	0	7	248	0	231	53	1,019	830	7,057
05/10/2009 *	0	0	0	3	256	286	0	60	---	1,095	7,714
05/11/2009	0	0	0	0	1,063	431	175	54	2,394	1,252	4,228
05/12/2009 *	0	0	0	1	1,086	719	163	182	---	2,841	6,429
05/13/2009	0	0	0	1	2,132	286	215	180	3,377	3,715	8,688
05/14/2009 *	0	0	0	24	1,050	286	76	289	---	3,949	8,528
05/15/2009	0	0	0	18	1,531	1,715	77	540	3,398	2,319	7,629
05/16/2009 *	0	0	0	31	3,058	1,002	657	722	---	9,431	10,580
05/17/2009	0	0	0	66	3,576	717	414	1,156	4,580	8,213	8,593
05/18/2009 *	0	0	0	33	3,795	286	343	813	---	7,943	10,871
05/19/2009 *	---	---	0	52	5,100	1,000	491	795	8,446	7,543	17,948
05/20/2009 *	---	---	0	6	10,169	3,134	1,495	1,732	---	5,728	26,361
05/21/2009 *	---	---	0	---	13,045	6,300	1,505	1,264	17,573	5,685	27,029
05/22/2009	---	---	0	---	---	---	---	---	---	7,541	---
Total:	0	0	0	250	46,604	16,734	5,843	7,873	40,787	68,420	157,797
# Days:	11	10	15	13	14	14	14	14	7	15	14
Average:	0	0	0	19	3,329	1,195	417	562	5,827	4,561	11,271
YTD	0	0	0	332	51,570	21,094	5,856	8,182	46,255	73,449	230,702

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/08/2009 *	37	---	328	432	157,213	48,640	8,513	381	---	40,493	30,515
05/09/2009	43	333	166	269	147,115	59,592	52,443	350	61,991	60,928	45,265
05/10/2009 *	33	401	183	124	134,873	59,236	47,547	293	---	44,877	28,581
05/11/2009	27	474	119	51	115,584	33,376	30,459	301	38,695	42,563	48,187
05/12/2009 *	22	930	132	147	164,848	54,394	27,051	455	---	33,480	41,142
05/13/2009	36	1,072	212	208	92,492	52,037	23,183	562	27,220	31,355	31,746
05/14/2009 *	47	700	120	387	53,266	31,173	19,491	682	---	23,546	9,184
05/15/2009	35	959	173	119	70,668	34,865	25,976	653	25,640	23,513	28,544
05/16/2009 *	31	1,749	129	92	57,600	39,513	26,042	706	---	18,901	15,298
05/17/2009	11	1,541	104	42	33,973	36,837	23,994	556	31,638	16,797	10,650
05/18/2009 *	29	2,123	178	69	55,917	31,849	38,195	628	---	14,956	13,364
05/19/2009 *	---	---	143	337	68,520	29,560	20,235	639	38,539	18,078	24,336
05/20/2009 *	---	---	182	236	111,039	27,249	34,512	820	---	18,116	13,975
05/21/2009 *	---	---	56	---	111,680	65,884	40,648	1,242	37,748	19,358	13,854
05/22/2009	---	---	49	---	---	---	---	---	---	23,162	---
Total:	351	10,282	2,274	2,513	1,374,788	604,205	418,289	8,268	261,471	430,123	354,641
# Days:	11	10	15	13	14	14	14	14	7	15	14
Average:	32	1,028	152	193	98,199	43,158	29,878	591	37,353	28,675	25,332
YTD	1,833	22,035	9,281	8,297	3,924,620	2,832,190	426,520	9,687	715,301	757,909	497,313

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/08/2009 *	0	---	0	0	248	1,431	1	86	---	2,008	567
05/09/2009	0	0	0	0	248	286	232	75	6,771	3,984	569
05/10/2009 *	0	0	0	2	256	1	528	95	---	3,260	721
05/11/2009	2	0	0	1	266	145	0	57	3,063	2,167	662
05/12/2009 *	52	0	0	0	271	719	0	47	---	1,783	2,058
05/13/2009	49	0	0	8	0	0	143	30	4,902	3,655	1,474
05/14/2009 *	17	0	0	81	0	143	76	60	---	1,912	394
05/15/2009	34	0	0	50	510	286	153	77	9,327	1,359	789
05/16/2009 *	10	0	0	14	1,529	0	0	89	---	2,040	1,430
05/17/2009	2	0	0	8	1,533	573	0	174	15,228	3,231	696
05/18/2009 *	4	0	0	4	1,771	286	69	154	---	2,075	1,453
05/19/2009 *	---	---	0	7	1,943	860	491	117	19,429	3,661	1,834
05/20/2009 *	---	---	0	1	4,947	4,360	1,766	208	---	4,010	3,164
05/21/2009 *	---	---	0	---	5,727	3,698	3,695	52	14,320	4,318	2,581
05/22/2009	---	---	0	---	---	---	---	---	---	5,540	---
Total:	170	0	0	176	19,249	12,788	7,154	1,321	73,040	45,003	18,392
# Days:	11	10	15	13	14	14	14	14	7	15	14
Average:	15	0	0	14	1,375	913	511	94	10,434	3,000	1,314
YTD	170	0	0	177	31,945	23,139	7,340	1,727	100,803	49,679	19,188

* 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:

5/22/09 10:44 AM

		05/08/09 TO 05/22/09					
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	9,800	1,036,481	34,000	1,048,118	14,000	2,142,399
	Sum of NumberBarged	9,751	976,601	33,988	1,037,817	13,918	2,072,075
	Sum of NumberBypassed	0	57,462	0	10,139	30	67,631
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	45	1	16	1	64
	Sum of FacilityMorts	48	1,691	11	137	51	1,938
	Sum of ResearchMorts	0	812	0	9	0	821
	Sum of TotalProjectMorts	49	2,548	12	162	52	2,823
LGS	Sum of NumberCollected	7,901	536,385	12,000	425,072	9,204	990,562
	Sum of NumberBarged	7,898	535,484	11,999	424,319	9,199	988,899
	Sum of NumberBypassed	2	722	0	689	0	1,413
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	9	0	5	0	14
	Sum of FacilityMorts	1	170	1	59	5	236
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	179	1	64	5	250
LMN	Sum of NumberCollected	330	195,823	4,200	283,502	5,172	489,027
	Sum of NumberBarged	330	194,377	4,197	280,269	5,167	484,340
	Sum of NumberBypassed	0	1,380	1	3,103	1	4,485
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	4	0	2	0	6
	Sum of FacilityMorts	0	108	2	124	2	236
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	112	2	126	2	242
MCN	Sum of NumberCollected	1,229	802,690	23,569	153,372	42,739	1,023,599
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,228	801,702	23,540	153,286	42,710	1,022,466
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	64	0	4	0	68
	Sum of FacilityMorts	1	924	29	82	29	1,065
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	988	29	86	29	1,133
Total Sum of NumberCollected		19,260	2,571,379	73,769	1,910,064	71,115	4,645,587
Total Sum of NumberBarged		17,979	1,706,462	50,184	1,742,405	28,284	3,545,314
Total Sum of NumberBypassed		1,230	861,266	23,541	167,217	42,741	1,095,995
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		1	122	1	27	1	152
Total Sum of FacilityMorts		50	2,893	43	402	87	3,475
Total Sum of ResearchMorts		0	812	0	9	0	821
Total Sum of TotalProjectMorts		51	3,827	44	438	88	4,448

YTD Transportation Summary

Source: Fish Passage Center

Updated: 5/22/09 10:44 AM

TO: 05/22/09

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	28,890	2,262,864	37,850	23,810	3,032,400	5,385,814
	Sum of NumberBarged	13,773	1,413,017	35,887	16,614	1,452,229	2,931,520
	Sum of NumberBypassed	15,038	846,954	1,948	7,068	1,579,933	2,450,941
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	12	104	1	18	25	160
	Sum of FacilityMorts	67	2,107	14	110	204	2,502
	Sum of ResearchMorts	0	812	0	0	9	821
	Sum of TotalProjectMorts	79	3,023	15	128	238	3,483
LGS	Sum of NumberCollected	12,344	1,413,947	15,025	16,438	1,972,986	3,430,740
	Sum of NumberBarged	7,898	661,691	12,199	10,599	512,797	1,205,184
	Sum of NumberBypassed	4,442	751,922	2,825	5,826	1,460,070	2,225,085
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	36	0	3	10	49
	Sum of FacilityMorts	4	294	1	10	109	418
	Sum of ResearchMorts	0	4	0	0	0	4
	Sum of TotalProjectMorts	4	334	1	13	119	471
LMN	Sum of NumberCollected	330	203,201	4,208	5,289	288,991	502,019
	Sum of NumberBarged	330	194,377	4,197	5,167	280,269	484,340
	Sum of NumberBypassed	0	8,718	9	114	8,580	17,421
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	11	0	2	3	16
	Sum of FacilityMorts	0	108	2	2	125	237
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	119	2	4	128	253
MCN	Sum of NumberCollected	1,775	1,098,504	26,767	59,137	419,855	1,606,038
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,771	1,097,396	26,735	59,104	419,717	1,604,723
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	98	0	1	10	110
	Sum of FacilityMorts	2	990	32	32	125	1,181
	Sum of ResearchMorts	1	20	0	0	3	24
	Sum of TotalProjectMorts	4	1,108	32	33	138	1,315
Total Sum of NumberCollected		43,339	4,978,516	83,850	104,674	5,714,232	10,924,611
Total Sum of NumberBarged		22,001	2,269,085	52,283	32,380	2,245,295	4,621,044
Total Sum of NumberBypassed		21,251	2,704,990	31,517	72,112	3,468,300	6,298,170
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		13	249	1	24	48	335
Total Sum of FacilityMorts		73	3,499	49	154	563	4,338
Total Sum of ResearchMorts		1	836	0	0	12	849
Total Sum of TotalProjectMorts		87	4,584	50	178	623	5,522

Cumulative Adult Passage at Mainstem Dams Through: 05/21

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	05/14	97220	58410	113980	14665	148232	9663	0	0	0	0	0	0	0	0	0	0	0	0
TDA	05/14	70142	43012	84180	12783	101215	7067	0	0	0	0	0	0	0	0	0	0	0	0
JDA	05/14	55614	37097	69292	11444	82798	5713	0	0	0	0	0	0	0	0	0	0	0	0
MCN	05/14	44513	26199	52058	7025	72340	4721	0	0	0	0	0	0	0	0	0	0	0	0
IHR	05/14	33048	16019	36840	3656	46181	2685	0	0	0	0	0	0	0	0	0	0	0	0
LMN	05/14	36313	8011	32056	3180	42209	2304	0	0	0	0	0	0	0	0	0	0	0	0
LGS	05/14	24834	9644	25056	2390	37945	1992	0	0	0	0	0	0	0	0	0	0	0	0
LGR	05/14	21729	10572	19856	2080	36463	1934	0	0	0	0	0	0	0	0	0	0	0	0
PRD	05/12	5550	982	6358	136	14239	174	0	0	0	0	0	0	0	0	0	0	0	0
RIS	05/13	4553	1274	4983	57	10054	257	0	0	0	0	0	0	0	0	0	0	0	0
RRH	05/13	1651	105	1284	11	3536	58	0	0	0	0	0	0	0	0	0	0	0	0
WEL	05/13	208	54	284	4	1621	16	0	0	0	0	0	0	0	0	0	0	0	0
WFA	05/12	10060	344	4531	33	-	-	0	0	0	0	-	-	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2009		2008		10-Yr Avg.		2009	2008	10-Yr Avg.	2009	2008	10-Yr Avg.	Wild 2009
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	1	0	3526	2902	3261	926
TDA	0	0	0	0	0	0	0	0	0	1157	1332	1133	478
JDA	0	0	0	0	0	0	0	1	0	2884	3156	2833	1710
MCN	0	0	0	0	0	0	1	0	0	2348	2348	1760	1094
IHR	0	0	0	0	0	0	0	0	0	3067	3170	2025	1068
LMN	0	0	0	0	0	0	0	0	0	4697	4024	2160	2232
LGS	0	0	0	0	0	0	0	0	0	5352	2600	2230	2176
LGR	0	0	0	0	0	0	0	0	0	10762	7733	7742	3364
PRD	0	0	0	0	0	0	0	0	0	48	85	9	0
RIS	0	0	0	0	0	0	1	1	0	89	219	52	42
RRH	0	0	0	0	0	0	1	0	0	383	413	159	178
WEL	0	0	0	0	0	0	0	0	0	53	108	34	34
WFA	0	0	0	0	-	-	0	0	-	6275	8405	-	-

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