



## Fish Passage Center

# Weekly Report #04 - 5

April 9, 2004

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### Highlights:

- **Water Supply Forecasts** have been decreasing rapidly over the last month, most significant are decreases at Brownlee, Lower Granite and Dworshak, which decreased 22%, 21%, and 19% of average, respectively.
- **The Spring Flow Objective period** started in the Lower Snake River on April 3rd, 2004, the flow objective is 85 Kcfs at Lower Granite through June 20th. Flows at Lower Granite are currently 52.8 Kcfs.
- **The Spring Flow Objective Periods** at McNary Dam and Priest Rapids Dam will begin on April 10th; the flow objectives at these locations will be 220 Kcfs and 135 Kcfs, respectively.
- **Grand Coulee, Hungry Horse and Libby** are not expected to reach their April 10th Flood Control elevations.
- **Dworshak and Brownlee** have both surpassed their April 10th FC elevation (based on the March Final WSF); however at both locations the April Final Water Supply Forecast decreased dramatically relative to the March Final WSF, therefore flood control elevations at both locations are expected to increase significantly.
- **Biological Opinion Spill** began at Lower Granite Dam on April 3 and at Little Goose Dam on April 7.
- **Adult spring chinook counts** at Bonneville Dam through April 1 are lower than 2003 and lower than the 10 year average

### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin was very low over most of March and early April. Although the precipitation data in Table 1 was only available through March 22nd, none of the sites recorded precipitation that was greater than average over March. Over the entire water year, precipitation has been slightly below average.

**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 2004 March 1-22		Water Year 2004 October 1, 2003 to March 22, 2004	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.08	85	12.96	94
Snake River Above Ice Harbor	0.43	36	8.81	90
Columbia Above The Dalles	0.87	64	13.03	95
Kootenai	0.92	73	13.46	96
Clark Fork	0.54	64	7.27	84
Flathead	0.99	86	10.73	92
Pend Oreille/Spokane	0.83	42	17.49	90
Central Washington	0.23	38	4.98	88
Snake River Plain	0.13	16	4.59	79
Salmon/Boise/Payette	0.38	28	10.49	86
Clearwater	1.40	70	17.68	99
SW Washington Cascades/Cowlitz	2.41	48	46.08	90
Willamette Valley	1.33	29	40.79	94

Snowpack within the Columbia Basin is also below average and has been decreasing (with respect to average) over the last several weeks. Average snowpack in the Columbia River for basins above the Snake River confluence is 73% of average (7% decrease from last week), for Snake River Basins the average snowpack is 66% of average (14% decrease from last week), and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 81% of average (14% decrease from last week).

Water Supply Forecasts have been decreasing rapidly over the last month. The April Final Forecast has been issued by the River Forecast Center; all locations presented in the table below have decreased relative to the March Final forecast, some have decreased drastically. Most significant are decreases at Brownlee, Lower Granite and Dworshak, which decreased 22%, 21%, and 19% of average, respectively.

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

Location	March Final		April Final	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	87	92900	78	84200
Grand Coulee (Jan-July)	88	55600	85	53600
Libby Res. Inflow, MT (Jan-July)	90	5700	84	5290
Hungry Horse Res. Inflow, MT (Jan-July)	87	1930	76	1680
Lower Granite Res. Inflow (Apr- July)	93	20000	72	15600
Brownlee Res. Inflow (Apr-July)	72	4530	50	3130
Dworshak Res. Inflow (Apr-July)	100	2640	81	2150

The Spring Flow Objective period started in the Lower Snake River on April 3rd, 2004. Based on the April Final Forecast at Lower Granite (Apr-July), the flow objective will be 85 Kcfs at Lower Granite through June 20th. Flows at Lower Granite are currently 52.8 Kcfs.

According to the 2000 BIOP, the Spring Flow Objective Periods at McNary Dam and Priest Rapids Dam begin on April 10th. The flow objectives at McNary and Priest Rapids will be 220 Kcfs and 135 Kcfs, respectively.

The Grand Coulee Reservoir is currently drafted below its flood control elevations and it appears unlikely it will reach its April 10th BIOP elevation. Grand Coulee ended April 8th at an elevation of 1267.4 feet, this is 8.4 feet below is standard BIOP required April 10th elevation (1275.8 feet) and 4.8 feet below the April 10th elevation (1272.2 feet) if a flood control swap occurs between Grand Coulee and Dworshak. Although Grand Coulee has managed to refill 2.2 feet in the last week, it appears unlikely that Grand Coulee will reach its standard April 10th BIOP elevation in 2004. Reaching the April 10th elevation will be especially difficult considering the April Final Water Supply forecast at Grand Coulee decreased relative to the March Final Forecast and as a result flood control elevations at Grand Coulee will increase. Reaching the April 10 flood control elevations ensures a high probability of both meeting spring flow objectives and refill by June 30.

The Libby Reservoir is also currently well below its flood control elevations. Libby ended April 8th at an elevation of 2400.1 feet, 42.9 feet below its estimated April 10th elevation of 2443 feet. Inflows to Libby over the last week have been increasing ranging between 5.5 and 10.1 Kcfs; therefore Libby has been able to refill approximately 1.2 feet while still maintaining minimum project outflow of 4.0 Kcfs.

The Hungry Horse Reservoir is currently at an elevation of 3519.0 feet, which is 18.2 feet below its estimated April 10th BIOP elevation. Over the last week, inflows to Hungry Horse have increased ranging between 3.4 and 9.5 Kcfs, enabling Hungry Horse to refill 3.6 feet while still meeting its project minimum flows.

The Dworshak reservoir is currently at an elevation of 1541.7 feet. Inflows to Dworshak have remained relatively high over the past week ranging between 9.1 and 14.4 Kcfs, allowing Dworshak to refill approximately 9.4 feet in the last week. Dworshak has currently surpassed its April 10th system FC elevation (based on the March Final WSF) of 1535.5 feet; however the April Final Water Supply Forecast at Dworshak decreased 19% relative to the March Final, therefore its flood control elevations are expected to increase significantly.

The Brownlee Reservoir was at an elevation of 2057.5 feet on April 8th. Brownlee has surpassed its April 10th elevation (2055.1 feet) that was based on the March Final WSF; however, the April Final Water Supply Forecast decreased 22% relative to the March Final, therefore its flood control elevations are expected to increase significantly. Inflows to Brownlee have ranged between 14.8 and 18.4 Kcfs, enabling it to refill 5.1 feet in the last week.

**Spill:** Spill at Lower Granite Dam was initiated on the evening of April 3. Based on fish numbers spill at Little Goose began on April 7. Initiation of spill at the lower Snake River projects is being considered on a day-to-day basis dependent on fish passage numbers. The low final April Runoff Volume forecast has caused discussion of the possibility of terminating spill at the Snake River collector projects. Discussions are underway relative to the benefits of in-river migration and potential impacts that may be imposed on research projects if spill is terminated. Decisions are expected next week.

Total dissolved gas levels remain below the waiver limits. Gas bubble trauma monitoring is occurring at McNary and Bonneville dams. The Snake River sites are expected to begin sampling next week. No fish with signs of GBT have been observed.

**Smolt Monitoring:** At Snake River traps yearling chinook have predominated the catch, with small numbers of steelhead being captured. The White Bird Trap collected a season high of 2,176 yearling chinook on April 7 compared to 1,558 last week. These yearling chinook were predominantly hatchery origin fish, but significant numbers of wild fish continue to be collected with 100 to 200 unclipped yearling chinook (without Coded Wire Tags) in the sample the past several days. Steelhead numbers remained small but were relatively higher than last week, with an average daily collection of 19 this week compared to 1 per day last week. The Imnaha Trap the captured over 10,000 yearling chinook on April 7 which were probably made up mostly of hatchery fish released volitionally from Imnaha Acclimation Pond beginning April 1. Steelhead numbers were similar to last week at Imnaha, averaging 14 per day this week compared to 15 per day last week. Numbers of yearling chinook captured at the Grande Ronde trap increased this past week with a daily average of 334 compared to 268 last week. The number of wild yearling chinook increased to over 100 fish per day the last two days. At the Lewiston Trap they continue to capture small numbers of yearling chinook and steelhead. It is likely the collection of yearling chinook at Lewiston trap will increase with increasing flows around the middle of April.

At Lower Granite Dam the average weekly passage index for yearling chinook increased this past week to 8,600 compared to 450 last week. The steelhead average daily passage index also increased from 50 last week to 2,300 this week. Small numbers of coho, sockeye and subyearling chinook were also captured this past week. At Little Goose Dam and Lower Monumental Dam relatively smaller numbers of yearling chinook and steelhead have been captured to date.

In the Mid-Columbia River the Entiat Trap continues to capture small numbers of yearling chinook, subyearling chinook and steelhead.

Rock Island Dam has reported relatively small numbers of yearling chinook and subyearling chinook to date, with a collection of 116 subyearling chinook on April 2 the highest total to date, while 91 yearling chinook on April 7 is the

highest collection for that run. There have been a few steelhead and sockeye collected, but no coho to date.

In the Lower Columbia, at McNary, where sampling is carried out every other day, in conjunction with NMFS transportation study that begins April 20, there have been three days of sampling reported and yearling chinook indices have steadily increased but remain below 1,000 with the average daily index this week at 500 while steelhead indices averaged 130 with a high of 170 reported on April 3. Subyearling chinook indices remain relatively low, with average daily value near still below 100 fish per day for the past week. At John Day Dam the numbers of yearling chinook have increased steadily since sampling began April 1, with the average daily index at 1,300 this week. Steelhead indices also increased steadily over the past week with the average daily value at 150. Small numbers of subyearling chinook, and coho smolts have been reported this past week. At Bonneville Dam, the average daily index for yearling chinook was 650 compared to 330 last week. The steelhead index averaged 220 this week compared to 90 last week. The indices for coho were up this week with an average index of 160 per day versus 60 per day last week. Subyearling chinook numbers were down to 3,100 per day index this week compared to 12,000 last week. The site continues to capture small numbers of pink salmon fry, with 2, 3 and 1 seen on the 5th, 7th and 8th respectively. Low numbers of sockeye were also reported in the sample this past week.

**Hatchery Releases** - The scheduled release of juvenile salmonids from Columbia River Basin hatcheries above Bonneville Dam for the 2004 migration season is estimated near 81.9 million. Supplemental and planned releases completed during the fall 2003 season are considered to be 2004 migrants. The Zone Release Report below summarizes "planned" hatchery releases from State, federal or Tribal hatcheries or acclimation ponds for the 2004 Migration Season. These totals will be updated after release from the hatcheries and finalized through the year.

Juvenile sockeye were released from net pens into Lake Wenatchee last summer and fall (2003); the majority of these fish reside in the lake and migrate from the lake and to the ocean the next spring (2004). In the Snake River basin, juvenile sockeye were released in Redfish, Alturas, and Pettit lakes last fall and most begin their migration in late April and May from the lakes.

Hatcheries in the Snake and Columbia basin released about 22.4 million salmon during the past two weeks. Most of the juvenile fish released were yearling chinook planted in the Snake River basin. For the upcoming two weeks, about 16 million fish will be released from hatcheries in the basin. See the Hatchery Release Summary Tables for details of individual release groups.

**2004 Hatchery Zone Report**

Race/Species	Friday 8 April 2004			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	2,610,000	12,430,000	21,730,094	36,770,094
Spring Chinook	10,467,630	4,010,579	5,250,398	19,728,607
Summer Chinook	2,402,002	3,273,500		5,675,502
Coho	1,199,433	1,141,000	5,924,000	8,264,433
Sockeye	62,000	315,790		377,790
Summer Steelhead	9,276,500	1,260,000	476,330	11,012,830
Winter Steelhead			90,000	90,000
<b>Total</b>	<b>26,017,565</b>	<b>22,430,869</b>	<b>33,470,822</b>	<b>81,919,256</b>

*Snake River* - Release of yearling chinook from McCall Hatchery at the Knox Bridge site on the S. Fork Salmon and at Johnson Creek have been completed for the season. Rapid River H completed specific site releases at Hells Canyon and the Little Salmon River with the on-site volitional release from the hatchery about 75% already out of the ponds. In the Grande Ronde basin, yearling chinook were released from the acclimation ponds located in the upper Grande Ronde and Catherine Creek with the second volitional releases on-going through the middle of April. Dworshak and Kooskia NFHs released their yearling spring chinook. Volitional release of the Tucannon R yearling chinook began on 3/15 and should continue for about a month. The Clearwater releases will be completed over the upcoming week.

Trucking of steelhead from Niagara Springs H. to Hells Canyon began on March 22 and were completed April 2nd. Another 8.5 million steelhead will be released between April through mid-May in the Snake River. Volitional releases will be ongoing from some of the acclimation ponds.

*Mid-Columbia* - Volitional releases of yearling spring chinook commenced mid-March in the Yakama River at Clark Flat, Easton, and Jack Creek ponds and volitional release of these fish will continue through mid-May. The upper Mid-Columbia spring chinook and steelhead will be released from Federal and State hatcheries in mid-April through mid-May, normally coinciding with the spill program.

*Lower Columbia* - Yearling fall and spring chinook and coho salmon have been released from acclimation ponds located in the Umatilla River basin during March. Yearling chinook releases from Round Butte H and Warm Springs NFH in to Deschutes River basin are ongoing with the completion from these hatcheries by early April. Yearling spring chinook were released from Klickitat H the first week in March. About 2.5 million yearling coho from Washougal H were trucked and released during this past week into the Klickitat River.

**Adult Fish Passage** - All COE projects are now counting adult fish as of April 1 with the PUD dams in the Mid-Columbia River normally initiating adult fish counting near April 15 and starting on May 1st at Wells Dam. The Bonneville Dam counts from January through March 14 are listed in a small table below the Adult Table.

At Bonneville Dam, counts of spring chinook remain low but daily counts began to increase slightly through the end of the count week, April 8. To date 2,375 adult spring chinook have been tallied past the project and that compares to 44,065 in 2003 and 14,428 for the 10-year average. Adult spring chinook interrogated for presence of PIT tags at Bonneville have to date been predominately from the 2002 juvenile migration year with adult fish from Rapid River Hatchery, Catherine Creek Pond, Dworshak NFH in the Snake River; Leavenworth NFH in the Mid-Columbia River, and Carson NFH in the lower Columbia River. Note that not all hatcheries released PIT tagged fish so that would preclude them from having these fish among the PIT tag returns. Numbers of adult chinook should start increasing rapidly as the 4-year old component of the Run begins dominating the passage at Bonneville Dam. Based on pre-season projections for spring chinook destined for areas above Bonneville Dam, there should be over 350,000 expected to pass the project.

Adult steelhead continue migrating through the upper Snake River projects to spawning areas in the upstream tributaries of the Clearwater, Salmon, Imnaha, Tucannon, and Grande Ronde basins. About 5,860 steelhead have been counted at Lower Granite Dam since March 1st. This total is well below the 2003 count, but exceeds the 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
03/26/04	63.1	0.0	68.8	0.0	72.9	0.0	72.4	0.0	77.2	0.0	81.8	0.0	81.4	0.0
03/27/04	51.0	0.0	50.8	0.0	52.8	0.0	54.4	0.0	58.1	0.0	69.1	0.0	72.4	0.0
03/28/04	43.0	0.0	43.7	0.0	46.7	0.0	44.7	0.0	49.0	0.0	76.3	0.0	71.6	0.0
03/29/04	70.8	0.0	71.8	0.0	74.4	0.0	75.0	0.0	79.7	0.0	68.1	0.0	72.6	0.0
03/30/04	70.0	0.0	70.0	0.0	74.0	0.0	72.8	0.0	75.3	0.0	72.3	0.0	71.5	0.0
03/31/04	56.5	0.0	63.8	0.0	69.2	0.0	75.7	0.0	80.1	0.0	79.6	0.0	73.6	0.0
04/01/04	71.6	0.0	67.0	0.0	75.8	0.0	73.4	0.0	79.5	0.0	77.7	0.0	74.5	0.0
04/02/04	62.8	0.0	73.7	0.0	80.4	0.0	81.8	0.0	87.1	0.0	94.4	0.0	94.6	0.0
04/03/04	65.0	0.0	58.3	0.0	54.7	0.0	54.6	0.0	58.0	0.0	81.3	0.0	82.7	0.0
04/04/04	36.3	0.0	34.9	0.0	37.2	0.0	37.7	0.0	41.0	0.0	74.5	0.0	71.7	0.0
04/05/04	64.6	0.0	73.0	0.0	75.3	0.0	78.9	0.0	82.4	0.0	72.9	0.0	71.4	0.0
04/06/04	67.2	0.0	67.6	0.0	75.1	0.0	73.4	0.0	77.3	0.0	66.2	0.0	71.7	0.0
04/07/04	54.5	0.0	57.0	0.0	65.5	0.0	65.2	0.0	70.6	0.0	76.0	0.0	71.9	0.0
04/08/04	67.2	0.0	67.0	0.0	64.5	0.0	62.3	0.0	68.7	0.0	68.0	0.0	71.2	0.0

**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
03/26/04	1.6	0.0	21.0	23.4	61.2	0.0	63.6	0.0	69.4	0.0	66.9	0.4
03/27/04	1.6	0.0	21.5	18.8	55.0	0.0	51.8	0.0	53.9	0.0	51.1	0.2
03/28/04	1.6	0.0	18.6	16.6	52.9	0.0	51.0	0.0	53.7	0.0	53.1	0.2
03/29/04	1.6	0.0	18.7	23.0	43.6	0.0	48.3	0.0	51.0	0.0	51.3	0.0
03/30/04	1.7	0.0	17.2	19.5	51.9	0.0	50.1	0.0	52.5	0.0	47.9	0.0
03/31/04	2.7	0.0	17.6	17.4	45.7	0.0	51.1	0.0	57.1	0.0	55.0	0.0
04/01/04	2.7	0.0	16.3	16.8	50.4	0.0	53.7	0.0	60.7	0.0	57.6	0.0
04/02/04	1.6	0.0	14.8	11.8	48.2	0.0	48.5	0.0	50.6	0.0	47.2	0.0
04/03/04	1.6	0.0	16.8	17.5	39.3	4.6	39.3	0.0	41.0	0.0	39.4	0.0
04/04/04	1.6	0.0	15.2	10.8	44.9	18.2	43.8	0.0	48.9	0.0	46.0	0.0
04/05/04	1.6	0.0	18.4	20.1	44.8	19.3	44.4	0.0	45.0	0.0	41.6	0.0
04/06/04	1.6	0.0	15.7	10.3	54.4	24.1	55.1	0.0	60.9	0.0	59.9	0.0
04/07/04	1.6	0.0	17.9	9.2	48.8	18.8	49.3	9.4	51.6	0.0	50.3	0.0
04/08/04	1.6	0.0	---	---	52.8	15.3	53.3	19.0	53.4	0.0	49.5	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		
03/26/04	154.9	0.0	161.9	0.0	167.2	0.0	173.9	2.2	80.0	85.0
03/27/04	131.0	0.0	128.6	0.0	138.6	0.0	157.2	2.0	72.4	76.6
03/28/04	119.3	0.0	112.9	0.0	115.5	0.0	136.4	2.1	55.4	71.6
03/29/04	135.3	0.0	148.8	0.0	165.6	0.0	161.0	2.3	72.6	79.4
03/30/04	121.8	0.0	130.4	0.0	136.1	0.0	153.6	2.2	63.7	81.3
03/31/04	144.0	0.0	164.3	0.0	171.1	0.0	166.0	2.2	63.5	93.5
04/01/04	126.6	0.1	144.5	0.0	150.8	0.0	161.5	2.4	53.0	99.0
04/02/04	139.1	0.4	132.8	0.0	137.0	0.0	155.4	2.4	144.9	1.1
04/03/04	145.6	0.0	139.5	0.0	146.3	0.0	147.4	2.5	39.0	99.0
04/04/04	135.7	0.0	116.1	0.0	124.1	0.0	138.2	2.5	32.1	96.9
04/05/04	119.7	0.0	120.2	0.0	127.9	0.0	137.7	2.5	32.1	95.9
04/06/04	119.0	0.0	128.9	0.0	138.0	0.0	141.6	2.4	34.3	97.7
04/07/04	144.4	0.0	144.1	0.0	146.6	0.0	148.9	2.4	137.0	3.0
04/08/04	201.8	0.0	140.9	0.0	151.3	0.0	158.5	2.6	147.2	1.8

## HATCHERY RELEASE LAST TWO WEEKS

### Hatchery Release Summary

From: **3/26/2004** to **4/8/2004**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Leavenworth NFH	CH1	SP	2003	95,000	04-05-03	04-15-03	Bonaparte Acclimation Pond	Okanogan River
<b>Colville Tribe Total</b>					<b>95,000</b>				
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2003	350,665	04-01-03	04-01-03	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2003	351,066	04-02-03	04-02-03	Red River Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2003	629,687	04-02-03	04-02-03	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	32,560	04-07-03	04-07-03	Lemhi River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	83,157	04-07-03	04-07-03	Lemhi River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	121,070	04-09-03	04-09-03	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2003	1,053,660	03-31-03	04-03-03	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2003	302,314	04-08-03	04-10-03	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2003	525,884	03-24-03	04-04-03	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2003	295,992	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2003	909,926	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2003	2,330,557	03-17-03	04-28-03	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2003	144,976	04-07-03	04-18-03	Sawtooth Hatchery	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2003	960,193	04-07-03	04-18-03	Sawtooth Hatchery	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>8,091,707</b>				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2003	52,225	04-03-03	04-03-03	Papoose Creek	Lochsa River
Nez Perce Tribe	Hagerman NFH	ST	SU	2003	35,549	04-07-03	04-07-03	Hazard Creek/Little Salmon R	Little Salmon River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2003	132,968	04-01-03	04-14-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	151,919	03-30-03	04-08-03	Cpt John Acclim Pond	Snake River
<b>Nez Perce Tribe Total</b>					<b>372,661</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	123,266	04-09-03	04-09-03	L Sheep Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2003	268,426	04-01-03	04-15-03	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2003	169,835	04-03-03	04-03-03	Bel. Pelton Ladder	Deschutes River
Oregon Dept. of Fish and Wildlife	Wallowa Acclim. Pond	CH1	SP	2003	66	03-31-03	03-31-03	Wallowa River	Grande Ronde River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>561,593</b>				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2003	160,176	03-31-03	04-04-03	Little Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2003	748,027	04-09-03	04-29-03	Sawtooth Hatchery	Salmon River (ID)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2003	619,345	03-26-03	04-16-03	Warm Springs Hatchery	Deschutes River
<b>U.S. Fish and Wildlife Service Total</b>					<b>1,527,548</b>				
Umatilla Tribe	Bonneville Hatchery	CH1	FA	2003	248,070	04-08-03	04-15-03	Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Cascade Hatchery	CO	UN	2003	188,971	03-28-03	03-28-03	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Cascade Hatchery	CO	UN	2003	591,349	04-03-03	04-10-03	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Little White Salmon NFH	CH1	SP	2003	322,806	04-08-03	04-15-03	Imeques Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	24,392	03-28-03	04-14-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	126,987	03-28-03	04-14-03	Grande Ronde Acclim Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>1,502,575</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2003	47,513	04-03-03	05-07-03	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	30,661	04-06-03	04-06-03	Parkdale Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	40,074	04-07-03	04-22-03	Jones Creek Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	55,628	04-07-03	04-22-03	Blackberry Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>173,876</b>				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2003	518,436	04-01-03	04-09-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	WI	2003	19,950	04-01-03	04-01-03	Salmon Creek (WA)	Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	140,396	04-01-03	04-21-03	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	146,922	03-15-03	04-21-03	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2003	2,554,300	03-31-03	04-09-03	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2003	127,969	04-07-03	05-30-03	Bel. Priest Rapids Dam	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>3,507,973</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	39,319	03-14-03	03-28-03	Easton Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	81,113	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	250,852	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
<b>Yakama Tribe Total</b>					<b>371,284</b>				
<b>Grand Total</b>					<b>16,204,217</b>				

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

# HATCHERY RELEASE NEXT TWO WEEKS

## Hatchery Release Summary

From: 4/9/2004 to 4/22/2004

4/09/04

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Leavenworth NFH	CH1	SP	2003	95,000	04-05-03	04-15-03	Bonaparte Acclimation Pond	Okanogan River
Colville Tribe	Winthrop NFH	CH1	SP	2003	35,000	04-10-03	04-15-03	Omak Creek	Okanogan River
<b>Colville Tribe Total</b>					<b>130,000</b>				
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2003	108,052	04-21-03	04-21-03	Clear Creek	Clearwater River M F
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2003	149,664	04-18-03	04-18-03	Redhouse (SFk ClearH20 R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2003	249,987	04-17-03	04-17-03	Red River Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2003	264,558	04-19-03	04-19-03	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	128,035	04-15-03	04-15-03	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	169,747	04-18-03	04-21-03	McNabb/Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	183,634	04-14-03	04-14-03	Hammer Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	202,079	04-23-03	04-23-03	Squaw Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2003	265,730	04-16-03	04-17-03	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2003	302,314	04-08-03	04-10-03	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2003	2,330,557	03-17-03	04-28-03	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2003	144,976	04-07-03	04-18-03	Sawtooth Hatchery	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2003	960,193	04-07-03	04-18-03	Sawtooth Hatchery	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>5,459,526</b>				
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2003	23,310	04-22-03	04-22-03	Meadow Creek - CLES	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2003	33,362	04-23-03	04-23-03	Mill Cr Bridge	S Fk Clearwater River
Nez Perce Tribe	Clearwater Hatchery	ST	SU	2003	43,070	04-22-03	04-22-03	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2003	132,968	04-01-03	04-14-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	140,383	04-13-03	04-14-03	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	145,331	04-15-03	04-16-03	Big Canyon (Clearwater R)	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>518,424</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	114,110	04-14-03	04-15-03	Big Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	165,262	04-14-03	04-16-03	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	331,422	04-11-03	04-15-03	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2003	268,426	04-01-03	04-15-03	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2003	336,552	04-11-03	04-16-03	Bel. Pelton Ladder	Deschutes River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>1,215,772</b>				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2003	1,673,255	04-16-03	04-17-03	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2003	123,379	04-14-03	04-17-03	Clear Creek	Clearwater River M F
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2003	682,889	04-14-03	04-17-03	Redhouse (SFk ClearH20 R)	S Fk Clearwater River
U.S. Fish and Wildlife Service	Entiat Hatchery	CH1	SP	2003	395,689	04-15-03	04-15-03	Entiat Hatchery	Entiat River
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2003	748,027	04-09-03	04-29-03	Sawtooth Hatchery	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2003	1,288,893	04-21-03	04-21-03	Leavenworth Hatchery	Wenatchee River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2003	1,012,339	04-17-03	04-17-03	Little White Salmon Hatchery	Little White Salmon Riv
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2003	4,070,365	04-14-03	04-14-03	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2003	619,345	03-26-03	04-16-03	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service	Willard Hatchery	CO	UN	2003	632,893	04-17-03	04-17-03	Little White Salmon River	Little White Salmon Riv
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2003	461,678	04-15-03	04-15-03	Winthrop Hatchery	Methow River
<b>U.S. Fish and Wildlife Service Total</b>					<b>11,708,752</b>				
Umatilla Tribe	Bonneville Hatchery	CH1	FA	2003	248,070	04-08-03	04-15-03	Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Cascade Hatchery	CO	UN	2003	591,349	04-03-03	04-10-03	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Little White Salmon NFH	CH1	SP	2003	322,806	04-08-03	04-15-03	Imeques Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	24,392	03-28-03	04-14-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	126,987	03-28-03	04-14-03	Grande Ronde Acclim Pond	Grande Ronde River
<b>Umatilla Tribe Total</b>					<b>1,313,604</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2003	47,513	04-03-03	05-07-03	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	40,074	04-07-03	04-22-03	Jones Creek Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	55,628	04-07-03	04-22-03	Blackberry Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>143,215</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2003	150,806	04-22-03	04-22-03	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2003	453,862	04-23-03	04-23-03	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	31,440	04-21-03	04-21-03	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	43,688	04-15-03	04-16-03	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	60,001	04-15-03	04-16-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	102,975	04-15-03	04-17-03	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	115,496	04-15-03	04-18-03	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2003	57,471	04-21-03	04-22-03	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	ST	SU	2003	171,645	04-11-03	04-22-03	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	140,396	04-01-03	04-21-03	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	146,922	03-15-03	04-21-03	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2003	127,969	04-07-03	05-30-03	Bel. Priest Rapids Dam	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>1,602,671</b>				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	81,113	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	250,852	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2003	18,000	04-21-03	04-21-03	Yakama River	Yakama River
<b>Yakama Tribe Total</b>					<b>349,965</b>				
<b>Grand Total</b>					<b>22,441,929</b>				

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



## 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>Bonneville Dam</b>											
	04/06/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	04/08/04	Chinook + Steelhead	32	0	0	0.00%	0.00%	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 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	High		Avg	Avg	High
3/26	---	---	---	0	105	105	105	24	103	103	104	24	102	102	105	23	---	---	---	0			
3/27	---	---	---	0	104	104	105	24	102	103	103	24	102	102	106	23	---	---	---	0			
3/28	---	---	---	0	103	104	105	24	102	102	102	24	101	102	103	23	---	---	---	0			
3/29	---	---	---	0	105	107	109	24	103	104	105	24	102	103	105	23	---	---	---	0			
3/30	---	---	---	0	106	107	108	24	104	104	105	24	103	103	107	23	105	105	105	15			
3/31	---	---	---	0	105	105	106	24	103	104	104	24	102	103	104	23	104	105	105	24			
4/1	---	---	---	0	104	104	105	16	103	103	104	20	101	102	104	19	104	104	105	18			
4/2	---	---	---	0	105	105	106	16	104	105	105	24	102	103	104	16	104	105	105	24			
4/3	---	---	---	0	105	106	108	24	105	106	106	24	103	103	104	23	105	106	106	22			
4/4	---	---	---	0	105	106	107	23	106	107	107	24	104	105	107	23	105	106	106	22			
4/5	---	---	---	0	105	106	107	24	106	106	107	24	103	104	106	24	105	106	106	23			
4/6	---	---	---	0	106	107	108	24	106	106	107	24	103	103	105	24	105	106	106	23			
4/7	---	---	---	0	106	107	108	24	107	108	110	24	104	104	105	24	105	106	106	23			
4/8	---	---	---	0	107	107	108	24	106	106	107	24	103	104	105	24	106	106	107	23			

### 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	High		Avg	Avg	High
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0			
3/27	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0			
3/28	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0			
3/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0			
3/30	105	105	108	14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0			
3/31	105	106	107	24	105	105	105	14	105	105	105	14	---	---	---	0	---	---	---	0			
4/1	105	105	106	18	104	104	104	19	104	105	105	19	---	---	---	0	---	---	---	0			
4/2	105	105	106	24	104	105	106	24	104	105	106	24	---	---	---	0	---	---	---	0			
4/3	105	106	107	22	106	107	107	24	106	107	107	24	---	---	---	0	---	---	---	0			
4/4	105	106	107	22	107	108	108	22	108	108	109	22	---	---	---	0	---	---	---	0			
4/5	106	107	108	23	107	107	108	24	107	107	108	24	---	---	---	0	---	---	---	0			
4/6	105	106	107	23	107	107	109	24	106	107	108	24	---	---	---	0	---	---	---	0			
4/7	106	107	108	22	107	107	107	24	106	107	107	24	---	---	---	0	---	---	---	0			
4/8	105	106	106	23	106	107	107	24	106	107	107	24	---	---	---	0	---	---	---	0			

### 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	High		Avg	Avg	High
3/26	---	---	---	0	---	---	---	0	105	105	106	23	105	106	106	23	105	105	106	23			
3/27	---	---	---	0	---	---	---	0	104	104	105	23	104	105	105	23	104	104	105	23			
3/28	---	---	---	0	---	---	---	0	103	103	105	23	103	104	104	23	104	105	108	23			
3/29	---	---	---	0	---	---	---	0	105	107	110	23	104	105	105	23	105	106	107	23			
3/30	---	---	---	0	---	---	---	0	106	106	107	23	105	105	106	23	106	106	107	23			
3/31	---	---	---	0	---	---	---	0	104	104	104	23	104	104	104	23	104	104	104	23			
4/1	---	---	---	0	---	---	---	0	103	104	104	23	103	103	104	23	104	104	105	23			
4/2	---	---	---	0	---	---	---	0	104	104	105	23	103	104	104	23	104	104	105	23			
4/3	---	---	---	0	---	---	---	0	105	106	106	23	105	105	105	23	105	106	106	23			
4/4	103	103	104	20	106	107	108	20	---	---	---	0	---	---	---	0	---	---	---	0			
4/5	104	104	105	23	107	108	109	22	107	107	108	20	106	106	106	23	106	107	107	23			
4/6	103	104	105	24	107	107	108	24	108	109	112	23	106	106	107	23	106	106	107	23			
4/7	103	103	104	24	107	108	108	24	106	106	108	23	106	106	107	23	106	107	107	23			
4/8	103	104	104	24	107	108	108	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	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/26	104	105	105	23	---	---	---	0	106	106	107	24	100	101	101	24	102	102	102	24
3/27	103	104	104	23	---	---	---	0	105	105	106	24	100	100	101	24	101	102	103	24
3/28	103	103	104	23	---	---	---	0	104	105	106	24	100	101	102	24	102	103	104	24
3/29	104	105	105	23	---	---	---	0	107	108	110	24	101	102	104	24	103	104	105	24
3/30	105	105	105	23	---	---	---	0	106	107	109	24	101	102	103	24	103	103	104	24
3/31	104	104	104	23	---	---	---	0	102	105	105	24	100	100	101	24	101	102	102	24
4/1	103	103	103	23	102	102	102	1	103	104	107	20	100	101	101	20	102	102	103	20
4/2	103	104	104	23	103	104	105	24	104	105	106	24	101	102	103	24	102	104	105	24
4/3	104	105	105	23	104	104	105	24	105	106	107	24	101	102	103	24	102	103	104	24
4/4	---	---	---	0	104	105	105	22	104	105	105	22	101	102	103	22	103	104	105	23
4/5	105	106	106	23	104	105	105	24	104	105	106	24	100	101	101	24	102	102	102	24
4/6	105	106	106	23	104	104	105	24	105	106	106	24	101	102	102	24	102	103	104	24
4/7	106	106	106	23	104	105	106	24	103	104	105	24	101	102	102	24	102	103	104	24
4/8	---	---	---	0	105	105	106	24	103	103	105	24	101	102	103	24	102	102	103	24

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

Date	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/26	100	101	102	24	102	102	103	24	102	103	104	24	102	102	103	24	102	103	103	24
3/27	100	101	102	24	100	101	101	24	101	101	102	24	101	101	102	24	101	102	103	24
3/28	101	103	105	24	100	101	103	24	99	100	100	24	101	102	103	24	100	101	101	24
3/29	103	105	107	24	102	103	104	24	101	102	102	24	104	105	106	24	102	103	103	24
3/30	102	104	106	24	102	102	103	24	102	102	102	24	103	104	106	24	102	103	103	24
3/31	101	102	103	24	101	101	101	24	101	101	102	24	101	101	101	24	101	101	102	24
4/1	101	102	103	20	101	102	102	16	101	101	102	16	100	100	101	16	101	101	104	16
4/2	102	104	106	24	103	103	105	24	102	103	103	24	102	104	104	24	101	102	102	24
4/3	102	104	105	24	103	104	105	24	104	107	111	24	102	103	103	24	102	102	103	24
4/4	103	104	106	22	103	104	107	22	111	111	112	22	102	102	103	22	102	102	103	22
4/5	101	102	103	24	103	104	105	24	110	115	120	24	103	103	104	24	102	102	104	24
4/6	102	103	105	24	105	106	107	24	112	114	116	24	104	104	105	24	103	104	104	24
4/7	101	103	104	24	105	105	106	20	110	112	115	20	104	105	106	24	106	109	116	24
4/8	101	102	104	24	104	105	107	24	109	114	117	24	106	107	108	24	111	116	117	24

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

Date	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/26	103	103	104	24	103	103	104	24	104	104	105	24	104	104	105	24	105	105	105	24
3/27	102	103	103	24	102	102	103	24	103	103	104	24	103	103	105	24	103	104	104	24
3/28	102	103	105	24	101	101	102	24	103	104	106	24	102	102	103	24	104	106	108	24
3/29	103	104	107	24	102	103	103	24	104	105	106	24	103	103	104	24	104	105	105	24
3/30	103	104	105	24	102	102	103	24	103	104	104	24	103	104	104	24	103	104	104	24
3/31	102	102	103	24	103	105	121	24	103	103	103	24	102	103	103	24	104	105	105	24
4/1	102	102	102	16	101	101	102	15	102	102	104	16	102	102	102	16	104	104	107	16
4/2	102	103	104	24	102	103	103	24	102	103	103	24	102	102	103	24	103	104	105	24
4/3	102	103	104	24	103	103	103	24	103	103	103	24	103	103	103	24	104	105	106	24
4/4	102	103	105	23	102	102	103	23	104	105	107	22	103	104	104	22	106	108	111	22
4/5	103	104	105	24	102	102	102	22	104	105	106	24	103	104	104	24	106	108	109	24
4/6	103	103	104	24	102	102	102	22	104	105	106	24	103	103	104	24	107	108	110	24
4/7	102	103	104	24	101	102	102	24	103	103	104	24	102	103	103	24	106	108	108	24
4/8	103	103	103	24	101	101	102	23	103	103	104	24	102	103	103	24	106	108	112	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>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
3/26	105	105	106	24	105	105	106	24	106	106	106	24	105	105	106	24	105	105	105	24
3/27	104	104	104	24	104	104	105	24	105	105	106	24	104	105	105	24	104	104	105	24
3/28	103	104	105	24	104	104	104	24	105	106	106	24	104	104	105	24	103	104	104	24
3/29	105	106	107	24	105	106	106	24	106	107	108	24	105	105	106	24	105	106	106	24
3/30	104	105	108	24	104	105	105	24	105	105	106	24	104	105	105	24	104	105	105	24
3/31	103	104	105	24	104	104	105	24	103	104	104	24	103	103	103	24	103	103	103	24
4/1	104	104	105	16	104	105	105	20	103	103	103	18	102	102	103	16	103	103	103	18
4/2	105	105	106	24	104	104	105	24	104	105	105	24	103	103	103	24	103	104	104	24
4/3	105	106	106	24	104	105	105	24	105	105	106	22	104	104	104	24	104	104	105	22
4/4	106	106	107	22	105	105	106	22	105	105	105	22	104	104	105	23	104	105	105	22
4/5	107	107	108	24	105	105	106	24	104	104	105	23	103	104	104	24	104	104	104	23
4/6	106	106	107	24	105	105	106	24	104	104	104	23	104	104	105	24	103	103	104	23
4/7	106	106	107	24	105	105	105	24	104	104	104	23	103	103	104	24	104	104	105	23
4/8	106	106	109	24	105	105	105	24	104	105	105	23	104	104	104	24	104	104	104	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>				<u>Bonneville</u>				<u>Warrendale</u>				<u>CamasWashugal</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>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
3/26	104	104	105	23	105	105	105	24	105	105	105	24	104	105	106	23				
3/27	103	103	104	23	103	104	105	24	104	104	105	24	103	104	105	23				
3/28	102	103	103	23	103	104	104	24	104	104	105	24	104	105	106	23				
3/29	104	105	106	23	104	105	105	24	104	105	106	24	104	105	106	23				
3/30	104	104	104	23	104	105	105	24	104	105	105	24	104	105	106	23				
3/31	102	102	103	23	103	104	104	24	104	104	104	24	105	106	107	23				
4/1	102	103	103	19	103	103	104	18	103	104	104	18	104	105	107	19				
4/2	103	104	104	23	103	104	104	24	104	105	105	24	105	106	107	23				
4/3	104	104	105	23	104	104	105	22	105	105	106	22	105	106	107	23				
4/4	104	104	105	23	105	105	106	22	105	106	107	22	105	107	108	22				
4/5	103	103	104	24	104	104	105	23	105	105	105	23	106	107	107	24				
4/6	103	103	103	24	103	104	104	23	104	104	105	23	105	106	107	24				
4/7	103	104	104	24	103	103	104	23	104	104	104	23	105	106	107	24				
4/8	103	104	105	24	103	104	104	23	104	105	106	23	105	106	107	24				

## Two-Week Summary of Passage Indices

Date	COMBINED YEARLING CHINOOK											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2004	42	1,193	477	381	23	70	---	---	---	---	---	268
03/27/2004	---	---	402	---	---	230	---	---	---	---	---	276
03/28/2004 *	---	---	4,278	---	---	240	---	---	---	---	---	226
03/29/2004 *	30	1,393	6,648	164	21	330	---	---	---	---	---	193
03/30/2004 *	12	1,558	3,956	179	28	430	---	---	---	---	---	316
03/31/2004 *	36	1,173	1,417	86	15	770	---	---	---	---	---	351
04/01/2004 *	21	882	10,069	529	14	1,080	---	---	0	---	---	665
04/02/2004 *	0	1,306	7,822	678	15	1,682	349	420	5	---	590	338
04/03/2004 *	---	---	1,880	---	---	6,250	281	280	1	322	990	405
04/04/2004 *	---	---	670	---	---	7,312	200	140	1	---	1,840	514
04/05/2004 *	27	1,015	719	132	18	5,127	160	90	13	500	1,130	550
04/06/2004 *	35	1,033	633	166	45	7,475	310	150	67	---	1,080	800
04/07/2004 *	4	2,176	1,161	339	17	12,773	520	230	91	526	1,300	916
04/08/2004 *	---	1,669	1,195	355	18	19,860	452	48	51	---	2,060	1,044
04/09/2004	---	---	---	---	---	12,319	---	---	20	648	1,650	---
<b>Total:</b>	<b>207</b>	<b>13,398</b>	<b>41,327</b>	<b>3,009</b>	<b>214</b>	<b>75,948</b>	<b>2,272</b>	<b>1,358</b>	<b>249</b>	<b>1,996</b>	<b>10,640</b>	<b>6,862</b>
<b># Days:</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>14</b>
<b>Average:</b>	<b>23</b>	<b>1,340</b>	<b>2,952</b>	<b>301</b>	<b>21</b>	<b>5,063</b>	<b>325</b>	<b>194</b>	<b>28</b>	<b>499</b>	<b>1,330</b>	<b>490</b>
<b>YTD</b>	<b>677</b>	<b>21,358</b>	<b>43,966</b>	<b>4,239</b>	<b>284</b>	<b>75,948</b>	<b>2,272</b>	<b>1,358</b>	<b>249</b>	<b>1,996</b>	<b>10,640</b>	<b>13,780</b>

Date	COMBINED SUBYEARLING CHINOOK											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2004	0	0	0	0	1	0	---	---	---	---	---	11,284
03/27/2004	---	---	0	---	---	10	---	---	---	---	---	17,070
03/28/2004 *	---	---	0	---	---	0	---	---	---	---	---	15,265
03/29/2004 *	0	0	0	0	0	10	---	---	---	---	---	16,509
03/30/2004 *	10	0	0	0	1	0	---	---	---	---	---	10,628
03/31/2004 *	2	0	0	0	3	0	---	---	---	---	---	7,643
04/01/2004 *	0	0	0	0	3	10	---	---	75	---	---	7,072
04/02/2004 *	17	0	0	0	2	0	0	0	116	---	0	5,678
04/03/2004 *	---	---	0	---	---	0	0	0	47	60	0	6,311
04/04/2004 *	---	---	0	---	---	0	0	0	16	---	0	2,694
04/05/2004 *	0	0	0	0	3	18	0	0	45	15	0	2,032
04/06/2004 *	0	0	0	0	10	0	0	0	16	---	0	1,322
04/07/2004 *	0	0	0	0	7	0	0	10	36	45	10	2,256
04/08/2004 *	---	0	0	0	4	143	0	0	118	---	0	1,871
04/09/2004	---	---	---	---	---	32	---	---	26	30	0	---
<b>Total:</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>223</b>	<b>0</b>	<b>10</b>	<b>495</b>	<b>150</b>	<b>10</b>	<b>107,635</b>
<b># Days:</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>14</b>
<b>Average:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>55</b>	<b>38</b>	<b>1</b>	<b>7,688</b>
<b>YTD</b>	<b>77</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>39</b>	<b>223</b>	<b>0</b>	<b>10</b>	<b>495</b>	<b>150</b>	<b>10</b>	<b>901,691</b>

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>  
this means that one or more of the sites on this date had an incomplete or biased sample.

For clip information see: [Daily Catch Report](#)

For sockeye and yearling chinook (Snake only) race information see: [Current Passage Index Query](#)

If the text appears garbled, please hit the refresh button on your browser

NOTE for 2002 Lower Monumental Data: Due to the non-standard operation of Lower Monumental this year, the passage index reliability is in question and is being looked into.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

## Two-Week Summary of Passage Indices

Date	COMBINED COHO											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2004	0	0	0	0	0	10	---	---	---	---	---	48
03/27/2004	---	---	0	---	---	0	---	---	---	---	---	59
03/28/2004	*	---	0	---	---	20	---	---	---	---	---	49
03/29/2004	*	0	0	0	0	1	20	---	---	---	---	116
03/30/2004	*	0	0	0	0	2	20	---	---	---	---	59
03/31/2004	*	0	0	0	0	2	10	---	---	---	---	43
04/01/2004	*	0	0	0	0	0	30	---	---	0	---	69
04/02/2004	*	0	0	0	0	0	10	0	0	0	---	88
04/03/2004	*	---	---	0	---	---	30	0	0	0	0	109
04/04/2004	*	---	---	0	---	---	13	0	0	0	---	130
04/05/2004	*	0	0	0	0	0	36	0	0	0	0	88
04/06/2004	*	0	0	0	0	0	0	0	0	0	---	164
04/07/2004	*	0	0	0	0	0	16	0	0	0	5	196
04/08/2004	*	---	0	0	0	1	48	0	0	0	---	342
04/09/2004		---	---	---	---	---	0	---	---	0	0	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>263</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>50</b>	<b>1,560</b>
<b># Days:</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>111</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>263</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>50</b>	<b>2,936</b>

Date	COMBINED STEELHEAD											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/26/2004	0	1	27	0	2	110	---	---	---	---	---	76
03/27/2004	---	---	26	---	---	160	---	---	---	---	---	49
03/28/2004	*	---	14	---	---	190	---	---	---	---	---	39
03/29/2004	*	1	0	10	1	9	620	---	---	---	---	58
03/30/2004	*	0	0	10	0	21	930	---	---	---	---	89
03/31/2004	*	1	0	1	0	20	830	---	---	---	---	86
04/01/2004	*	0	6	22	0	16	1,010	---	---	0	---	233
04/02/2004	*	1	3	25	1	4	1,412	44	60	0	---	147
04/03/2004	*	---	---	1	---	---	2,850	83	70	0	170	138
04/04/2004	*	---	---	2	---	---	2,664	76	190	0	---	123
04/05/2004	*	4	22	5	1	10	2,141	140	20	0	145	211
04/06/2004	*	3	19	6	0	6	1,811	125	90	0	---	308
04/07/2004	*	0	27	19	2	14	2,262	435	110	1	80	305
04/08/2004	*	---	25	52	1	9	2,762	691	66	5	---	314
04/09/2004		---	---	---	---	---	2,316	---	---	1	170	---
<b>Total:</b>	<b>10</b>	<b>103</b>	<b>220</b>	<b>6</b>	<b>111</b>	<b>22,068</b>	<b>1,594</b>	<b>606</b>	<b>7</b>	<b>565</b>	<b>1,340</b>	<b>2,176</b>
<b># Days:</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>14</b>
<b>Average:</b>	<b>1</b>	<b>10</b>	<b>16</b>	<b>1</b>	<b>11</b>	<b>1,471</b>	<b>228</b>	<b>87</b>	<b>1</b>	<b>141</b>	<b>168</b>	<b>155</b>
<b>YTD</b>	<b>16</b>	<b>109</b>	<b>373</b>	<b>19</b>	<b>126</b>	<b>22,068</b>	<b>1,594</b>	<b>606</b>	<b>7</b>	<b>565</b>	<b>1,340</b>	<b>2,514</b>

\* See sampling comments

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

## Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE											BO2
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	
	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/26/2004	0	0	0	0	0	0	---	---	---	---	---	0
03/27/2004	---	---	0	---	---	20	---	---	---	---	---	0
03/28/2004 *	---	---	0	---	---	0	---	---	---	---	---	0
03/29/2004 *	0	0	0	0	0	0	---	---	---	---	---	0
03/30/2004 *	0	0	0	0	0	0	---	---	---	---	---	0
03/31/2004 *	0	0	0	0	0	20	---	---	---	---	---	0
04/01/2004 *	0	0	0	0	0	0	---	---	0	---	---	9
04/02/2004 *	0	0	0	0	0	10	1	0	3	---	0	7
04/03/2004 *	---	---	0	---	---	10	0	0	2	40	0	0
04/04/2004 *	---	---	0	---	---	13	1	0	0	---	0	0
04/05/2004 *	0	0	0	0	0	18	0	0	0	65	0	0
04/06/2004 *	0	0	0	0	0	53	0	0	2	---	0	18
04/07/2004 *	0	0	0	0	0	111	0	0	1	30	0	0
04/08/2004 *	---	0	0	0	0	16	0	0	11	---	0	17
04/09/2004	---	---	---	---	---	0	---	---	16	25	10	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271</b>	<b>2</b>	<b>0</b>	<b>35</b>	<b>160</b>	<b>10</b>	<b>51</b>
<b># Days:</b>	<b>9</b>	<b>10</b>	<b>14</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>40</b>	<b>1</b>	<b>4</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>271</b>	<b>2</b>	<b>0</b>	<b>35</b>	<b>160</b>	<b>10</b>	<b>68</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

ENT (Collection) = Entiat River Trap : 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.

IMN data collected for the FPC by the Nez Perce Tribe. ENT data collected for the FPC by USFWS.

## Two Week Transportation Summary

Source: Fish Passage Center

Updated:

4/9/04 11:17 AM

**03/27/04 TO 04/09/04**

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	150	51,930	220	190	16,960	69,450
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	129	43,991	220	181	15,496	60,017
	Sum of TotalProjectMortalities	1	286	0	9	25	321
<b>LGS</b>	Sum of NumberCollected		2,102		2	1,334	3,438
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		0		0	0	0
	Sum of Numbertrucked		2,096		2	1,333	3,431
	Sum of TotalProjectMortalities		5		0	1	6
<b>LMN</b>	Sum of NumberCollected	10	1,358			606	1,974
	Sum of NumberBarged	0	0			0	0
	Sum of NumberBypassed	0	0			0	0
	Sum of Numbertrucked	10	1,352			604	1,966
	Sum of TotalProjectMortalities	0	6			2	8
<b>MCN</b>	Sum of NumberCollected	150	1,995	5	160	565	2,875
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	150	1,986	5	160	565	2,866
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	0	9	0	0	0	9
Total Sum of NumberCollected		310	57,385	225	352	19,465	77,737
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		150	1,986	5	160	565	2,866
Total Sum of Numbertrucked		139	47,439	220	183	17,433	65,414
Total Sum of TotalProjectMortalities		1	306	0	9	28	344



### YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/9/04 11:17 AM

TO: 04/09/04

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
<b>LGR</b>	Sum of NumberCollected	150	51,930	220	190	16,960	69,450	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of NumberTrucked	129	43,991	220	181	15,496	60,017	
	Sum of TotalProjectMortalities	1	286	0	9	25	321	
<b>LGS</b>	Sum of NumberCollected		2,102			2	1,334	3,438
	Sum of NumberBarged		0			0	0	0
	Sum of NumberBypassed		0			0	0	0
	Sum of NumberTrucked		2,096			2	1,333	3,431
	Sum of TotalProjectMortalities		5			0	1	6
<b>LMN</b>	Sum of NumberCollected	10	1,358			606	1,974	
	Sum of NumberBarged	0	0			0	0	
	Sum of NumberBypassed	0	0			0	0	
	Sum of NumberTrucked	10	1,352			604	1,966	
	Sum of TotalProjectMortalities	0	6			2	8	
<b>MCN</b>	Sum of NumberCollected	150	1,995	5	160	565	2,875	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	150	1,986	5	160	565	2,866	
	Sum of NumberTrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	0	9	0	0	0	9	
Total Sum of NumberCollected		310	57,385	225	352	19,465	77,737	
Total Sum of NumberBarged		0	0	0	0	0	0	
Total Sum of NumberBypassed		150	1,986	5	160	565	2,866	
Total Sum of NumberTrucked		139	47,439	220	183	17,433	65,414	
Total Sum of TotalProjectMortalities		1	306	0	9	28	344	

**Cumulative Adult Passage at Mainstem Dams Through: 04/08**

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	2,375	0	44,065	165	14,428	26	0	0	0	0	0	0	0	0	0	0	0	0
TDA	817	2	18,650	23	5,380	5	0	0	0	0	0	0	0	0	0	0	0	0
JDA	421	1	9,577	5	2,449	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	101	1	5,814	10	1,193	2	0	0	0	0	0	0	0	0	0	0	0	0
IHR	119	5	3,272	0	499	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	69	0	1,455	2	183	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	62	0	383	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	21	0	60	0	25	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			
	2004		2003		10-Yr Avg.		2004	2003	10-Yr Avg.	2004	2003	10-Yr Avg.	Wild 2004
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	1,714	1,854	1,256	305	
TDA	0	0	0	0	0	0	0	0	385	488	371	176	
JDA	0	0	0	0	0	0	0	0	580	676	1,152	281	
MCN	0	0	0	0	0	0	0	0	356	783	728	125	
IHR	0	0	0	0	0	0	0	0	797	960	810	281	
LMN	0	0	0	0	0	0	0	0	720	1,288	838	362	
LGS	0	0	0	0	0	0	0	0	785	1,086	719	374	
LWG	0	0	0	0	0	0	0	0	5,860	14,530	4,593	1,672	
PRD	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	
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 missing 03/28; IHR is missing 03/29 to 03/31.

\*\*PRD is not reporting 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.

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: 04/09/04

BON counts from January 1, 2004 to March 14, 2004 (our traditional counts begin March 15)

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
156	0	1,489	238

