



Fish Passage Center

# Weekly Report #05 - 3

March 25, 2005

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**Summary of Events:**

**Water Supply:** Precipitation increased through most of the Columbia Basin over the past week, but remains much below average for the water year to date, October 1, 2004 through March 21, 2005 as illustrated in Table 1.

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

Location	Water Year 2005 March 1-21		Water Year 2005 October 1, 2004 to March 21, 2005	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.95	78	10.51	77
Snake River Above Ice Harbor	0.48	43	6.75	69
Columbia Above The Dalles	0.76	58	9.44	69
Kootenai	0.83	69	10.25	73
Clark Fork	0.72	89	4.64	54
Flathead	1.12	102	9.26	79
Pend Oreille/Spokane	1.25	67	13.87	72
Central Washington	0.25	44	3.12	55
Snake River Plain	0.30	39	4.46	78
Salmon/Boise/Payette	0.39	30	6.53	54
Clearwater	0.95	50	11.43	65
SW Washington Cascades/Cowlitz	1.70	35	28.07	55
Willamette Valley	1.47	34	21.00	49

The March mid-month water supply forecast was distributed on March 11. The mid-Month water supply forecast decreased at most sites compared to the March 5, final forecast distributed on March 9. The March mid-Month forecast includes observed precipitation through March 14, an assumed 70% of normal precipitation for the remainder of March, an assumed 80% of normal precipitation for the first half of April and 100% of normal precipitation for the remainder of the year. Snow pack is not included in the Mid-month forecast. The following table includes the March final forecast and the March mid-Month forecast for selected sites.

**Table 2. March final and March Mid-Month Water Supply forecast compared to Actual 2001 runoff volume.**

Location	March Final		March Mid-Month		Actual 2001 Runoff Volume (Kaf)
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	
The Dalles (Jan-July)	66	70700	63	67700	58200
Grand Coulee (Jan-July)	80	50500	79	49400	37400
Rock Island Dam (Jan-July)	79	54700	77	53400	
Libby Res. Inflow, MT (Jan-July)	77	4860	76	4790	3341
Hungry Horse Res. Inflow, MT (Jan-July)	67	1480	66	1460	1300
Lower Granite Res. Inflow (Apr- July)	46	9960	46	9880	10300
Brownlee Res. Inflow (Apr-July)	28	1740	30	1880	1970*
Dworshak Res. Inflow (Apr-July)	56	1470	47	1230	1470

Grand Coulee has drafted five feet from March 18 through March 24, from elevation 1262 to 1257, continuing to draft to the March 31 reservoir elevation target of 1255 feet. Daily average outflows at the project have ranged from 64.8 kcfs to 110 kcfs.

Libby reservoir has maintained an elevation of 2413 feet over the past week, with daily average outflows of 4 kcfs. Libby is currently 29 feet below the end of March VARQ flood control elevation.

Hungry Horse reservoir has filled slightly from elevation 3546.79 feet on March 18 to 3547.24 feet on March 24. Daily average outflow from the Hungry Horse project has ranged from .5 kcfs to .9 kcfs. Hungry Horse is 8.5 feet below the end of March VARQ flood control elevation.

Dworshak reservoir has filled 1.97 feet from March 18 through March 24, from elevation 1569.63 to 1571.60. Daily average outflow at Dworshak has been maintained at a steady 1.60 kcfs daily average.

Brownlee has maintained elevation 2073 feet over the past week with outflow from the project ranging from 10.1 kcfs to 12.47 kcfs.

Mainstem flows continue to be low, with daily average flows at Lower Granite Dam ranging from 20 kcfs to 26 kcfs over the past week. Over the past week daily average flows at Priest Rapids dam have ranged from a low of 89 kcfs on March 19 to 113.80 on March 24. Daily flows at The Dalles Dam have averaged 135.1 kcfs over the past week, ranging from a daily average of 112.9 kcfs on March 20 to a high daily average for the period of 154.8 kcfs on March 18. Weekly average flow at Bonneville Dam was 134.2 kcfs from March 18 through March 24, with daily average flows ranging from a low of 124.5 kcfs on March 20 to a high daily average flow of 139.4 kcfs on March 19.

**Smolt Monitoring:** Yearling chinook are continuing to be captured in relatively small numbers at most Snake River Basin SMP traps. At the Salmon River Trap there were nearly 1,200 yearling chinook captured on March 22. Those fish were predominantly hatchery origin fish. While at the Grande Ronde Trap and Imnaha Trap small numbers of yearling chinook were also captured. These were also likely recent releases from upstream hatcheries.

In the Lower Columbia, at Bonneville Dam, yearling chinook numbers have decreased from last week. Likely fish in the catch at that site are from Klickitat River and Umatilla River hatchery releases the past two weeks. Subyearling chinook numbers continue to decrease after the March 2 release of 7.2 million fish from Spring Creek Hatchery. This past week the subyearling index averaged 2,500 per day compared to 3,000 per day the previous week.

**Spill:** The only spill that occurred in the system over the past week was at Bonneville Dam. This spill is part of adult attraction passage enhancement. In spite of the fact that projects are not spilling water, total dissolved gas levels throughout the hydrosystem are elevated. This is likely a result of physical and biological processes.

**Hatchery Releases** - Releases of juvenile salmonids from Columbia River Basin hatcheries above Bonneville Dam are estimated near 83.8 million for the 2005 migration season. Supplemental and planned releases completed during the fall 2004 season are considered to be 2005 migrants. The Zone Release Report below summarizes "planned" hatchery releases from State, federal or Tribal hatcheries or acclimation ponds for this year's migration. These totals will be updated after release from the hatcheries and finalized through the year.

## Hatchery Zone Release Report

	Friday 25-Mar-2005			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	4,840,000	12,656,000	21,886,441	39,382,441
Spring Chinook	8,970,411	4,681,405	5,038,495	18,690,311
Summer Chinook	2,375,000	3,466,500		5,841,500
Coho	825,000	2,449,119	5,149,974	8,424,093
Sockeye	210,716	240,459		451,175
Summer Steelhead	9,119,500	1,240,151	522,500	10,882,151
Winter Steelhead			118,300	118,300
Total	26,340,627	24,733,634	32,715,710	83,789,971

Due to the drought conditions that presently exist in the Northwest, rivers and streams in some drainages in the Columbia River basin are already at minimum levels with the snow pack in many basins well below 50% of normal. Hatchery releases are occurring earlier than normal in some areas of the Basin because of the lower flows that presently exist and potentially may exist through the spring migration. The spring migration is comprised mainly of yearling Chinook, Coho, Sockeye and Steelhead.

Hatchery releases initiated or completed during the past two weeks accounted for about 9.0 million fish liberated in the Columbia/Snake River basin. For the upcoming two weeks, about 17.9 million fish will be released from hatcheries, either directly into the streams or else released volitionally through time. See the Hatchery Release Summary Tables for details.

**Snake River** -About 2.0 million spring/summer Chinook were released mainly in the Clearwater River basin during the 2004 summer through December timeframe. Yearling chinook from the acclimation ponds located in the Grande Ronde River at Lostine R, Catherine Creek, and upper Grande Ronde began their volitional releases as well as volitional release from Rapid River Hatchery that will be ongoing for the next few weeks. The direct release of yearling spring/summer Chinook from McCall Hatchery was completed as were several releases in the Clearwater River basin.

Yearling Coho salmon are being introduced in the Clearwater River basin with hatchery production releases to be about 825,000 for the 2005 season. Greater than half of the projected total have been released in the Clearwater River basin to date.

The projected release of hatchery Steelhead is about 9.1 million for the Snake River basin. A- and B-Run steelhead are released with the Clearwater River basin exclusively considered B-Run fish and most of the other River basins having A-Run Steelhead. Steelhead releases are beginning in some areas of the Basin with most planned for April and May.

**Mid-Columbia** - The CleElum tribal facility began volitional release of about 800,000 yearling spring chinook mid-March and will continue the release through late April. Spring chinook from Ringold Hatchery was completed during the previous week with all the fish out of the pond by Friday March 18th. Most State, Tribal and Federal hatcheries will begin releasing fish in the upper Mid-Columbia from mid to late April.

**Lower Columbia** - Yearling fall Chinook and Coho salmon were released in late February in the Umatilla River with additional Coho were in March from Reith Bridge, near Pendleton, OR. About 800,000 yearling spring Chinook were released during the past two weeks from Imeques Pond, about 80 River Miles from the Mouth of the Umatilla River. Yearling spring Chinook were released from Klickitat Hatchery on March 1-11 (600,000 total) with Warm Springs NFH beginning a volitional release in the Deschutes River basin from mid-March through early April. Volitional release of spring Chinook will be initiated in the Hood River during the upcoming week as well. Release of Coho salmon from Washougal Hatchery into the Klickitat River should begin next week (about 2.5 million). The majority of Steelhead are projected for release in April to early May.

Juvenile Sockeye were released from net pens into Lake Wenatchee last summer and fall; the majority of these fish reside in the lake and then migrate from the lake and to the ocean the next spring, in this case, April and May, 2005. In the Snake River basin, juvenile sockeye were released

in Redfish, Alturas, and Pettit lakes last fall and will also begin their migration in the spring, usually late April and May from the lakes.

**Adult Fish Passage** - At Bonneville and upstream dams, calendar dates when official counting of adult fish will be initiated varies among the sites. Lower Granite Dam began reporting counts on March 1, Bonneville Dam on March 15th, and at the remaining mainstem COE projects, counting will begin on April 1. The PUD dams in the Mid-Columbia River normally begin counting adult fish near April 15 with Wells Dam starting on May 1. The Bonneville Dam counts from January through March 14 are listed in a small table below the normal Adult Table.

At Bonneville Dam, counts of spring chinook have yet to break into double figures with 14 adult chinook counted from the 15th through the 23rd of March. Although it is early in the adult passage season, comparing the cumulative adult spring chinook count through March 23 with the same period in 2004 and the 10 year average shows 14 fish in 2005, 180 in 2004 and 842 for the ten-year average. Compared to past years the 2005 passage to date is low.

Adult Steelhead continue moving through the hydro system to reach their tributaries and spawning sites. Again, the majority of these fish counted this winter and spring have over-wintered in the pools (2004) and complete their trip to the spawning grounds in March through early May the following year (2005). Counts at Lower Granite total 2,615 for the season, at present lower than the 2004 and 10-year average to date.

**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
03/11/05	96.0	0.0	92.4	0.0	97.0	0.0	96.0	0.0	98.9	0.0	96.2	0.0	91.9	0.0
03/12/05	70.3	0.0	71.2	0.0	74.9	0.0	74.5	0.0	76.8	0.0	95.5	0.0	97.1	0.0
03/13/05	48.4	0.0	48.1	0.0	49.7	0.0	47.7	0.0	52.5	0.0	78.7	0.0	78.9	0.0
03/14/05	104.4	0.0	102.8	0.0	105.2	0.0	103.6	0.0	105.3	0.4	80.8	0.0	81.4	0.0
03/15/05	104.0	0.0	104.4	0.0	106.8	0.0	105.2	0.0	106.7	0.8	104.4	0.0	101.4	0.0
03/16/05	115.5	0.0	119.4	0.0	122.3	0.0	115.7	0.0	119.4	0.8	126.1	0.0	121.3	0.0
03/17/05	108.7	0.0	106.2	0.0	108.1	4.0	107.2	0.0	109.9	0.6	107.5	0.0	122.9	0.0
03/18/05	90.3	0.0	91.2	0.0	98.9	0.0	102.5	0.3	106.4	0.0	112.1	0.0	100.0	0.0
03/19/05	86.9	0.0	89.4	0.0	96.7	0.0	98.3	0.0	100.9	0.0	99.2	0.0	90.0	0.0
03/20/05	64.8	0.0	68.1	0.0	74.3	0.0	72.9	0.0	76.0	0.0	102.8	0.0	105.1	0.0
03/21/05	109.1	0.0	114.9	0.0	105.3	0.0	103.9	0.0	105.8	0.0	102.5	0.0	99.5	0.0
03/22/05	110.0	0.0	109.8	0.0	115.1	0.0	111.8	0.0	113.7	0.2	112.5	0.0	108.1	0.0
03/23/05	102.7	0.0	103.8	0.0	108.2	0.0	106.8	0.0	109.0	1.7	114.2	0.0	113.7	0.0
03/24/05	95.0	0.0	99.7	0.0	103.5	0.0	101.8	0.0	103.5	0.7	109.0	0.0	113.9	0.0

**Daily Average Spill 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
03/11/05	1.5	0.0	11.3	8.8	16.3	0.0	16.7	0.0	15.9	0.0	15.7	0.0
03/12/05	1.5	0.0	11.5	8.9	19.6	0.0	18.4	0.0	18.6	0.0	18.6	0.0
03/13/05	1.6	0.0	11.2	8.9	20.8	0.0	19.6	0.0	18.9	0.0	17.5	0.0
03/14/05	1.6	0.0	11.6	10.5	22.1	0.0	25.5	0.0	26.4	0.0	27.1	0.0
03/15/05	1.5	0.0	12.1	10.8	23.9	0.0	23.1	0.0	25.4	0.0	25.4	0.0
03/16/05	1.5	0.0	11.2	11.4	26.8	0.0	27.7	0.0	30.0	0.0	30.3	0.0
03/17/05	1.6	0.0	11.3	13.8	19.4	0.0	19.0	0.0	20.7	0.0	20.2	0.0
03/18/05	1.6	0.0	10.0	11.2	26.0	0.0	25.0	0.0	24.9	0.0	27.4	0.0
03/19/05	1.6	0.0	11.6	10.7	22.7	0.0	23.4	0.0	19.8	0.0	18.2	0.0
03/20/05	1.6	0.0	10.2	12.4	26.2	0.0	26.2	0.0	25.0	0.0	23.5	0.0
03/21/05	1.6	0.0	11.9	12.7	22.3	0.0	23.9	0.0	24.9	0.0	23.8	0.0
03/22/05	1.6	0.0	10.5	11.4	22.6	0.0	24.0	0.0	25.8	0.0	27.7	0.0
03/23/05	1.6	0.0	13.0	11.7	25.6	0.0	27.3	0.0	26.2	0.0	25.8	0.0
03/24/05	1.6	0.0	---	---	20.1	0.0	21.6	0.0	21.9	0.0	21.6	0.0

**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		
03/11/05	122.6	0.0	123.8	0.0	127.7	0.0	143.7	1.3	26.6	109.7
03/12/05	116.3	0.0	117.7	0.0	122.5	0.0	123.2	1.2	13.4	102.5
03/13/05	115.1	0.0	118.4	0.0	122.1	0.0	138.9	1.5	22.3	109.1
03/14/05	105.1	0.0	118.0	0.0	113.9	0.0	122.7	1.2	3.1	112.2
03/15/05	110.4	0.0	110.4	0.0	116.4	0.0	123.1	1.4	0.0	115.6
03/16/05	129.7	0.0	130.5	0.0	135.7	0.3	128.3	1.3	5.8	115.2
03/17/05	137.5	0.0	114.9	0.0	110.9	0.0	125.3	1.4	7.9	110.0
03/18/05	139.1	0.0	156.1	0.0	154.8	0.0	126.8	1.4	9.4	109.9
03/19/05	133.6	0.0	131.8	0.0	134.1	0.0	139.4	1.2	22.2	109.5
03/20/05	105.8	0.0	107.6	0.0	112.9	0.0	124.5	1.3	9.5	107.2
03/21/05	133.0	0.0	135.3	0.0	133.4	0.0	137.4	1.3	15.9	113.6
03/22/05	132.1	0.0	136.9	0.0	136.8	0.0	134.3	1.4	16.9	109.6
03/23/05	141.1	0.0	141.7	0.0	141.9	0.0	144.9	1.4	28.9	108.1
03/24/05	126.9	0.3	130.3	0.0	131.8	0.0	132.3	1.3	19.8	104.7

## HATCHERY RELEASE LAST TWO WEEKS

### Hatchery Release Summary

From: 3/11/2005 to 03/24/05

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2005	400,000	03-14-05	03-18-05	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2005	90,000	03-14-05	04-01-05	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2005	100,000	03-14-05	04-01-05	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2005	1,050,000	03-18-05	03-21-05	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2005	525,000	03-14-05	04-08-05	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2005	2,700,000	03-14-05	04-22-05	Rapid River Hatchery	Little Salmon River
<b>Idaho Dept. of Fish and Game Total</b>					<b>4,865,000</b>				
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2005	95,400	03-11-05	03-20-05	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	McCall Hatchery	CH1	SU	2005	105,000	<b>03-14-05</b>	03-16-05	Johnson Cr Idaho	South Fork Salmon R
<b>Nez Perce Tribe Total</b>					<b>200,400</b>				
Oregon Dept. of Fish and Wildlife	Oak Springs Hatchery	ST	SU	2005	30,000	03-15-05	03-15-05	Hood River	Hood River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>30,000</b>				
U.S. Fish and Wildlife Service	Kooskia NFH	CH1	SP	2005	<b>620,000</b>	03-21-05	04-04-05	Kooskia Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2005	739,000	03-16-05	04-13-05	Warm Springs Hatchery	Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>1,359,000</b>				
Umatilla Tribe	Cascade Hatchery	CO	UN	2005	797,883	03-14-05	03-21-05	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Little White Salmon NFH	CH1	SP	2005	205,490	03-14-05	03-16-05	Imeques Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	1,000	03-24-05	04-14-05	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	98,500	03-18-05	04-08-05	Lookingglass Hatchery	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	104,300	03-24-05	04-14-05	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	130,900	03-14-05	03-27-05	Catherine Cr Acclim Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>1,338,073</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2005	45,000	03-24-05	05-04-05	Blackberry Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>45,000</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2005	124,000	03-21-05	05-20-05	Above Rock Island Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH1	SP	2005	440,000	03-11-05	03-18-05	Ringold Springs Hatchery	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>564,000</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	268,500	03-09-05	04-29-05	Easton Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	274,500	03-09-05	04-29-05	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	284,500	03-09-05	04-29-05	Jack Creek Acclim Pond	Yakama River
Yakama Tribe	Yakama Hatchery	CHO	FA	2005	150,000	03-11-05	03-18-05	Stiles Pond	Yakama River
<b>Yakama Tribe Total</b>					<b>977,500</b>				
<b>Grand Total</b>					<b>9,378,973</b>				

## HATCHERY RELEASE NEXT TWO WEEKS

### Hatchery Release Summary

From: **3/25/2005** to **4/7/2005**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2005	400,000	04-06-05	04-15-05	Red River Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2005	700,000	04-01-05	04-06-05	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2005	90,000	03-14-05	04-01-05	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2005	100,000	03-14-05	04-01-05	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2005	215,000	04-04-05	04-08-05	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2005	445,000	03-31-05	04-08-05	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2005	525,000	03-14-05	04-08-05	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2005	830,000	04-02-05	04-30-05	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2005	1,000,000	04-01-05	04-14-05	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2005	2,700,000	03-14-05	04-22-05	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2005	135,000	04-01-05	04-06-05	Sawtooth Hatchery	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>7,140,000</b>				
Nez Perce Tribe	Hagerman NFH	ST	SU	2005	40,000	03-28-05	04-11-05	Hazard Creek/Little Salmon R	Little Salmon River
Nez Perce Tribe	Hagerman NFH	ST	SU	2005	160,000	03-28-05	04-11-05	Little Salmon River	Salmon River (ID)
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2005	69,200	03-28-05	04-14-05	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2005	140,000	04-01-05	04-10-05	Big Canyon (Clearwater R)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2005	150,000	04-01-05	04-10-05	Pittsburg Landing Acclim Pond	Snake River
<b>Nez Perce Tribe Total</b>					<b>559,200</b>				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2005	437,000	03-26-05	04-15-05	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2005	320,000	04-01-05	04-15-05	Bel. Pelton Ladder	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2005	160,000	04-01-05	04-08-05	Bel. Pelton Ladder	Deschutes River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>917,000</b>				
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SP	2005	1,070,000	04-01-05	04-08-05	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2005	100,000	03-28-05	04-11-05	Little Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Kooskia NFH	CH1	SP	2005	620,000	03-21-05	04-04-05	Kooskia Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2005	739,000	03-16-05	04-13-05	Warm Springs Hatchery	Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>2,529,000</b>				
Umatilla Tribe	Little White Salmon NFH	CH1	SP	2005	250,000	04-05-05	04-06-05	Walla Walla River	Walla Walla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	1,000	03-24-05	04-14-05	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	59,100	04-04-05	04-14-05	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	98,500	03-18-05	04-08-05	Lookingglass Hatchery	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	104,300	03-24-05	04-14-05	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2005	130,900	03-14-05	03-27-05	Catherine Cr Acclim Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>643,800</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2005	45,000	03-24-05	05-04-05	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2005	39,800	04-07-05	05-04-05	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2005	29,800	04-01-05	04-29-05	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2005	44,500	03-28-05	05-04-05	Jones Creek Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2005	46,500	03-28-05	05-04-05	Blackberry Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>205,600</b>				
Washington Dept. of Fish and Wildlife	COOP	CH1	SP	2005	27,668	04-02-05	04-02-05	O'Reilly Pond	Methow River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2005	210,000	04-01-05	05-12-05	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2005	124,000	03-21-05	05-20-05	Above Rock Island Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2005	450,000	03-25-05	04-01-05	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2005	160,000	03-25-05	03-31-05	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2005	104,000	04-04-05	04-15-05	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2005	65,000	04-01-05	04-20-05	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2005	125,000	04-01-05	04-20-05	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2005	2,500,000	04-04-05	04-08-05	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2005	84,000	04-04-05	06-03-05	Twisp River	Methow River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>3,849,668</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2005	350,000	04-04-05	04-15-05	Lost Creek Acclim Pond	Yakama River
Yakama Tribe	Cascade Hatchery	CO	UN	2005	350,000	04-04-05	04-15-05	Yakama River	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	268,500	03-09-05	04-29-05	Easton Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	274,500	03-09-05	04-29-05	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2005	284,500	03-09-05	04-29-05	Jack Creek Acclim Pond	Yakama River
Yakama Tribe	Eagle Creek NFH	CO	UN	2005	250,000	04-04-05	04-15-05	Stiles Pond	Yakama River
Yakama Tribe	Eagle Creek NFH	CO	UN	2005	250,000	04-04-05	04-15-05	Yakama River	Yakama River
<b>Yakama Tribe Total</b>					<b>2,027,500</b>				
<b>Grand Total</b>					<b>17,871,768</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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</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>	<u>Avg</u>
3/11	---	---	---	0	104	105	105	24	103	104	104	24	103	104	106	24	---	---	---	0
3/12	---	---	---	0	104	104	105	24	103	103	103	24	103	104	104	24	---	---	---	0
3/13	---	---	---	0	103	104	104	24	103	103	103	23	103	104	105	24	---	---	---	0
3/14	---	---	---	0	104	105	106	20	104	104	105	24	104	105	106	20	---	---	---	0
3/15	---	---	---	0	105	106	106	24	105	105	106	24	104	105	107	24	---	---	---	0
3/16	---	---	---	0	105	106	106	24	106	106	106	24	105	106	108	24	---	---	---	0
3/17	---	---	---	0	106	107	108	24	105	105	106	24	105	105	107	24	---	---	---	0
3/18	---	---	---	0	105	105	107	24	105	106	106	24	104	105	106	24	---	---	---	0
3/19	---	---	---	0	105	106	106	24	106	106	106	24	105	105	107	24	---	---	---	0
3/20	---	---	---	0	103	103	104	24	106	106	106	24	105	106	108	24	---	---	---	0
3/21	---	---	---	0	103	104	105	24	104	104	105	24	104	104	106	24	---	---	---	0
3/22	---	---	---	0	103	105	105	24	105	105	106	24	104	105	105	24	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	103	104	104	24	104	104	105	24	103	104	105	24	---	---	---	0

### 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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</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>	<u>Avg</u>
3/11	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/12	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/13	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/14	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/15	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/16	---	---	---	0	---	---	---	0	---	---	---	0	100	100	100	24	99	99	99	24
3/17	---	---	---	0	---	---	---	0	---	---	---	0	103	105	105	24	103	105	106	24
3/18	---	---	---	0	---	---	---	0	---	---	---	0	107	110	111	24	108	110	111	24
3/19	---	---	---	0	---	---	---	0	---	---	---	0	109	109	110	24	108	109	110	24
3/20	---	---	---	0	---	---	---	0	---	---	---	0	107	108	109	24	108	108	108	24
3/21	---	---	---	0	---	---	---	0	---	---	---	0	104	104	105	24	104	104	105	24
3/22	---	---	---	0	---	---	---	0	---	---	---	0	104	105	105	24	104	105	105	24
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	103	103	104	24	104	104	104	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</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>	<u>Avg</u>
3/11	99	99	99	24	103	103	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/12	99	99	99	24	102	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/13	99	99	99	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/14	99	99	99	24	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0
3/15	101	103	105	24	104	104	105	15	---	---	---	0	---	---	---	0	---	---	---	0
3/16	105	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	105	106	108	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	108	109	109	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	106	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/21	104	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	104	104	105	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	103	103	104	24	---	---	---	0	---	---	---	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>Clrwr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>	
3/11	---	---	---	0	---	---	---	0	105	106	107	23	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	104	105	106	24	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	108	109	110	24	---	---	---	0	---	---	---	0
3/14	---	---	---	0	---	---	---	0	103	104	106	24	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	105	106	107	24	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	107	109	110	24	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	106	109	110	24	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	104	104	105	19	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	105	106	108	24	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	105	105	106	24	---	---	---	0	---	---	---	0
3/21	---	---	---	0	---	---	---	0	103	104	105	24	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	104	105	106	24	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	104	104	105	24	103	103	105	9	103	103	106	6

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite TIwr</u>			<u>Little Goose</u>			<u>L. Goose TIwr</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>	
3/11	---	---	---	0	107	108	109	24	106	106	109	24	---	---	---	0	---	---	---	0
3/12	---	---	---	0	105	106	107	24	104	105	106	24	---	---	---	0	---	---	---	0
3/13	---	---	---	0	104	105	105	24	104	104	104	24	---	---	---	0	---	---	---	0
3/14	---	---	---	0	106	108	109	24	105	106	106	24	---	---	---	0	---	---	---	0
3/15	---	---	---	0	107	107	108	24	106	106	107	24	---	---	---	0	---	---	---	0
3/16	---	---	---	0	106	107	107	24	106	106	107	24	---	---	---	0	---	---	---	0
3/17	---	---	---	0	105	105	106	24	105	105	106	24	---	---	---	0	---	---	---	0
3/18	---	---	---	0	105	105	105	24	104	105	105	24	---	---	---	0	---	---	---	0
3/19	---	---	---	0	105	105	106	24	105	105	105	24	---	---	---	0	---	---	---	0
3/20	---	---	---	0	105	106	108	24	104	104	105	24	---	---	---	0	---	---	---	0
3/21	---	---	---	0	103	103	104	24	102	103	103	24	---	---	---	0	---	---	---	0
3/22	---	---	---	0	104	105	105	24	103	104	104	24	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	102	102	103	11	102	103	103	24	101	101	102	24	---	---	---	0	---	---	---	0

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

Date	<u>Lower Mon.</u>			<u>L. Mon. TIwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor TIwr</u>			<u>McNary-Oregon</u>			#				
	<u>24 h</u>	<u>12 h</u>	<u>High</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>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>	
3/11	---	---	---	0	---	---	---	0	106	106	107	24	105	106	107	24	106	108	109	24
3/12	---	---	---	0	---	---	---	0	105	106	106	24	105	106	106	24	105	106	106	24
3/13	---	---	---	0	---	---	---	0	105	105	105	24	105	106	107	24	105	106	107	24
3/14	---	---	---	0	---	---	---	0	106	107	108	24	106	107	107	24	106	108	110	24
3/15	---	---	---	0	---	---	---	0	107	107	108	24	107	108	108	24	107	107	108	24
3/16	---	---	---	0	---	---	---	0	108	108	109	24	107	108	109	24	107	108	109	24
3/17	---	---	---	0	---	---	---	0	107	108	108	24	108	108	109	24	106	107	108	24
3/18	---	---	---	0	---	---	---	0	108	108	109	24	108	109	109	24	106	107	108	24
3/19	---	---	---	0	---	---	---	0	109	109	110	24	109	109	110	24	106	107	107	24
3/20	---	---	---	0	---	---	---	0	108	108	109	24	108	109	109	24	105	105	106	24
3/21	---	---	---	0	---	---	---	0	106	106	107	24	106	107	107	23	103	104	105	24
3/22	---	---	---	0	---	---	---	0	107	108	108	24	107	108	108	24	104	105	105	24
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	106	106	107	24	106	107	107	24	103	103	104	24

## 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>	#					
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg	AVG	High
3/11	106	107	108	24	106	106	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/12	106	107	108	24	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/13	105	105	106	24	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/14	107	108	109	24	106	106	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/15	107	108	108	24	106	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0
3/16	106	107	109	24	106	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0
3/17	106	106	106	24	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/18	106	106	106	24	105	106	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/19	106	107	107	24	106	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0
3/20	105	105	106	24	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/21	103	103	103	24	104	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/22	104	104	105	24	105	105	105	24	106	106	106	11	105	105	106	9	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	103	103	103	24	103	103	104	24	104	104	105	24	104	104	104	24	104	104	104	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washugal</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>	#				
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg	High	hr
3/11	---	---	---	0	106	107	107	24	107	108	109	24	107	108	109	23
3/12	---	---	---	0	106	107	107	24	107	107	108	24	107	108	109	23
3/13	---	---	---	0	106	106	106	24	106	107	107	24	107	108	108	23
3/14	---	---	---	0	106	107	107	24	106	107	108	22	107	108	109	23
3/15	---	---	---	0	107	107	107	24	107	107	108	24	108	108	109	23
3/16	---	---	---	0	106	106	107	24	106	106	107	24	107	107	108	23
3/17	---	---	---	0	104	105	105	24	105	105	106	24	105	106	107	23
3/18	---	---	---	0	105	106	106	24	106	106	107	24	106	107	108	23
3/19	---	---	---	0	106	106	106	24	107	107	107	22	106	106	107	23
3/20	---	---	---	0	105	105	105	24	105	106	106	24	105	105	106	23
3/21	---	---	---	0	104	104	105	24	105	105	105	24	104	105	106	23
3/22	---	---	---	0	104	105	105	24	105	105	105	24	104	104	105	23
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	104	104	105	23	103	104	104	24	104	105	105	24	104	104	105	23





## 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)
03/11/2005	0	0	0	0	---	---	---	---	---	---	0
03/12/2005	---	0	0	---	---	---	---	---	---	---	0
03/13/2005	---	0	0	---	---	---	---	---	---	---	0
03/14/2005	0	0	0	0	---	---	---	---	---	---	0
03/15/2005	0	0	0	0	---	---	---	---	---	---	0
03/16/2005	0	0	0	0	---	---	---	---	---	---	0
03/17/2005	0	0	0	0	---	---	---	---	---	---	0
03/18/2005	0	0	0	0	---	---	---	---	---	---	0
03/19/2005	---	0	0	---	---	---	---	---	---	---	0
03/20/2005	---	0	0	---	---	---	---	---	---	---	0
03/21/2005	0	0	0	0	---	---	---	---	---	---	0
03/22/2005	0	0	0	0	---	---	---	---	---	---	0
03/23/2005	0	0	0	0	---	---	---	---	---	---	0
03/24/2005	0	---	0	0	---	---	---	---	---	---	0
03/25/2005	---	---	---	---	---	---	---	---	---	---	0
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b># Days:</b>	<b>10</b>	<b>13</b>	<b>14</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</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)}

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 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.

**Cumulative Adult Passage at Mainstem Dams Through: 03/23**

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2005		2004		10-Yr Avg.		2005		2004		10-Yr Avg.		2005		2004		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	14	0	180	0	842	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2005		2004		10-Yr Avg.		2005	2004	10-Yr Avg.	2005	2004	10-Yr Avg.	Wild 2005
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	-10	615	400	-62	
TDA	0	0	0	0	0	0	0	0	0	0	0	0	
JDA	0	0	0	0	0	0	0	0	0	0	0	0	
MCN	0	0	0	0	0	0	0	0	0	0	0	0	
IHR	0	0	0	0	0	0	0	0	0	0	0	0	
LMN	0	0	0	0	0	0	0	0	0	0	0	0	
LGS	0	0	0	0	0	0	0	0	0	0	0	0	
LWG	0	0	0	0	0	0	0	0	2,615	3,135	2,795	619	
PRD	0	0	0	0	0	0	0	0	0	0	0	n/a	
RIS	0	0	0	0	0	0	0	0	0	0	0	0	
RRH	0	0	0	0	0	0	0	0	0	0	0	0	
WEL	0	0	0	0	0	0	0	0	0	0	0	0	

LGR is through 03/21. BON is through 03/23.

\*PRD is not posting wild steelhead numbers.

These numbers were collected from the COE's Running Sums text files, except where otherwise noted.

Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 03/25/05

BON counts from January 1, 2005 to March 14, 2005 (our traditional counts begin March 15):

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
15	0	256	-74

