



# Fish Passage Center Weekly Report #06 - 8

April 28, 2006

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## Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 78% and 263% of average at individual sub-basins over the first twenty-four days of April. Precipitation above The Dalles over the first twenty-four days of April has been 161% of average. To date in Water Year 2006, precipitation has been above average at all locations listed in Table 1.

**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 2006 Apr 1-24		Water Year 2006 October 1, 2005 to April 24	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	2.18	165	17.73	114
Snake River Above Ice Harbor	2.32	198	15.69	137
Columbia Above The Dalles	2.11	161	18.2	117
Kootenai	1.97	141	18.8	118
Clark Fork	2.61	263	13.43	135
Flathead	2.33	184	17.12	127
Pend Oreille/Spokane	2.49	138	25.28	115
Central Washington	1.08	211	8.73	136
Snake River Plain	1.80	216	9.77	141
Salmon/Boise/Payette	2.56	200	20.74	148
Clearwater	3.28	154	23.5	113
SW Washington Cascades/Cowlitz	3.33	78	60.13	104
Willamette Valley	3.23	83	55.28	112

Snowpack within the entire Columbia Basin is above average. Average snowpack in the Columbia Basin above the Snake River confluence is 109% of average, for the Snake River Basin the average snowpack is 134% of average, and for lower Columbia Basin between McNary and Bonneville Dam average snowpack is 131% of average.

Table 2 displays the March Final, April Final, and May Early runoff volume forecasts for multiple reservoirs. The May Early forecast at The Dalles between January and July is 112000 Kaf (104% of average). Water supply forecasts at all locations in Table 2 have increased between the April Final and May Early forecasts.

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

Location	March Final		April Final		May Early	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	100	107000	100	107000	104	112000
Grand Coulee (Jan-July)	98	61900	96	60600	102	64100
Libby Res. Inflow, MT (Jan-July)	98	6200	96	6030	102	6450
Hungry Horse Res. Inflow, MT (Jan-July)	106	2360	99	2210	103	2280
Lower Granite Res. Inflow (Apr-July)	109	23400	118	25500	130	28000
Brownlee Res. Inflow (Apr-July)	110	6940	133	8380	147	9280
Dworshak Res. Inflow (Apr-July)	99	2620	96	2540	100	2640

Grand Coulee Reservoir is at 1233.1 feet (4-27-06) and has drafted 5.3 feet over the last week. The end of April Flood Control Elevation at Grand Coulee is 1229.0 feet.

The Libby Reservoir is currently at elevation 2411.1 feet (4-27-06) and filled 2.6 feet last week. Outflows have been 4 Kcfs over the last week. The end of April Flood Control Elevation at Libby is 2417.0 feet.

Hungry Horse is currently at an elevation of 3516.2 feet (4-27-06) and drafted 2.6 feet last week. Outflows at Hungry Horse have been approximately 11 cfs over the last week. The end of April Flood Control Elevation at Hungry Horse is 3521.3 feet.

Dworshak is currently at an elevation of 1535.3 feet (4-27-06) and drafted 1.3 feet last week; outflows at Dworshak have ranged between 13.9 and 15 Kcfs. The end of April Flood Control Elevation at Dworshak is 1535.4 feet.

The Brownlee Reservoir was at an elevation of 2024.2 feet on April 27th, 2006 (refilling 2.9 feet last week). Outflows at Brownlee have been as high as 71.1 Kcfs over the last week. The end of April Flood Control Elevation at Brownlee is 2026.6 feet.

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite) and 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, 260 Kcfs at McNary, and 135 Kcfs at Priest Rapids. Flows at Lower Granite have averaged 125.6 Kcfs over the season and 125 Kcfs last week; flows at McNary have averaged 321.2 Kcfs over the season and 318 Kcfs last week; and flows at Priest Rapids have averaged 172.8 Kcfs over the season and 179.8 Kcfs last week

**Spill:** Some involuntary spill is occurring in the system due to continued high flows and at some projects spill is exceeding the voluntary levels set for fish passage. Spill in excess of turbine capacity at Dworshak Dam is occurring as the project attempts to reach its end of April flood control elevation. Spill operations for fish passage at the Lower Snake River projects began on April 3, 2006 in accordance with the December 29, 2005 District Court Order and Opinion. Spill at Lower Granite, Little Goose, Lower Monumental and Ice Harbor dams averaged 32%, 23%, 18% and 41% of average daily flow over the past week, respectively. Spill at Lower Granite is exceeding the objective of the Court Order of 20 Kcfs for 24 hours. Spill at Little Goose Dam is less than the Court's Order of 30% of instantaneous flow for 24 hours, and is being limited because total dissolved gas in the Lower Monumental forebay was exceeding the waiver criteria. Spill at Lower Monumental Dam is also less than the 40 Kcfs for 24 hours specified in the order and was being restricted for TDG exceedences in Ice Harbor forebay. Ice Harbor Dam spill has been meeting, or exceeding, the Court Order.

Spill for fish passage began on April 10 at Lower Columbia River projects. Spill for fish passage McNary, John Day, The Dalles and Bonneville dams was 46%, 39%, 33% and 30% of average daily flow, respectively. McNary Dam has been exceeding the requirements of the Court's Order. John Day Dam is being operated with a limited hydraulic capacity. Spill at The Dalles Dam is significantly less than called for in the Court's Order and is being limited to decrease TDG in the Bonneville Dam forebay. Spill at Bonneville Dam has met, or exceeded the Court Order over the past week.

Total dissolved gas levels have exceeded the TDG waiver limits at some locations over the past week. Biological monitoring has not shown that criteria levels have been exceeded. However, a few fish have been showing minor (Rank 1, or less than 5% of an unpaired fin affected) signs of GBT.

**Smolt Monitoring:** Relatively large numbers of migrant yearling Chinook and steelhead continue to be collected at Smolt Monitoring Traps in the Snake River Basin tributaries, although catch at all but the Lewiston Trap, have declined as high early season flows have receded. Passage indices at Lower Snake River dams have continued high over the past week while indices at for spring migrants at Rock Island and Lower Columbia SMP dams have increased rapidly over the past week.

At the Salmon River Trap daily collection of yearling Chinook averaged around 1,300 per day the past week which is just slightly lower than the previous week, while steelhead capture increased to nearly 200 per day this week. Hatchery origin fish predominated in the catch at the Salmon River trap this past week. At the Imnaha Trap yearling Chinook collection declined from 300 per day average last week to 100 per day this week, while steelhead capture decreased more slowly from 660 per day last week to 450 per day this week, again hatchery origin fish predominate in the collection at this trap. At the Grande Ronde Trap yearling Chinook numbers increased this past week while steelhead capture continued to decline over the past 10 days. Unlike the other traps, the majority of the Chinook captured this past week at the Grande Ronde Trap appear to be wild origin fish, while steelhead are predominantly hatchery fish. Sampling at the Lewiston Trap has been uninterrupted over the past ten days despite flows near 100 Kcfs. As of today, flows were still 95 Kcfs as measured at the Anatone gage, which is more than double the historic average.

At Lower Granite Dam, yearling Chinook indices averaged roughly 52,000 per day over the past week compared to 30,000 per day the previous week. Steelhead indices jumped from 48,000 per day average last week to nearly 114,000 per day this week. Clipped hatchery origin fish make up over 80% of the steelhead passing the project in the past few days. Sockeye indices at Lower Granite Dam reflect the passage of what are thought to be small kokanee flushed from Dworshak Reservoir and carried downstream to Lower Granite Dam by the higher than average flows for this time of year. The listed sockeye from

the upper Salmon River are 100% adipose clipped, unlike those passing through the lower Snake River now which are unclipped.

At Little Goose Dam, collection of fish for transportation began April 24, so that full 24 hour sampling will be conducted at the site for the remainder of the season. Indices for yearling Chinook reached 126,000 on April 26. Indices at Lower Monumental should be used with caution as those data represent condition samples taken over a small portion of the sample days. Lower Monumental will begin transport on April 29, so that fish collection for barging will begin the 28th.

Sockeye indices have begun to increase rapidly at Rock Island Dam and McNary Dam, as well as at other Lower Columbia SMP sites. Yearling Chinook and steelhead indices are increasing rapidly at Lower Columbia dams. At McNary the daily average index for yearling Chinook averaged 79,000 per day this week compared to 15,500 last week, while steelhead averaged 39,000 this week compared to 3,000 per day last week. At John Day and Bonneville dams yearling Chinook predominate in the samples this week.

**Hatchery Releases: Snake River-** Releases of yearling spring Chinook in the Snake River Basin are basically complete for 2006 migration year. Summer steelhead releases continue in the Salmon River Basin, from Hagerman NFH, while releases from Magic Valley are scheduled to be completed by today. In the Imnaha and Grande Ronde River basins a few volitional and direct releases of summer steelhead will be completed during the next few weeks. Steelhead releases in the Clearwater River basin are also mostly complete. Releases of summer steelhead from Lyons Ferry into the Touchet, Tucannon, Walla Walla rivers, and directly into the Snake River are ongoing, and scheduled to be completed by the end of the month. The release of approximately 800,000 subyearling Chinook below Hells Canyon Dam are scheduled for next two weeks from Oxbow and Umatilla Hatcheries.

**Mid-Columbia -** In the Metthow River volitional releases of Yearling Chinook, steelhead

and coho are ongoing, with most scheduled to end by April 30. Releases of upper Mid-Columbia spring Chinook are in-river with steelhead releases either ongoing or completed (Wenatchee R) during the past week. The large yearling summer Chinook releases from Dryden, Similkameen, and Carlton ponds as well as Wells H should be in-river.

**Lower Columbia** - In the Lower Columbia River, releases of yearling Chinook and steelhead are ongoing from various acclimation facilities in the Umatilla River, with the Chinook releases scheduled to end by the end of April, while steelhead releases will continue into May. Spring Creek NFH is scheduled to release an additional 3.3 million subyearling fall Chinook on May 8. In the Hood River releases of steelhead and yearling Chinook are ongoing.

**Adult Fish Passage** - Adult counts at Bonneville Dam have been increasing over the last week, ranging between 48 and 680 adult spring Chinook per day. Adult spring Chinook counts this year are still far behind 2005 and the ten-year average. Between March 15th and April 27th, 2,239 spring Chinook adults had passed Bonneville Dam; this compares to 21,889 spring Chinook adults over the same period last year and 86,994 over the same period on a ten-year average. Early last week the Sea Lion Exclusion Devices (SLED's) were removed from several entrances at Bonneville Dam over a two day period in an effort to determine if the SLED's were deterring adult fish as well as sea lions from entering the fish ladders at Bonneville Dam. Adult spring Chinook numbers did increase early in the week, however fish were entering the ladder at entrances both with and without the SLED's in approximately equal numbers. It was decided the SLED's were not having a great impact on the movement of adult fish and they were reinstalled after the two day period. Daily adult steelhead passage numbers at Bonneville Dam have ranged between 16 and 37 over the last week.

At upriver sites, adult steelhead continue to move through the hydro system to reach their tributaries and spawning sites. The majority of

these fish have over-wintered in the pools and will complete their trip to the spawning grounds in March through early May. Counts at Lower Granite have ranged between 47 and 104 adult steelhead last week. The total adult steelhead passing Lower Granite Dam from January 1 has been 7,320 adult steelhead; this compares to 4,586 steelhead over the same period last year and 6,028 steelhead over a ten-year average.

**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
04/14/06	166.3	0.0	169.0	0.0	172.9	36.3	168.2	10.4	168.3	0.0	182.3	32.2	175.2	4.4
04/15/06	166.9	0.0	163.7	0.0	167.5	34.9	166.3	8.4	165.6	0.0	180.5	32.4	181.8	7.7
04/16/06	157.1	0.0	167.0	0.0	176.7	67.2	174.0	24.9	168.6	0.0	191.3	62.1	173.0	0.0
04/17/06	158.7	0.0	160.8	0.0	168.7	43.0	164.5	12.8	165.8	34.9	181.7	60.2	180.0	31.3
04/18/06	153.7	0.0	163.3	0.0	168.3	41.8	166.8	13.1	167.6	36.1	184.9	66.2	175.7	55.6
04/19/06	156.5	0.0	150.8	0.0	155.0	20.3	156.4	2.3	160.2	35.7	185.0	59.3	198.0	121.4
04/20/06	168.5	0.0	173.8	0.0	174.7	35.5	167.4	14.8	170.2	35.1	176.0	55.5	174.7	107.1
04/21/06	166.5	0.0	175.2	0.0	185.4	43.7	177.9	14.7	178.6	34.0	186.9	86.2	172.0	103.4
04/22/06	158.5	0.0	163.1	0.0	170.9	32.6	169.4	6.6	173.3	32.0	188.8	70.2	191.2	111.6
04/23/06	156.9	0.0	156.0	0.0	164.2	25.8	155.4	6.9	160.7	29.1	179.4	53.3	186.7	107.5
04/24/06	159.0	0.0	163.4	0.0	170.3	28.8	164.9	10.8	172.7	35.7	175.5	60.0	174.6	100.1
04/25/06	156.4	0.0	164.5	0.0	176.5	32.5	171.2	10.0	174.5	36.5	188.9	52.8	183.2	107.3
04/26/06	135.4	0.0	139.5	0.0	155.3	10.3	155.9	0.5	163.3	34.7	171.7	24.3	178.7	103.1
04/27/06	144.5	0.0	143.9	0.0	151.7	10.0	147.8	0.0	152.5	35.0	164.7	12.7	172.4	98.8

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/14/06	14.8	4.4	62.9	74.3	132.6	46.5	130.7	30.8	132.4	26.6	134.9	62.5
04/15/06	14.6	4.2	64.9	77.7	143.7	57.6	140.2	31.5	140.6	27.7	144.7	73.7
04/16/06	14.9	4.5	70.0	77.9	151.5	65.6	151.9	41.4	155.4	41.1	155.9	82.1
04/17/06	14.9	4.5	72.4	80.0	151.7	66.1	149.2	40.4	153.5	39.3	156.5	81.8
04/18/06	14.9	4.5	73.2	81.1	146.2	60.5	145.1	35.7	146.3	33.3	148.4	67.0
04/19/06	14.9	4.5	71.2	81.2	138.1	53.3	136.5	28.7	139.8	29.8	141.9	61.7
04/20/06	14.9	4.5	67.7	71.5	134.3	48.9	136.5	27.5	138.3	24.8	141.2	61.6
04/21/06	15.0	4.6	66.0	62.3	117.5	31.8	113.4	27.0	116.4	24.9	118.2	51.7
04/22/06	14.9	4.5	66.4	56.9	114.8	29.3	114.6	27.6	118.0	25.0	121.2	52.0
04/23/06	14.6	4.2	67.8	68.4	119.3	33.7	114.6	27.5	117.0	22.0	120.5	51.9
04/24/06	14.2	3.8	70.7	72.1	131.5	45.8	128.5	27.6	131.8	19.3	132.2	52.9
04/25/06	14.0	3.6	71.1	72.1	134.1	49.3	132.2	27.6	134.5	21.3	136.9	53.9
04/26/06	13.9	3.5	68.5	72.4	132.9	49.1	130.3	27.5	130.6	23.4	133.6	52.3
04/27/06	14.1	3.7	---	---	125.0	39.2	124.3	27.6	125.2	21.5	128.2	51.9

**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		
04/14/06	307.7	141.7	300.8	130.3	293.6	110.3	323.1	114.8	85.0	111.8
04/15/06	333.4	157.7	330.9	151.1	325.6	105.1	332.7	123.6	84.9	112.6
04/16/06	343.9	168.5	361.4	187.5	355.7	115.1	358.5	149.4	84.7	112.9
04/17/06	339.4	165.1	342.5	150.7	345.8	105.8	359.6	156.1	82.9	109.1
04/18/06	354.9	185.5	364.4	139.0	360.2	120.9	369.6	150.8	83.4	123.9
04/19/06	337.7	173.7	335.6	128.1	329.9	98.5	362.2	122.6	83.1	145.1
04/20/06	341.7	179.4	352.0	143.0	350.2	110.0	366.8	129.4	81.9	144.5
04/21/06	305.1	130.6	314.0	97.5	317.8	101.8	334.4	97.8	81.6	143.5
04/22/06	286.7	112.3	295.3	88.8	281.7	101.0	320.1	83.6	81.4	143.7
04/23/06	318.7	145.3	315.7	101.2	308.8	109.8	323.0	83.4	82.2	145.9
04/24/06	335.1	167.9	335.1	172.8	324.1	104.2	325.2	93.4	84.7	135.6
04/25/06	315.7	151.6	301.0	140.3	301.8	97.1	329.8	104.5	83.1	130.8
04/26/06	338.5	164.3	319.2	130.1	309.3	98.6	320.9	103.9	79.3	126.1
04/27/06	326.0	150.3	341.3	133.1	334.2	102.6	343.7	120.1	83.8	128.2

## 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
<b>Lower Granite Dam</b>											
	04/18/06	Chinook + Steelhead	97	0	0	0.00%	0.00%	0	0	0	0
	04/25/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Little Goose Dam</b>											
	04/18/06	Chinook + Steelhead	99	5	5	5.05%	0.00%	5	0	0	0
	04/25/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	04/24/06	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
<b>McNary Dam</b>											
	04/24/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	04/18/06	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	04/21/06	Chinook + Steelhead	22	0	0	0.00%	0.00%	0	0	0	0
	04/25/06	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	04/20/06	Chinook + Steelhead	100	6	6	6.00%	0.00%	6	0	0	0
	04/24/06	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	04/27/06	Chinook + Steelhead	100	2	2	2.00%	0.00%	1	1	0	0

## HATCHERY RELEASE LAST TWO WEEKS

### Hatchery Release Summary

From: **4/14/2006** to **04/27/06**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	20,000	04-12-06	04-21-06	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	51,000	04-14-06	04-24-06	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	57,000	04-12-06	04-21-06	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	63,000	04-12-06	04-21-06	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	64,000	04-17-06	04-21-06	S Fk Clearwater River	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	84,000	04-12-06	04-21-06	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	99,700	04-14-06	04-24-06	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2006	226,000	04-17-06	04-21-06	S Fk Clearwater River	Clearwater River M F
Idaho Dept. of Fish and Game	Dworshak NFH	ST	SU	2006	1,200,000	04-17-06	04-21-06	Clearwater River	Snake River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	10,000	04-17-06	04-18-06	Hayden Creek Hatchery	Lemhi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	10,000	04-17-06	04-18-06	Hayden Creek Hatchery	Lemhi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	20,000	04-17-06	04-18-06	Lemhi River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	30,000	04-19-06	04-19-06	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	30,000	04-27-06	04-28-06	Valley Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	32,000	04-26-06	04-27-06	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	40,000	04-17-06	04-18-06	Hayden Creek Hatchery	Lemhi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	40,000	04-17-06	04-18-06	Lemhi River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	54,000	04-21-06	04-21-06	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	63,000	04-26-06	04-27-06	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	80,000	04-17-06	04-17-06	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	122,000	04-19-06	04-20-06	McNabb/Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	200,000	04-24-06	04-26-06	Squaw Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	228,000	04-21-06	04-25-06	East Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2006	170,000	03-31-06	04-24-06	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2006	830,000	04-05-06	04-21-06	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2006	2,535,000	03-13-06	04-21-06	Rapid River	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2006	1,554,000	04-03-06	04-21-06	Sawtooth Hatchery	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>7,912,700</b>				
Nez Perce Tribe	Clearwater Hatchery	CO	UN	2006	30,000	04-15-06	04-15-06	Orofino Creek	Clearwater River M F
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2006	22,500	04-25-06	04-25-06	Meadow Creek - CLES	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2006	22,500	04-25-06	04-25-06	Mill Cr Bridge	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2006	44,000	04-14-06	04-24-06	Red River	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2006	46,000	04-14-06	04-24-06	Red River	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2006	56,000	04-26-06	04-26-06	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Irrigon Hatchery Complex	ST	SU	2006	162,000	04-11-06	05-02-06	L Sheep Acclim Pond	Imnaha River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2006	135,800	03-28-06	04-17-06	Lostine Accim Pond	Wallowa River
<b>Nez Perce Tribe Total</b>					<b>518,800</b>				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2006	850,000	04-14-06	05-05-06	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2006	1,006,000	04-17-06	04-17-06	Icicle Creek	Wenatchee River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2006	250,000	04-20-06	04-20-06	Little White Salmon River	Little White Salmon River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2006	4,227,017	04-17-06	04-17-06	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2006	568,250	03-30-06	04-26-06	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2006	485,000	04-17-06	04-21-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	42,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	75,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	194,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2006	102,000	04-14-06	04-30-06	Winthrop Hatchery	Methow River
<b>U.S. Fish and Wildlife Service Total</b>					<b>7,799,267</b>				

## HATCHERY RELEASE LAST TWO WEEKS (con't)

Agency	From: Hatchery	4/14/2006 Species	Race	to MigYr	04/27/06 NumRel	RelStart	RelEnd	RelSite	RelRiver
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006	12,000	04-13-06	04-18-06	W Fk Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006	17,049	04-19-06	04-19-06	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2006	500	04-27-06	04-27-06	Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2006	11,000	04-06-06	04-28-06	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2006	17,500	03-27-06	04-27-06	E Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	160	04-22-06	04-22-06	Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	15,000	04-11-06	04-17-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	15,000	04-11-06	04-17-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	19,950	04-18-06	04-18-06	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	23,000	04-25-06	05-08-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	23,000	04-25-06	05-08-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	33,000	03-21-06	05-04-06	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SU	2006	19,950	04-18-06	04-18-06	Jones Creek Acclim	Hood River
<b>Warm Springs Tribe Total</b>					<b>207,109</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2006	401,000	04-15-06	05-01-06	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	SP	2006	65,000	03-15-06	04-18-06	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	50,000	04-15-06	04-30-06	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	60,000	04-15-06	04-30-06	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	85,000	04-15-06	04-30-06	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	100,000	04-15-06	04-30-06	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	100,000	04-15-06	04-30-06	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	160,000	04-15-06	04-30-06	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	65,000	04-15-06	05-01-06	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	99,500	04-15-06	05-01-06	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	206,000	04-15-06	05-01-06	Chewuch Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	SP	2006	480,000	04-10-06	04-30-06	Ringold Springs	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2006	280,000	04-10-06	04-30-06	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	WI	2006	4,500	04-17-06	04-17-06	Salmon Creek (WA)	Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2006	199,800	04-03-06	04-23-06	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2006	65,000	04-03-06	04-30-06	Tucannon River	Tucannon River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>2,420,800</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	231,551	03-15-06	05-14-06	Jack Creek Acclim P	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	273,636	03-15-06	05-14-06	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	280,667	03-15-06	05-14-06	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	34,112	04-26-06	05-15-06	Nason Creek	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	108,064	04-26-06	05-15-06	Maher Creek Acclim. P	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	108,574	04-26-06	05-15-06	Coulter Creek	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	115,088	04-15-06	04-15-06	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	610,951	04-15-06	04-15-06	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2006	125,000	04-15-06	04-15-06	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2006	125,000	04-15-06	04-15-06	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2006	1,700,000	04-15-06	04-15-06	Prosser Acclim Pond	Yakima River
Yakama Tribe	Wells Hatchery	CO	UN	2006	149,804	04-19-06	04-30-06	Wells Hatchery	Mid-Columbia River
Yakama Tribe	Winthrop NFH	CO	UN	2006	74,800	04-19-06	04-30-06	Winthrop Hatchery	Methow River
Yakama Tribe	Winthrop NFH	CO	UN	2006	245,241	03-19-06	04-30-06	Winthrop Hatchery	Methow River
Yakama Tribe	Yakama Hatchery	CH0	FA	2006	2,000	04-15-06	04-15-06	Marion Drain	Yakima River
<b>Yakama Tribe Total</b>					<b>4,184,488</b>				
<b>Grand Total</b>					<b>23,469,743</b>				



# HATCHERY RELEASE NEXT TWO WEEKS

## Hatchery Release Summary

From: 4/28/2006 to 5/11/2006

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	30,000	04-27-06	04-28-06	Valley Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2006	31,000	04-28-06	04-28-06	East Fk Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Oxbow-Idaho	CH0	FA	2006	190,000	05-02-06	05-02-06	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Oxbow-Idaho	CH0	FA	2006	200,000	05-02-06	05-02-06	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2006	40,000	05-02-06	05-02-06	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2006	40,000	05-02-06	05-02-06	Salmon River (ID)	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>531,000</b>				
Nez Perce Tribe	Dworshak NFH	CO	UN	2006	186,500	05-01-06	05-02-06	Clear Creek	Clearwater River M F
Nez Perce Tribe	Irrigon Hatchery Complex	ST	SU	2006	162,000	04-11-06	05-02-06	L Sheep Acclim Pond	Imnaha River
<b>Nez Perce Tribe Total</b>					<b>348,500</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2006	100,000	05-02-06	05-12-06	Big Canyon Acclim.Pd	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2006	174,000	04-29-06	05-11-06	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	CH0	FA	2006	400,000	05-08-06	05-10-06	Hells Canyon Dam	Snake River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>674,000</b>				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2006	100,000	05-08-06	05-12-06	East Fk Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2006	240,000	05-08-06	05-10-06	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2006	850,000	04-14-06	05-05-06	Salmon River (ID)	Salmon River (ID)
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2006	3,300,000	05-08-06	05-08-06	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	42,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	75,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	CO	UN	2006	194,000	04-20-06	04-30-06	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2006	102,000	04-14-06	04-30-06	Winthrop Hatchery	Methow River
<b>U.S. Fish and Wildlife Service Total</b>					<b>4,903,000</b>				
Umatilla Tribe	Bonneville Hatchery	CH1	FA	2006	244,295	04-15-06	04-30-06	Thornhollow Acclim P	Umatilla River
Umatilla Tribe	Little White Salmon NFH	CH1	SP	2006	182,284	04-15-06	04-30-06	Imeques Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2006	45,000	04-30-06	05-15-06	Bonifer Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2006	45,000	04-30-06	05-15-06	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2006	45,000	04-30-06	05-15-06	Thornhollow Acclim Pond	Umatilla River
<b>Umatilla Tribe Total</b>					<b>561,579</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006	2,000	05-10-06	05-11-06	Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2006	20,000	04-28-06	05-10-06	W Fk Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2006	875	04-28-06	04-28-06	Hood River	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2006	11,000	04-06-06	04-28-06	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	1,900	05-08-06	05-09-06	Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	1,900	05-09-06	05-10-06	Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	23,000	04-25-06	05-08-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	23,000	04-25-06	05-08-06	W Fk Hood River	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2006	33,000	03-21-06	05-04-06	Parkdale Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>116,675</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2006	401,000	04-15-06	05-01-06	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	50,000	04-15-06	04-30-06	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	60,000	04-15-06	04-30-06	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	85,000	04-15-06	04-30-06	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	100,000	04-15-06	04-30-06	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	100,000	04-15-06	04-30-06	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2006	160,000	04-15-06	04-30-06	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	65,000	04-15-06	05-01-06	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	99,500	04-15-06	05-01-06	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2006	206,000	04-15-06	05-01-06	Thornhollow Acclim P	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	SP	2006	480,000	04-10-06	04-30-06	Ringold Springs	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2006	280,000	04-10-06	04-30-06	Ringold Springs	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2006	65,000	04-03-06	04-30-06	Tucannon River	Tucannon River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>2,151,500</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	231,551	03-15-06	05-14-06	Jack Creek Acclim P	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	273,636	03-15-06	05-14-06	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2006	280,667	03-15-06	05-14-06	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	34,112	04-26-06	05-15-06	Nason Creek	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	108,064	04-26-06	05-15-06	Maher Creek Acclim. P	Wenatchee River
Yakama Tribe	Leavenworth NFH	CO	UN	2006	108,574	04-26-06	05-15-06	Coulter Creek	Wenatchee River
Yakama Tribe	Wells Hatchery	CO	UN	2006	149,804	04-19-06	04-30-06	Wells Hatchery	Mid-Columbia River
Yakama Tribe	Winthrop NFH	CO	UN	2006	74,800	04-19-06	04-30-06	Winthrop Hatchery	Methow River
Yakama Tribe	Winthrop NFH	CO	UN	2006	245,241	03-19-06	04-30-06	Winthrop Hatchery	Methow River
<b>Yakama Tribe Total</b>					<b>1,506,449</b>				
<b>Grand Total</b>					<b>10,792,703</b>				

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

### Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
4/14	---	---	---	0	115	118	119	24	108	108	108	24	106	106	106	24	---	---	---	0
4/15	---	---	---	0	116	117	118	24	107	108	108	24	106	106	106	24	---	---	---	0
4/16	---	---	---	0	117	119	120	24	107	107	108	23	105	105	105	24	---	---	---	0
4/17	---	---	---	0	117	118	118	24	106	107	108	24	104	104	105	24	---	---	---	0
4/18	---	---	---	0	116	118	122	24	105	106	107	24	104	104	104	24	103	103	103	24
4/19	---	---	---	0	119	120	120	24	106	107	107	24	104	105	105	24	104	104	104	24
4/20	---	---	---	0	120	121	123	24	108	108	109	24	106	106	107	24	105	105	106	23
4/21	---	---	---	0	119	119	120	24	107	108	108	24	106	106	107	24	105	105	106	24
4/22	---	---	---	0	117	119	120	24	106	106	107	24	104	105	105	24	104	104	104	15
4/23	---	---	---	0	116	117	120	24	107	108	109	24	105	105	106	24	104	104	104	23
4/24	---	---	---	0	117	120	120	24	108	109	109	24	105	106	106	24	105	105	105	24
4/25	---	---	---	0	118	120	120	24	109	109	109	24	106	106	107	24	105	106	106	24
4/26	---	---	---	0	118	120	121	24	109	109	110	24	106	107	107	24	105	106	106	24
4/27	---	---	---	0	119	119	120	13	108	108	108	24	106	106	106	13	105	105	106	24

### Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
4/14	---	---	---	0	104	104	105	16	110	112	123	16	110	111	112	24	110	111	112	24
4/15	---	---	---	0	104	104	104	11	110	110	118	11	110	112	115	24	111	113	117	24
4/16	---	---	---	0	103	103	103	17	120	122	126	17	111	113	115	24	112	114	117	24
4/17	---	---	---	0	103	103	103	11	111	111	123	11	114	115	118	24	115	117	119	24
4/18	103	103	104	23	102	102	103	17	113	115	120	17	114	116	118	23	114	117	119	23
4/19	104	104	105	22	103	104	104	21	109	111	117	21	113	114	116	24	113	115	116	24
4/20	105	105	106	24	104	105	105	24	111	114	122	24	113	115	116	24	113	115	117	24
4/21	105	105	106	24	104	105	105	24	113	116	126	24	110	111	112	24	111	113	116	24
4/22	104	104	104	14	103	103	103	24	110	115	121	24	111	112	113	24	112	113	115	24
4/23	104	104	105	23	103	103	104	24	108	111	117	24	112	113	115	24	112	114	116	24
4/24	105	105	105	23	104	104	105	24	110	112	118	24	108	109	111	24	108	110	113	24
4/25	105	105	106	23	105	105	105	24	111	112	118	24	111	112	113	24	112	113	115	24
4/26	105	105	106	24	105	105	105	24	107	108	111	24	111	111	111	24	111	112	112	24
4/27	104	105	105	24	104	104	104	24	106	107	107	24	109	110	111	24	109	110	111	24

### Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
4/14	109	110	110	24	110	110	111	24	107	107	108	23	111	115	123	23	109	111	113	23
4/15	111	113	114	24	111	113	114	24	110	110	111	23	113	115	121	23	112	115	117	23
4/16	112	113	115	24	112	114	115	24	108	109	110	23	116	122	127	23	111	112	115	23
4/17	113	114	115	24	116	117	118	24	107	108	109	23	116	121	127	23	114	118	123	22
4/18	115	117	117	23	118	119	120	23	109	110	114	23	117	119	121	23	118	120	121	23
4/19	113	114	114	24	116	117	118	24	115	117	119	23	118	119	119	23	117	117	118	23
4/20	114	115	116	24	118	118	119	24	118	118	119	23	119	120	120	23	118	119	120	23
4/21	111	113	114	24	116	117	117	24	115	116	117	23	122	122	122	23	117	118	119	23
4/22	112	113	114	24	116	117	118	24	112	113	113	23	119	120	122	23	117	117	119	23
4/23	111	111	113	24	116	116	116	24	111	112	112	23	117	118	118	23	116	117	119	23
4/24	111	113	114	24	115	115	116	24	113	114	114	23	119	120	122	23	115	116	117	23
4/25	111	113	114	24	116	116	116	24	115	116	118	23	117	120	122	23	118	119	120	23
4/26	110	111	112	24	116	116	116	24	113	114	115	23	115	117	119	23	117	118	119	23
4/27	109	110	111	24	116	116	117	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>Clrwtr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg			Avg			
4/14	109	111	114	23	100	102	103	24	109	110	110	24	104	104	105	24	108	109	109	24
4/15	112	115	119	23	---	---	---	0	108	109	109	24	102	103	103	24	107	108	108	24
4/16	111	114	119	23	---	---	---	0	108	109	109	24	102	103	104	24	108	108	109	24
4/17	114	117	122	23	109	109	110	15	108	109	109	24	102	103	103	24	108	108	109	24
4/18	116	119	122	23	110	112	113	24	107	108	109	24	103	104	104	24	109	110	110	24
4/19	122	122	123	23	114	116	117	24	108	109	109	24	104	105	105	24	110	110	111	24
4/20	122	122	123	23	117	117	118	24	108	110	115	20	105	106	106	24	110	110	111	24
4/21	121	122	122	23	115	116	117	24	109	110	111	24	104	105	105	24	108	108	109	24
4/22	121	122	123	23	114	115	116	24	109	109	110	24	104	104	105	24	106	107	107	24
4/23	121	122	122	23	115	115	116	24	109	110	110	24	104	105	105	24	107	109	109	23
4/24	121	121	121	23	114	115	116	24	108	109	109	24	104	104	105	24	109	110	125	23
4/25	122	122	123	23	115	116	116	24	108	108	108	24	104	104	105	24	109	109	111	24
4/26	121	122	122	23	115	116	116	24	108	108	109	24	104	105	105	24	109	110	110	23
4/27	---	---	---	0	115	115	116	24	108	108	108	24	104	104	105	24	108	109	109	23

### Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwtr-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>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg			Avg			
4/14	103	104	104	24	108	108	109	24	118	119	120	24	114	114	114	24	115	116	116	24
4/15	102	102	102	24	107	107	108	24	121	121	122	24	112	112	113	24	116	116	117	24
4/16	102	102	103	24	105	105	106	24	122	123	123	24	111	111	112	24	117	118	118	24
4/17	102	103	103	24	105	105	105	24	122	123	123	24	112	112	113	24	117	117	117	24
4/18	102	104	105	24	105	106	106	24	120	121	121	24	112	113	114	24	116	117	117	24
4/19	103	104	105	24	107	108	109	24	120	121	121	24	115	115	116	24	117	117	118	24
4/20	103	105	106	24	109	109	110	24	120	120	120	24	116	116	116	24	117	118	118	24
4/21	103	103	104	24	109	109	110	24	115	117	119	24	114	115	116	24	116	116	117	24
4/22	103	103	104	24	106	107	108	24	114	115	117	24	112	112	113	24	115	115	115	24
4/23	103	104	106	24	105	106	106	24	116	116	118	24	109	109	110	24	115	115	115	24
4/24	103	103	104	24	106	106	106	24	118	119	120	24	108	108	108	24	115	115	115	24
4/25	103	104	105	24	107	107	107	24	119	120	120	24	109	110	111	24	114	115	115	24
4/26	103	104	105	24	107	107	107	24	119	120	120	24	111	111	112	24	115	116	116	24
4/27	103	104	105	24	107	107	107	24	117	117	118	24	112	112	112	24	115	115	115	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>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg		Avg	Avg			Avg			
4/14	118	119	120	24	116	117	118	24	116	117	117	24	119	120	121	24	---	---	---	0
4/15	116	116	116	9	117	117	118	24	115	115	116	24	120	120	121	24	---	---	---	0
4/16	---	---	---	0	118	119	119	24	113	113	113	24	121	121	121	24	---	---	---	0
4/17	115	115	116	12	117	117	117	24	113	113	113	24	121	121	121	24	---	---	---	0
4/18	115	116	117	24	117	117	118	24	113	114	115	24	119	120	121	24	---	---	---	0
4/19	117	118	118	24	118	118	119	24	116	116	117	24	119	119	120	24	---	---	---	0
4/20	118	119	119	24	118	118	119	24	117	118	118	24	119	120	120	24	---	---	---	0
4/21	118	118	119	24	118	120	123	24	116	117	117	24	118	118	119	24	---	---	---	0
4/22	115	115	116	24	121	122	122	24	115	115	115	24	118	118	118	24	---	---	---	0
4/23	115	115	115	24	120	121	122	24	115	115	115	24	118	118	119	24	---	---	---	0
4/24	114	114	114	24	118	118	119	24	114	114	114	24	118	119	120	24	---	---	---	0
4/25	114	114	114	24	117	118	118	24	113	114	114	24	118	119	119	24	---	---	---	0
4/26	114	114	114	23	119	120	122	23	114	114	114	24	118	119	120	24	---	---	---	0
4/27	114	114	115	24	117	117	118	24	113	113	113	24	118	118	119	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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>			<u>hr</u>	<u>Avg</u>		
4/14	110	111	111	24	119	120	120	24	114	115	115	24	120	120	121	24	114	115	116	24
4/15	109	110	110	24	120	120	121	24	114	115	115	24	120	121	123	24	115	115	116	24
4/16	108	109	109	24	120	120	120	24	113	113	113	24	122	123	123	24	117	118	119	24
4/17	108	109	110	24	119	120	120	24	110	111	112	24	120	121	123	24	115	116	117	24
4/18	109	111	112	24	120	120	120	24	109	109	110	24	119	120	121	24	112	114	115	24
4/19	112	113	114	24	120	120	120	24	111	112	113	24	119	120	122	24	113	115	117	24
4/20	115	117	117	24	120	120	121	24	114	115	115	24	120	121	123	24	114	115	117	24
4/21	116	116	117	24	118	120	120	24	115	115	115	24	119	119	120	24	113	115	116	24
4/22	114	114	115	24	117	119	120	24	114	115	115	24	118	119	119	24	113	114	114	24
4/23	114	115	115	24	118	119	119	24	114	114	114	24	119	120	120	24	114	114	115	24
4/24	114	115	115	24	119	120	122	24	113	113	114	24	121	122	123	24	114	116	120	24
4/25	115	115	116	24	119	120	120	24	113	113	113	24	119	120	121	24	119	120	121	24
4/26	115	115	115	24	120	121	122	24	112	112	113	24	119	119	119	24	113	114	115	24
4/27	114	115	115	24	120	120	120	24	112	113	114	24	119	120	120	24	114	115	116	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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>	<u>Avg</u>			<u>hr</u>	<u>Avg</u>		
4/14	118	118	119	24	116	116	117	24	117	117	117	23	116	116	116	24	120	120	120	17
4/15	117	118	119	24	115	115	115	24	116	116	117	23	114	115	115	24	122	123	124	17
4/16	119	120	121	24	115	115	115	24	118	118	118	19	116	117	117	24	124	124	125	17
4/17	118	118	119	24	115	116	116	24	118	118	119	23	116	116	116	24	124	124	124	17
4/18	116	117	118	24	115	116	117	24	118	119	119	23	118	119	119	24	123	123	125	17
4/19	117	118	118	24	116	117	118	24	118	118	118	23	117	118	119	24	123	123	127	17
4/20	118	118	119	23	117	117	118	24	118	118	118	23	117	118	119	24	122	122	123	17
4/21	117	117	118	24	114	115	117	24	115	116	118	24	115	116	116	24	119	119	120	17
4/22	116	117	118	24	114	114	115	24	115	115	116	24	113	114	115	24	122	123	125	17
4/23	117	118	118	24	115	116	116	24	115	115	116	24	114	114	114	24	119	120	125	17
4/24	117	118	119	24	116	117	117	24	116	117	117	24	115	116	116	24	121	121	123	17
4/25	120	121	122	24	117	117	117	24	117	117	117	24	116	117	118	24	119	119	120	17
4/26	116	117	118	24	118	118	119	24	117	118	118	24	115	116	117	24	121	121	123	17
4/27	117	118	118	24	114	114	115	24	116	116	117	24	116	117	117	24	119	120	120	17

## 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/currentsmppsubmitdata.asp>

<b>COMBINED YEARLING CHINOOK</b>											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/14/2006 *	1,792	465	108	355	13,763	13,850	0	165	---	3,371	45,900
04/15/2006 *	1,372	86	202	446	22,326	91	0	22	14,686	4,042	41,343
04/16/2006 *	---	176	169	---	35,087	22,439	746	14	---	9,560	45,479
04/17/2006 *	---	446	69	---	48,180	52,536	72	53	26,813	11,267	49,720
04/18/2006 *	---	535	109	---	27,127	46,258	0	27	---	10,419	39,950
04/19/2006 *	1,056	96	195	---	31,429	69,018	1,070	411	20,513	14,001	42,378
04/20/2006 *	1,363	145	193	488	33,789	87,681	0	662	0	14,857	21,898
04/21/2006 *	1,232	149	213	772	40,376	60,571	0	320	158,719	14,555	33,594
04/22/2006 *	---	88	342	966	34,400	48,391	871	209	---	24,163	25,135
04/23/2006 *	---	137	414	775	42,298	48,181	0	215	63,106	34,020	30,910
04/24/2006 *	---	84	357	558	47,249	45,625	59	147	---	43,049	41,470
04/25/2006 *	2,077	68	310	927	68,977	61,458	4,520	102	45,855	53,734	38,119
04/26/2006 *	923	71	271	1,272	62,021	126,237	0	188	---	38,465	32,300
04/27/2006 *	955	---	149	---	71,195	64,692	0	182	48,300	39,767	28,407
04/28/2006	---	---	---	---	---	---	---	---	---	---	---
<hr/>											
<b>Total:</b>	<b>10,770</b>	<b>2,546</b>	<b>3,101</b>	<b>6,559</b>	<b>578,217</b>	<b>747,028</b>	<b>7,338</b>	<b>2,717</b>	<b>377,992</b>	<b>315,270</b>	<b>516,603</b>
<b># Days:</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>1,346</b>	<b>196</b>	<b>222</b>	<b>729</b>	<b>41,301</b>	<b>53,359</b>	<b>524</b>	<b>194</b>	<b>47,249</b>	<b>22,519</b>	<b>36,900</b>
<b>YTD</b>	<b>27,276</b>	<b>24,502</b>	<b>9,387</b>	<b>8,525</b>	<b>746,194</b>	<b>747,525</b>	<b>10,201</b>	<b>3,277</b>	<b>389,600</b>	<b>334,598</b>	<b>636,778</b>

<b>COMBINED SUBYEARLING CHINOOK</b>											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
04/14/2006 *	0	0	0	0	150	0	0	21	---	95	1,113
04/15/2006 *	0	0	0	0	0	0	0	74	728	84	1,264
04/16/2006 *	---	0	0	---	0	523	0	23	---	39	596
04/17/2006 *	---	0	0	---	0	0	0	105	2,110	0	1,731
04/18/2006 *	---	1	0	---	0	0	0	87	---	280	360,198
04/19/2006 *	0	2	0	---	0	0	25	37	5,438	160	93,307
04/20/2006 *	0	0	0	0	975	0	0	85	0	405	10,622
04/21/2006 *	0	0	0	0	0	0	0	38	2,491	386	4,152
04/22/2006 *	---	0	0	2	0	529	0	104	---	106	2,014
04/23/2006 *	---	0	0	5	0	2,647	0	75	3,581	389	1,939
04/24/2006 *	---	0	0	4	0	1,622	0	22	---	0	724
04/25/2006 *	0	0	0	0	0	637	0	14	4,546	750	1,385
04/26/2006 *	0	0	1	8	639	1,267	0	29	---	661	896
04/27/2006 *	0	---	0	---	0	3,819	0	13	2,191	1,020	1,280
04/28/2006	---	---	---	---	---	---	---	---	---	---	---
<hr/>											
<b>Total:</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>19</b>	<b>1,764</b>	<b>11,044</b>	<b>25</b>	<b>727</b>	<b>21,085</b>	<b>4,375</b>	<b>481,221</b>
<b># Days:</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>126</b>	<b>789</b>	<b>2</b>	<b>52</b>	<b>2,636</b>	<b>313</b>	<b>34,373</b>
<b>YTD</b>	<b>3</b>	<b>33</b>	<b>6</b>	<b>34</b>	<b>7,984</b>	<b>11,048</b>	<b>98</b>	<b>1,221</b>	<b>26,653</b>	<b>4,584</b>	<b>1,252,258</b>

## Two-Week Summary of Passage Indices

COMBINED COHO												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
04/14/2006	*	0	0	0	3	75	0	0	0	---	0	5,390
04/15/2006	*	0	0	0	5	78	0	0	0	75	0	4,353
04/16/2006	*	---	0	0	---	341	392	0	1	---	39	4,473
04/17/2006	*	---	0	0	---	0	521	0	9	0	41	3,147
04/18/2006	*	---	0	0	---	702	615	0	7	---	0	3,086
04/19/2006	*	0	0	0	---	505	0	13	7	0	241	2,332
04/20/2006	*	0	0	0	2	650	0	0	10	0	81	2,380
04/21/2006	*	0	0	0	3	457	506	0	3	0	172	1,384
04/22/2006	*	---	0	0	4	542	0	0	5	---	71	2,890
04/23/2006	*	---	0	0	2	539	0	0	12	339	292	3,729
04/24/2006	*	---	0	0	0	144	0	0	16	---	293	2,456
04/25/2006	*	0	0	0	2	311	127	0	9	208	0	3,910
04/26/2006	*	0	0	0	1	319	253	0	7	---	551	3,334
04/27/2006	*	0	---	0	---	0	509	0	14	1,493	0	3,071
04/28/2006	*	---	---	---	---	---	---	---	---	---	---	---
<hr/>												
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>4,663</b>	<b>2,923</b>	<b>13</b>	<b>100</b>	<b>2,115</b>	<b>1,781</b>	<b>45,935</b>
<b># Days:</b>		<b>8</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>333</b>	<b>209</b>	<b>1</b>	<b>7</b>	<b>264</b>	<b>127</b>	<b>3,281</b>
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>4,784</b>	<b>2,923</b>	<b>13</b>	<b>106</b>	<b>2,151</b>	<b>1,820</b>	<b>66,939</b>

COMBINED STEELHEAD												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
04/14/2006	*	24	1,377	510	43	11,883	19,943	0	6	---	2,750	996
04/15/2006	*	12	358	836	53	29,847	51	0	4	3,959	2,581	702
04/16/2006	*	---	1,061	1,733	---	21,598	23,928	946	6	---	3,321	596
04/17/2006	*	---	718	1,024	---	79,230	62,209	61	20	5,409	4,726	944
04/18/2006	*	---	803	567	---	96,219	112,401	0	12	---	8,658	1,299
04/19/2006	*	44	48	162	---	36,470	119,233	1,987	16	3,347	7,943	1,167
04/20/2006	*	47	262	58	38	58,156	117,176	0	14	0	7,773	1,448
04/21/2006	*	24	304	36	65	73,743	70,322	0	5	16,997	8,329	1,132
04/22/2006	*	---	351	60	61	74,353	150,432	2,384	13	---	12,524	2,608
04/23/2006	*	---	561	181	79	163,534	59,027	0	28	54,555	14,653	2,010
04/24/2006	*	---	420	301	312	53,895	42,769	59	39	---	16,858	3,539
04/25/2006	*	422	572	67	226	71,624	67,725	4,403	28	51,117	25,492	3,829
04/26/2006	*	171	510	42	194	145,413	82,778	0	52	---	35,268	5,697
04/27/2006	*	145	---	22	---	212,038	89,345	0	63	36,634	43,336	4,947
04/28/2006	*	---	---	---	---	---	---	---	---	---	---	---
<hr/>												
<b>Total:</b>		<b>889</b>	<b>7,345</b>	<b>5,599</b>	<b>1,071</b>	<b>1,128,003</b>	<b>1,017,339</b>	<b>9,840</b>	<b>306</b>	<b>172,018</b>	<b>194,212</b>	<b>30,914</b>
<b># Days:</b>		<b>8</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>111</b>	<b>565</b>	<b>400</b>	<b>119</b>	<b>80,572</b>	<b>72,667</b>	<b>703</b>	<b>22</b>	<b>21,502</b>	<b>13,872</b>	<b>2,208</b>
<b>YTD</b>		<b>1,006</b>	<b>13,494</b>	<b>6,112</b>	<b>1,229</b>	<b>1,223,948</b>	<b>1,019,344</b>	<b>12,134</b>	<b>348</b>	<b>177,006</b>	<b>202,172</b>	<b>36,614</b>

## 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)
04/14/2006 *	0	0	0	0	226	277	0	0	---	11	0
04/15/2006 *	0	0	0	0	313	0	0	3	95	48	0
04/16/2006 *	---	0	0	---	256	785	67	1	---	20	0
04/17/2006 *	---	0	0	---	446	1,440	0	22	198	41	0
04/18/2006 *	---	0	0	---	176	1,041	0	24	---	198	162
04/19/2006 *	0	0	0	---	168	1,753	25	46	418	80	0
04/20/2006 *	0	0	0	0	162	1,011	0	74	0	243	0
04/21/2006 *	0	0	0	0	152	1,528	0	35	207	43	0
04/22/2006 *	---	0	0	1	271	1,059	51	18	---	142	0
04/23/2006 *	---	0	0	1	269	1,853	0	55	850	267	0
04/24/2006 *	---	0	0	0	433	976	0	159	---	0	72
04/25/2006 *	0	0	0	1	156	705	0	38	3,522	750	244
04/26/2006 *	0	0	0	0	639	1,393	0	86	---	331	81
04/27/2006 *	0	---	0	---	310	518	0	299	2,492	1,529	84
04/28/2006	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3,977</b>	<b>14,339</b>	<b>143</b>	<b>860</b>	<b>7,782</b>	<b>3,703</b>	<b>643</b>
<b># Days:</b>	<b>8</b>	<b>13</b>	<b>14</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>284</b>	<b>1,024</b>	<b>10</b>	<b>61</b>	<b>973</b>	<b>265</b>	<b>46</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>9,567</b>	<b>14,367</b>	<b>175</b>	<b>863</b>	<b>7,835</b>	<b>3,725</b>	<b>966</b>

\* 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:

4/28/06 9:51 AM

		04/15/06	TO	04/28/06			
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	1,100	370,993	3,000	2,550	732,307	1,109,950
	Sum of NumberBarged	400	214,211	1,592	1,450	530,058	747,711
	Sum of NumberBypassed	700	156,300	1,399	1,049	202,121	361,569
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	57	1	2	25	85
	Sum of FacilityMorts	0	412	8	49	89	558
	Sum of ResearchMorts	0	13	0	0	14	27
	Sum of TotalProjectMorts	0	482	9	51	128	670
<b>LGS</b>	Sum of NumberCollected	8,551	575,986	2,224	10,962	779,379	1,377,102
	Sum of NumberBarged	4,482	198,335	700	2,022	188,564	394,103
	Sum of NumberBypassed	4,063	375,923	1,524	8,777	590,087	980,374
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	3	49	0	4	3	59
	Sum of FacilityMorts	3	1,184	0	64	111	1,362
	Sum of ResearchMorts	0	2	0	0	1	3
	Sum of TotalProjectMorts	6	1,235	0	68	115	1,424
<b>LMN</b>	Sum of NumberCollected	20	6,034	10	110	7,976	14,150
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	20	5,963	10	110	7,919	14,022
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	0	0	0	0	0
	Sum of FacilityMorts	0	21	0	0	7	28
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	21	0	0	7	28
<b>MCN</b>	Sum of NumberCollected	10,677	191,671	1,091	3,912	90,055	297,406
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	10,641	191,449	1,090	3,900	90,005	297,085
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	4	31	0	1	5	41
	Sum of FacilityMorts	32	189	1	11	44	277
	Sum of ResearchMorts	0	2	0	0	1	3
	Sum of TotalProjectMorts	36	222	1	12	50	321
Total Sum of NumberCollected		20,348	1,144,684	6,325	17,534	1,609,717	2,798,608
Total Sum of NumberBarged		4,882	412,546	2,292	3,472	718,622	1,141,814
Total Sum of NumberBypassed		15,424	729,635	4,023	13,836	890,132	1,653,050
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		7	137	1	7	33	185
Total Sum of FacilityMorts		35	1,806	9	124	251	2,225
Total Sum of ResearchMorts		0	17	0	0	16	33
Total Sum of TotalProjectMorts		42	1,960	10	131	300	2,443



### YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/28/06 9:52 AM

TO: 04/28/06

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	5,140	485,288	3,080	6,440	802,781	1,302,729
	Sum of NumberBarged	400	214,211	1,592	1,450	530,058	747,711
	Sum of NumberBypassed	4,736	270,567	1,479	4,930	272,587	554,299
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	4	84	1	11	33	133
	Sum of FacilityMorts	0	413	8	49	89	559
	Sum of ResearchMorts	0	13	0	0	14	27
	Sum of TotalProjectMorts	4	510	9	60	136	719
<b>LGS</b>	Sum of NumberCollected	8,554	576,335	2,224	10,981	780,790	1,378,884
	Sum of NumberBarged	4,482	198,335	700	2,022	188,564	394,103
	Sum of NumberBypassed	4,066	376,265	1,524	8,794	591,495	982,144
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	3	52	0	4	4	63
	Sum of FacilityMorts	3	1,191	0	67	114	1,375
	Sum of ResearchMorts	0	2	0	0	1	3
	Sum of TotalProjectMorts	6	1,245	0	71	119	1,441
<b>LMN</b>	Sum of NumberCollected	70	8,085	10	132	9,606	17,903
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	69	8,013	10	130	9,549	17,771
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	1	1	0	0	0	2
	Sum of FacilityMorts	0	21	0	2	7	30
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	22	0	2	7	32
<b>MCN</b>	Sum of NumberCollected	13,519	197,573	1,111	3,937	92,664	308,804
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	13,459	197,340	1,110	3,925	92,612	308,446
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	26	38	0	1	5	70
	Sum of FacilityMorts	34	193	1	11	46	285
	Sum of ResearchMorts	0	2	0	0	1	3
	Sum of TotalProjectMorts	60	233	1	12	52	358
Total Sum of NumberCollected		27,283	1,267,281	6,425	21,490	1,685,841	3,008,320
Total Sum of NumberBarged		4,882	412,546	2,292	3,472	718,622	1,141,814
Total Sum of NumberBypassed		22,330	852,185	4,123	17,779	966,243	1,862,660
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		34	175	1	16	42	268
Total Sum of FacilityMorts		37	1,818	9	129	256	2,249
Total Sum of ResearchMorts		0	17	0	0	16	33
Total Sum of TotalProjectMorts		71	2,010	10	145	314	2,550

**Cumulative Adult Passage at Mainstem Dams Through: 04/27**

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2006		2005		10-Yr Avg.		2006		2005		10-Yr Avg.		2006		2005		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	04/27	2,239	13	21,889	69	86,994	940	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/27	401	-1	10,498	12	49,542	385	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/27	166	-4	6,166	0	36,369	228	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/27	46	1	2,442	17	28,206	192	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/27	7	0	606	0	17,844	95	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/27	2	0	343	1	14,918	43	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/27	3	0	138	0	12,386	64	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/27	1	0	71	0	10,408	22	0	0	0	0	0	0	0	0	0	0	0	0
PRD	04/26	9	0	42	1	2,440	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	04/26	3	0	4	0	885	2	0	0	0	0	0	0	0	0	0	0	0	0
RRH	04/26	0	0	0	0	115	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/23	784	0	2,960	26	n/a	n/a	---	---	---	---	---	---	0	0	0	0	n/a	n/a

DAM	Coho						Sockeye			Steelhead			
	2006		2005		10-Yr Avg.		10-Yr Avg.			10-Yr Avg.			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2006	2005	Avg.	2006	2005	Avg.	2006
BON	0	0	0	0	0	0	0	2	0	1,514	1,005	2224	439
TDA	0	0	-1	0	0	0	0	0	0	957	510	775	321
JDA	0	0	4	0	0	0	0	0	0	2,074	796	2518	948
MCN	0	0	0	0	0	0	0	0	0	1,955	796	1278	701
IHR	0	0	0	0	0	0	0	0	0	2,511	1,171	1499	855
LMN	0	0	0	0	0	0	0	0	0	2,502	727	1505	949
LGS	0	0	0	0	0	0	0	0	0	2,460	848	1753	761
LGR	0	0	0	0	0	0	0	0	0	7,320	4,586	6028	2,122
PRD	0	0	0	0	0	0	0	2	0	16	6	1	0
RIS	0	0	0	0	0	0	0	0	0	24	23	16	8
RRH	0	0	0	0	0	0	0	0	0	84	213	72	27
WFA	0	0	0	0	n/a	n/a	0	0	n/a	5,656	6,053	n/a	n/a

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: 04/28/06

BON counts from January 1, 2006 to March 14, 2006 (our traditional counts begin March 15):

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
1	0	2,516	238

Run Year counts (June 1, 2005 to May 31, 2006) for Lower Granite:

Steelhead
0