



## Fish Passage Center

# Weekly Report #02 - 5

April 12, 2002

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### SUMMARY OF EVENTS:

- **Precipitation over the beginning of April has ranged between 2% and 61% of the average precipitation recorded between 1971 and 2000.**
- **The Hungry Horse and Brownlee reservoirs did not reach their April 10<sup>th</sup> Biological Opinion targets.**
- **The Grand Coulee and Dworshak reservoirs did reach their April 10<sup>th</sup> Biological Opinion targets.**
- **A flood control shift is continues to be implemented between the Dworshak and Grand Coulee reservoirs.**

**Water Supply:** Over the end of March and the start of April, the Columbia Basin has been drier than the average of the years 1971-2000. Precipitation has ranged from only 2% to 61% of average over the period from April 1-9, 2002 (Table 1). Because of limited precipitation over the past several weeks, cumulative WY 2002 precipitation observations (% of average) have dropped over much of the Columbia Basin. However, WY 2002 remains approximately normal in terms of cumulative precipitation.

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

Location	April 1-9, 2002		Cumulative 10-1-01 to 4-09-02	
	Observed (inches)	% Avg	Observed (inches)	% Avg
Columbia Above Coulee	0.29	58	14.42	98
Snake R. Above Ice Harbor	0.06	13	9.81	91
Columbia Above The Dalles	0.17	35	14.36	97
Kootenai	0.23	44	12.71	84
Clark Fork	0.19	51	10.08	108
Flathead	0.29	61	13.08	103
Pend Oreille/Spokane	0.18	26	24.45	117
Central Washington	0.02	12	5.66	93
Snake R. Plain	0.01	2	4.73	74
Clearwater	0.24	30	21.19	109
SW Washington Cascades/Cowlitz	0.44	27	60.64	110
Willamette Valley	0.26	18	48.24	103

On April 8, 2002, the NWRFC released the April Final water supply forecast. Table 2 displays the 2002 February, March, and April final runoff volume forecasts for multiple reservoirs. Of the ten locations displayed in Table 2, five of the sites reported increasing forecasts and five sites reported a decreasing forecast between the March Final and April Final water supply forecasts. In particular, the Hungry Horse, Libby and Grand Coulee reservoirs reported increases of 7% (150 Kaf), 4% (280 Kaf), and 2% (1100 Kaf), respectively. On the other hand, the Brownlee, Lower Granite, and The Dalles reservoirs reported decreases of 7% (460 Kaf), 5% (1500 Kaf), and 1% (900 Kaf), respectively.

**Table 2.** February, March, and April 2002 Final Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Site	February Final		March Final		April Final	
	Runoff Volume (KAF)	%of Avg	Runoff Volume (KAF)	%of Avg	Runoff Volume (KAF)	%of Avg
Mica (April-Sept)	11500	92	11300	90	11700	94
Hungry Horse (April-Sept)	1910	90	1910	90	2060	97
Libby (April-Sept)	6470	97	6290	95	6570	99
Grand Coulee (Jan-July)	60800	97	60000	95	61100	97
The Dalles (Jan-July)	101000	94	97300	91	96400	90
Brownlee (April-July)	4570	72	4090	65	3630	58
Dworshak (April-July)	3000	113	2950	112	3050	115
Lower Granite (Jan-July)	28200	94	25700	86	24200	81
Heise (ID) (April-July)	2960	83	2710	76	2670	75
Weiser (ID) (April-July)	4090	71	3630	63	3210	56

Operations have varied at the major reservoirs within the Columbia and Snake River Basins. April 10<sup>th</sup> Biological Opinion (BiOp) reservoir targets have been estimated by interpolating between the March 31<sup>st</sup> and April 15<sup>th</sup> flood control targets at the Hungry Horse, Grand Coulee, Brownlee, and Dworshak reservoirs (Table 3). The Hungry Horse and Brownlee reservoirs did not reach their estimated April 10<sup>th</sup> BiOp targets, being 20.4 and 9.4 feet below the BiOp targets, respectively (Table 3). Both Grand Coulee and Dworshak reached their BiOp targets.

**Table 3.** USACE determined flood control targets issued in April of 2002 and estimated April 10<sup>th</sup> BiOp targets along with actual reservoir elevations for Libby, Hungry Horse, Grand Coulee, Brownlee, and Dworshak (see next column).

Reservoir	Actual Elevation 4/10/02 (ft. Above MSL)	Estimated 4/10/02 BiOp Target (ft. Above MSL)	USACE Determined 4/15/02 Flood Control Target (ft. Above MSL)*
Libby	2370.8	na	2354.9
Hungry Horse	3509.1	3529.5	3520.7
Grand Coulee**	1264.1	1263.1	1253.9
Brownlee	2045.7	2055.1	2062.9
Dworshak	1507.0	1495	1500.8

\* Flood Control Target calculated using the April Final Water Supply Forecast

\*\*The Flood control targets at Grand Coulee reflect the flood control shift from Dworshak

A flood control shift between the Dworshak and Grand Coulee reservoirs continues to be implemented. Essentially, USACE may potentially shift an amount of water at Dworshak equivalent to the difference in local and system flood control. To date, USACE has shifted only a portion of the potential volume of water from Dworshak to Grand Coulee. Over the first eleven days of April 2002, Dworshak has been drafting water at or near the maximum powerhouse outflow of approximately 10.5 Kcfs and spilling between 3.8 and 5.0 kcfs of water. Over the mentioned eleven-day period, the Dworshak reservoir has dropped 6.9 feet in elevation.

The Libby reservoir has been operating at a minimum outflow of 4 kcfs over the past month. Over the past six days (April 6-11, 2002), inflows have increased and are larger than outflows, resulting in approximately one-half foot of refill. Furthermore, Table 2 shows that the April final water supply forecast at Libby has increased 4% of average and 280 Kaf relative to the March final forecast. The increased water supply forecast appears promising in terms of refill. As mentioned last week, USACE has released March 2002 QADJ modeling results that show Libby to have only a 7% chance of refilling by June 30<sup>th</sup> of 2002, but an 88% chance of refill by the end of July.

According to the 2000 Biological opinion, the minimum outflow at the Hungry Horse reservoir should be 0.9 kcfs over the month of April. Over the first part of April, outflows at Hungry Horse ranged between 1.8 and 2.2 kcfs to meet the Columbia Falls minimum flow requirements.

Over the past week, flow objectives have been determined based upon the April final water supply forecast. Based upon the April final forecasts, flow objectives will be 97 kcfs at Lower Granite between 4/3/02 and 6/20/02, 246 kcfs at McNary between 4/10/02 and 6/30/02, and 135 kcfs at Priest Rapids from 4/10/02 and 6/30/02. The flow objectives are intended to represent seasonal averages over the designated time periods. Total outflows are currently (April 11, 2002) 76.7 kcfs at Lower Granite, 170.0 kcfs at McNary, and 77.0 kcfs at Priest Rapids.

Over the beginning of WY 2002, reservoirs on the Upper Snake River have been consistently refilling, yet many are behind where they are ordinarily in terms refill. Currently, as of April 11<sup>th</sup>, 2002, the entire Upper Snake River System is at 55% of capacity. Individually, American Falls is at 84% of capacity, Palisades is at 36% of capacity, Jackson Lake is at 21% of capacity, Island Park is at 85% of capacity, and Grassy Lake is at 65% of capacity.

**Spill.** Spill has been occurring daily at Dworshak Dam as the project releases water to achieve the end of April flood control elevation. Spill at Lower Granite Dam has been adjusted over the past week so as to not exceed the 120% TDG level at the tailrace monitor. The spill pattern was also altered to include all eight spill bays for this week only, to address the TDG levels. The removable spillway weir testing will begin next Monday and it is anticipated that TDG levels will likely decrease under the test conditions. Spill began at Little Goose Dam on the evening of April 5, 2002. Spill is being provided for 24 hours daily, rather than the 12 hours specified in the 2000 Biological Opinion. This operation is will continue till May 1, during which time Lower Monumental Dam will operate in primary bypass mode. After May 1, Little Goose will return to the Biological Opinion levels of spill

and Lower Monumental Dam will begin collecting fish for transportation. No spill will occur at Lower Monumental Dam in 2002 unless flows exceed hydraulic capacity. This operation was agreed to by the federal agencies to address the decrease in juvenile survival expected as a result of terminating spill at Lower Monumental Dam this year to conduct repairs in the stilling basin due to erosion. The hourly spill volume at Little Goose Dam has been decreased to address the TDG levels downstream at the Lower Monumental forebay. Spill at Ice Harbor Dam began at 1800 hours on April 10, 2002.

Spill at McNary, John Day, The Dalles and Bonneville dams was initiated at 1800 hours on **April 10<sup>th</sup>**. At McNary and The Dalles dams, spill will be provided according to the Biological Opinion. At John Day and Bonneville dams daytime spill tests will be conducted on alternating days with Biological Opinion spill levels.

Spill began at Wells Dam in the Mid Columbia River on April 11<sup>th</sup>.

The smolt monitoring program sampling for gas bubble trauma has begun. A few fish were observed with signs of GBT at Rock Island Dam.

**Smolt Monitoring:** Lower Monumental Dam went into primary bypass mode beginning Monday, April 8. Sampling for fish condition and GBT will be done one day per week until May 1, when fish collection for transportation will resume. At that time daily sampling will be begin again, in conjunction with that operation.

At the Snake River basin SMP traps the yearling chinook continued to be captured at the White Bird Trap in the past week with a weekly high of 3,044 on 4/9 and weekly total of 13,421 which is a 33% increase over the previous 7 days. At the Imnaha Trap a total of 2,521 yearling chinook were captured this week. At the Grande Ronde Trap this past 7-days a total of 1,395 yearling chinook were captured, a large increase compared to the 233 captured last week. All traps are reporting small numbers of steelhead this week as well, except for the Grand Ronde Trap where an average of 114 steelhead per day were captured over the past 7-days.

At Lower Granite Dam the passage index continued upward for both yearling chinook and steelhead this past week. Yearling chinook rose from near 1,500 on 4/6 to above 6,700 on 4/11. Steelhead index also climbed from 1,300 on 4/6 to nearly 6,000 by 4/11. Sockeye numbers at Lower Granite continued to increase over the past week with the average daily index of 172 this past week compared to 37 for the previous week. No Coho were collected this week but subyearling chinook were showing up in small numbers again this week.

Rock Island Dam had 119 yearling chinook on 4/11, the first day of collecting more than 10 fish this season. McNary also saw an increase in juvenile migrants this past week, with an index of less than 600 yearling chinook on 4/6 ending the week at over 1,700 on 4/11. Similarly, steelhead numbers also increased with an average daily index of 529 this week compared to 483 last week for a 10% increase. Subyearling indices were low but increasing this past week with average of nearly 160 per day.

At John Day Dam passage index for yearling chinook averaged 460 per day this week compared to 230 per day last. Steelhead indices averaged 430 this week versus 160 last. Coho, subyearling chinook and sockeye were captured in low numbers this past week. At Bonneville Dam yearling chinook, and steelhead numbers increased this past week with an average daily index this week of 1,200 chinook and 200 steelhead versus 300 and 10 for last week respectively. An estimated 2,600 subyearling chinook passed the project each day this week versus 59,000 per day last week after the release from Spring Creek Hatchery.

**Adult Fish Passage:** All COE projects are now counting adult fish. The PUD projects on the Mid-Columbia River will begin on or near April 15 at Priest Rapids, Rock Island and Rocky Reach dams with Wells Dam initiating fish counting near May 1. The FPC Weekly Report will list in a Table; the adult fish counts for the week with the previous year (2001) and the 10-year average through the same ending date so the reader can compare passage throughout the year for the individual species.

At Bonneville Dam, adult spring chinook numbers have ranged between 584 and 2096 per day with a total of 12,995 counted through April 11. This compares to 102,773 in 2001 and 18,463 for the 10-year average to-date. This year's total is about 13% of the 2001 count and about 70% of the 10-year average at this date in the chinook run. The projected total number of adult spring chinook expected to return in 2002 is 333,700, anticipated to be the second largest return since counting began at Bonneville Dam in 1938. At this point only 4% of the expected number has returned, whereas last year (2001) 32% of the expected return had been counted by this date. A total of 3,583 adult spring chinook have been counted at The Dalles Dam, about 9% and 64% of last years' count and the ten-year average, respectively. A total of 1,039 adult spring chinook have made it past McNary Dam, with 243 of those counted at Ice Harbor Dam. This is 5% and 34% of the 2001 and 10-year average, respectively. Twenty-six adult spring chinook have been counted at Lower Granite Dam thus far this spring, which are 6% and 53% of the 2001 and 10-year average to-date, respectively.

Winter steelhead continue to pass Bonneville Dam with a small number of summer steelhead still moving upstream to spawning sites. The total counted through April 11 was 2,250, and was greater than the 2001 total and the 10-year average. At Lower Granite Dam, steelhead passage ranged between 229 and 786 fish per day with the season total through April 11 of 7,605. This compares to about 4,615 in 2001 and 3,684 for the 10-year average.

**Hatchery Releases:** During the past two weeks (3/29-4/11), approximately 22.6 million chinook, coho, and steelhead smolts have been, or are continuing to be, released from state, federal, and tribal facilities in the Columbia River basin. An additional 15.3 million chinook, coho, and steelhead smolts will begin to be released during the next two-week period (4/12-4/25). The upcoming hatchery releases include: IDFG steelhead released into the Clearwater and Salmon rivers; ODFW steelhead released into the Imnaha River and spring chinook released into the Deschutes River; Umatilla tribe's steelhead and spring chinook released into the Umatilla River; USFWS spring chinook released into the Wind, Little White Salmon, Wenatchee, and Methow rivers, coho released into Little White Salmon River, and steelhead released into the Clearwater, Salmon, and Methow rivers; WDFW spring/summer chinook released into the mainstem Mid-Columbia, Wenatchee, and Methow rivers, summer steelhead released into the Walla Walla, Wenatchee, Methow, and Okanogan rivers, and winter steelhead released into the White Salmon River; and Yakima tribe's coho released into the Wenatchee and Methow rivers, and subyearling chinook released into the Yakima River. In addition to these new releases in the next two weeks, there is the continuation of the approximate 11.8 million chinook, coho, and steelhead smolts which started to be released during the last two-week period. These continuing releases include smolts from the state, federal, and tribal entities listed above plus: Colville tribe's spring chinook released into the Okanogan River; Nex Perce tribe's spring chinook released into the Clearwater and Wallowa rivers, yearling fall chinook released into the Clearwater and mainstem Snake rivers, and steelhead released into the Clearwater and Salmon rivers; and Warm Spring tribe's spring chinook released in the Hood River. Of the total 27.1 million smolts included in the new and continuing releases over the next two weeks, approximately 51 % occurred in the Snake River basin, 31 % occurred in the Mid-Columbia River basin (including Walla Walla River), and 18 % occurred in the lower Columbia River basin (between McNary and Bonneville dams).

**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
03/29/02	47.4	0.0	46.0	0.0	47.8	0.0	50.2	0.0	55.2	0.0	53.2	0.0	53.8	0.0
03/30/02	31.7	0.0	33.3	0.0	34.7	0.0	36.3	0.0	37.6	0.0	44.9	0.0	54.1	0.0
03/31/02	24.0	0.0	28.4	0.0	28.5	0.0	30.1	0.0	31.3	0.0	48.9	0.0	53.6	0.0
04/01/02	57.0	0.0	53.5	0.0	56.7	0.0	58.5	0.0	60.2	0.0	57.0	4.7	53.3	0.0
04/02/02	66.4	0.0	66.1	0.0	66.1	0.0	67.5	0.0	69.7	0.0	50.9	5.9	53.5	0.0
04/03/02	55.0	0.0	61.3	0.0	59.7	0.0	61.6	0.0	65.0	0.0	63.6	6.8	58.8	0.0
04/04/02	52.2	0.0	51.8	0.0	52.9	0.0	51.7	0.0	54.9	0.0	59.4	7.0	64.7	0.0
04/05/02	59.3	0.0	56.2	0.0	58.9	0.0	58.3	0.0	58.9	0.0	58.0	6.4	67.2	0.0
04/06/02	31.2	0.0	35.5	0.0	38.3	0.0	39.9	0.0	43.1	0.0	56.1	6.4	54.3	0.0
04/07/02	28.2	0.0	32.9	0.0	33.4	0.0	37.8	0.0	40.2	0.0	48.9	5.5	53.8	0.0
04/08/02	42.9	0.0	38.9	0.0	51.7	0.0	56.8	0.0	59.6	0.0	58.3	0.0	54.3	0.0
04/09/02	42.8	0.0	49.9	0.0	59.6	0.0	61.5	0.0	64.6	0.0	56.4	0.0	60.0	0.0
04/10/02	68.1	0.0	66.5	0.0	51.1	0.4	46.4	0.0	55.1	0.0	79.1	0.0	83.5	0.0
04/11/02	111.9	0.0	113.2	0.0	115.1	19.6	106.6	11.3	104.8	0.0	74.1	3.4	77.0	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
03/29/02	10.8	0.0	18.6	26.9	67.0	0.0	65.2	0.0	69.4	0.0	72.6	0.0
03/30/02	10.8	0.0	17.7	25.7	57.1	0.0	60.7	0.0	66.6	0.0	66.0	0.0
03/31/02	10.8	0.0	17.8	27.7	56.9	0.0	59.1	0.0	63.7	0.0	62.2	0.0
04/01/02	14.6	3.8	17.2	25.2	67.6	0.0	73.6	0.0	78.1	0.0	76.8	0.0
04/02/02	15.6	4.9	18.6	23.0	60.9	0.0	73.2	0.0	84.1	0.0	84.4	0.0
04/03/02	15.7	5.0	18.1	11.1	60.8	13.4	61.1	0.0	66.2	0.0	65.7	0.0
04/04/02	15.6	4.8	17.6	9.4	53.9	26.8	51.4	0.0	53.8	0.0	54.3	0.0
04/05/02	15.5	4.7	18.7	18.0	55.9	28.5	52.5	12.0	55.3	0.0	55.1	0.0
04/06/02	15.3	4.5	18.8	19.5	66.3	27.1	63.6	47.3	70.6	0.0	69.5	0.0
04/07/02	13.3	3.9	18.1	15.8	72.1	35.3	67.0	45.7	68.3	0.0	67.2	0.0
04/08/02	15.3	4.5	19.1	19.3	71.1	28.6	67.0	46.0	70.3	0.0	68.7	0.0
04/09/02	15.3	4.6	18.3	18.4	70.8	23.2	69.3	43.9	76.0	0.0	76.2	0.0
04/10/02	15.4	4.7	18.0	16.6	74.9	26.2	74.0	39.7	79.5	0.0	80.1	20.7
04/11/02	15.6	4.9	---	---	76.7	26.6	75.2	38.5	80.0	0.0	83.9	57.0

**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		
03/29/02	128.8	0.0	133.3	0.0	131.5	0.0	138.6	0.0	21.3	110.6
03/30/02	121.1	0.0	139.3	0.0	138.0	0.0	130.4	0.0	17.3	106.4
03/31/02	118.0	0.0	117.7	0.0	117.3	0.0	127.8	0.0	21.7	99.4
04/01/02	138.0	0.0	152.9	0.0	153.2	0.0	159.1	0.0	42.1	110.3
04/02/02	148.2	0.0	170.8	0.0	168.8	0.0	175.7	0.0	56.9	112.1
04/03/02	127.9	0.0	140.9	0.0	140.6	0.0	143.3	0.0	24.6	111.9
04/04/02	121.8	0.0	131.6	0.0	133.6	0.0	137.7	0.0	25.3	105.7
04/05/02	114.7	0.0	131.2	0.0	131.0	0.0	135.5	0.0	25.0	103.8
04/06/02	121.8	0.0	119.4	0.0	118.2	0.0	126.1	0.0	25.0	94.4
04/07/02	117.9	0.0	109.1	0.0	109.9	0.0	127.8	0.0	24.2	96.9
04/08/02	145.6	0.0	165.4	0.0	163.9	0.6	161.4	0.0	50.4	104.7
04/09/02	138.2	0.0	150.8	0.0	150.9	0.0	157.9	0.0	45.0	106.2
04/10/02	154.0	28.6	177.8	27.3	171.8	15.3	183.5	12.7	54.7	109.5
04/11/02	170.0	61.0	181.2	53.6	182.5	72.4	213.2	51.5	39.4	115.7

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>Lower Granite Dam</b>											
	04/09/02	Yearling Chinook	44	0	0	0.00%	0.00%	0	0	0	0
	04/09/02	Steelhead	56	0	0	0.00%	0.00%	0	0	0	0
<b>Little Goose Dam</b>											
	04/10/02	Yearling Chinook	28	0	0	0.00%	0.00%	0	0	0	0
	04/10/02	Steelhead	72	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	04/08/02	Yearling Chinook	9	0	0	0.00%	0.00%	0	0	0	0
	04/08/02	Steelhead	8	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	04/08/02	Yearling Chinook	34	0	0	0.00%	0.00%	0	0	0	0
	04/08/02	Steelhead	14	0	0	0.00%	0.00%	0	0	0	0
	04/11/02	Yearling Chinook	69	0	0	0.00%	0.00%	0	0	0	0
	04/11/02	Steelhead	4	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	04/08/02	Yearling Chinook	19	0	0	0.00%	0.00%	0	0	0	0
	04/08/02	Steelhead	2	0	0	0.00%	0.00%	0	0	0	0
	04/11/02	Yearling Chinook	62	0	0	0.00%	0.00%	0	0	0	0
	04/11/02	Steelhead	8	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	04/11/02	Yearling Chinook	94	2	2	2.12%	0.00%	2	0	0	0
	04/11/02	Steelhead	3	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	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph			#				
	24 h		12 h	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			
3/29	95	96	96	23	101	102	103	24	102	102	103	24	101	102	103	23	---	---	---	0
3/30	95	96	96	20	102	103	103	24	102	103	103	24	102	103	104	23	---	---	---	0
3/31	96	96	97	21	102	104	104	24	103	103	103	24	104	106	107	23	---	---	---	0
4/1	---	---	---	0	103	105	109	24	102	103	103	24	103	103	105	23	---	---	---	0
4/2	---	---	---	0	102	104	105	24	103	104	105	24	101	101	103	24	---	---	---	0
4/3	---	---	---	0	102	103	104	23	103	103	104	23	101	102	102	23	---	---	---	0
4/4	---	---	---	0	103	104	105	24	103	104	104	24	102	102	103	23	---	---	---	0
4/5	---	---	---	0	104	106	106	24	104	105	105	24	103	103	104	23	---	---	---	0
4/6	---	---	---	0	104	106	107	24	104	105	105	23	103	105	105	23	---	---	---	0
4/7	---	---	---	0	103	104	105	23	104	104	105	23	104	105	106	24	---	---	---	0
4/8	---	---	---	0	103	105	105	24	103	103	104	24	103	103	103	24	---	---	---	0
4/9	---	---	---	0	103	104	104	24	104	104	104	24	104	104	105	24	---	---	---	0
4/10	---	---	---	0	103	105	106	24	104	104	105	24	103	103	104	24	---	---	---	0
4/11	---	---	---	0	103	105	106	24	104	104	105	24	102	102	103	24	---	---	---	0

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr			#				
	24 h		12 h	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			
3/29	---	---	---	0	103	103	104	15	103	103	104	15	---	---	---	0	---	---	---	0
3/30	---	---	---	0	104	104	104	24	104	104	105	24	---	---	---	0	---	---	---	0
3/31	---	---	---	0	105	105	105	24	104	105	106	24	---	---	---	0	---	---	---	0
4/1	---	---	---	0	105	105	105	24	104	105	105	24	---	---	---	0	---	---	---	0
4/2	---	---	---	0	105	106	106	24	106	107	122	24	104	105	108	23	105	106	116	23
4/3	---	---	---	0	105	105	106	24	105	106	106	24	104	105	105	23	104	105	105	23
4/4	---	---	---	0	105	106	107	24	105	106	106	24	105	106	106	24	105	106	106	24
4/5	---	---	---	0	106	107	107	24	106	107	107	24	107	107	108	24	106	107	107	24
4/6	---	---	---	0	106	106	106	24	106	106	107	24	107	108	108	24	107	107	108	23
4/7	---	---	---	0	106	106	107	22	106	107	107	22	107	107	108	21	107	107	107	21
4/8	---	---	---	0	106	107	107	23	106	107	107	23	106	107	107	24	106	107	107	24
4/9	---	---	---	0	106	107	107	20	106	107	107	20	106	106	107	18	106	106	107	18
4/10	---	---	---	0	106	106	107	24	106	107	107	24	106	106	106	24	106	106	106	24
4/11	---	---	---	0	106	106	106	24	109	111	122	24	106	107	107	23	107	107	116	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids			#				
	24 h		12 h	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			
3/29	---	---	---	0	---	---	---	0	102	103	103	24	103	103	103	24	---	---	---	0
3/30	---	---	---	0	---	---	---	0	103	103	104	24	103	103	104	24	---	---	---	0
3/31	---	---	---	0	---	---	---	0	103	104	104	24	103	104	104	24	---	---	---	0
4/1	---	---	---	0	---	---	---	0	103	104	105	24	105	107	109	24	105	105	105	24
4/2	104	105	107	23	104	105	107	21	104	105	106	24	106	109	112	24	105	105	105	24
4/3	104	105	105	23	104	105	105	23	---	---	---	0	---	---	---	0	---	---	---	0
4/4	105	106	106	24	105	105	106	24	109	111	113	24	108	110	114	24	109	110	111	24
4/5	106	107	107	24	106	106	107	24	108	108	109	23	109	111	113	24	111	111	112	24
4/6	107	107	108	24	107	107	108	24	107	107	108	24	109	112	113	24	110	111	111	24
4/7	107	107	108	21	107	107	107	21	106	106	107	24	108	111	113	24	110	110	111	24
4/8	106	107	107	24	106	107	107	24	105	106	106	24	105	105	106	24	109	109	109	24
4/9	107	107	107	18	107	107	107	18	107	107	108	18	106	106	106	18	109	110	110	24
4/10	106	106	106	24	106	106	106	24	107	108	109	24	106	106	107	24	106	106	106	24
4/11	106	107	107	23	106	106	107	23	---	---	---	0	---	---	---	0	---	---	---	0



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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>				<u>Dworshak</u>				<u>Clwrtr-Peck</u>				<u>Anatone</u>				
	24 h		12 h	#	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	
3/29	103	103	103	12	104	105	106	24	95	95	95	2	98	98	98	24	102	102	103	24
3/30	---	---	---	0	104	105	106	24	95	95	96	14	98	98	99	24	102	103	103	24
3/31	---	---	---	0	106	106	107	24	96	97	97	24	99	99	101	24	102	103	104	24
4/1	---	---	---	0	105	105	106	24	105	107	107	24	102	103	104	24	101	102	102	19
4/2	104	104	104	10	104	105	108	24	108	109	110	24	104	106	107	24	101	102	103	24
4/3	---	---	---	0	104	105	105	24	109	109	109	24	105	106	106	24	102	102	103	23
4/4	107	108	109	24	105	107	107	23	109	109	109	24	105	106	107	24	101	102	103	24
4/5	109	110	110	24	107	108	108	24	109	109	110	24	105	106	107	24	101	102	102	24
4/6	109	110	110	24	107	107	108	21	108	108	109	22	104	104	105	22	101	102	103	22
4/7	108	109	109	24	106	106	107	23	108	108	109	23	104	104	104	21	101	102	103	23
4/8	107	108	108	24	108	108	109	20	109	109	110	24	104	105	106	24	102	103	104	21
4/9	107	108	108	24	107	107	108	24	109	109	110	24	104	105	105	24	101	102	102	24
4/10	105	106	106	24	105	106	106	24	109	109	109	22	103	104	104	23	101	102	103	23
4/11	---	---	---	0	106	106	107	24	109	109	110	24	104	104	104	24	102	102	103	22

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

Date	<u>Clwrtr-Lewiston</u>			<u>Lower Granite</u>				<u>L. Granite Tlwr</u>				<u>Little Goose</u>				<u>L. Goose Tlwr</u>				
	24 h		12 h	#	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	
3/29	99	99	100	24	100	101	101	24	100	101	101	24	101	101	101	24	101	101	101	24
3/30	100	101	102	24	101	101	101	24	100	101	101	24	101	102	102	24	101	101	101	24
3/31	100	101	103	24	101	102	102	24	101	101	102	24	102	102	102	24	101	102	102	24
4/1	100	102	102	24	101	101	101	24	101	101	101	24	101	101	102	24	101	101	101	24
4/2	102	104	105	24	102	103	104	24	104	109	123	24	102	104	110	24	103	107	120	24
4/3	103	105	106	24	102	103	103	24	105	109	121	23	102	102	103	24	101	101	102	24
4/4	103	105	106	24	102	103	104	24	113	120	122	22	103	105	108	22	101	102	102	23
4/5	103	104	105	24	103	104	105	24	114	122	123	22	103	104	105	24	106	111	120	24
4/6	102	103	103	22	103	104	104	22	113	121	124	22	103	103	103	22	119	120	120	22
4/7	102	102	103	23	103	103	104	23	118	120	121	22	106	107	108	23	119	119	119	21
4/8	102	104	105	24	102	102	103	24	114	118	118	24	108	109	110	24	119	119	119	24
4/9	102	103	104	23	102	103	103	24	112	118	119	24	110	110	111	24	119	119	120	24
4/10	102	103	104	24	102	102	102	24	112	119	120	24	111	112	112	24	117	118	118	24
4/11	102	103	104	24	103	103	103	24	112	118	121	24	111	112	112	24	117	117	117	24

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>				<u>Ice Harbor</u>				<u>Ice Harbor Tlwr</u>				<u>McNary-Oregon</u>				
	24 h		12 h	#	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	
3/29	101	101	102	24	101	101	101	24	102	102	103	24	102	102	102	24	102	103	105	24
3/30	101	102	102	24	101	102	102	24	102	102	103	24	101	102	102	24	104	106	108	24
3/31	102	102	103	24	102	103	103	24	102	102	103	24	102	102	103	24	104	107	108	24
4/1	102	103	104	24	102	102	103	24	102	103	103	24	102	102	103	24	104	105	106	24
4/2	103	105	117	24	102	104	117	24	103	104	115	24	102	103	115	24	103	104	106	24
4/3	102	103	105	23	101	102	104	23	103	103	105	24	102	103	103	24	104	105	107	24
4/4	103	104	105	24	102	102	103	24	104	104	108	24	103	103	103	24	104	106	109	24
4/5	103	103	104	24	102	102	103	24	104	105	108	24	103	103	104	24	104	105	107	24
4/6	102	103	103	22	102	102	103	22	103	104	104	22	103	103	104	22	104	105	105	21
4/7	102	103	103	23	102	103	104	23	103	103	103	23	103	103	103	23	104	104	105	23
4/8	111	114	117	24	111	113	114	24	103	103	106	24	102	103	103	24	105	107	110	24
4/9	117	117	118	24	116	117	117	24	103	103	104	24	103	103	103	24	105	106	108	24
4/10	117	118	118	24	117	117	117	24	107	109	111	24	108	111	116	24	104	105	106	24
4/11	118	118	118	24	117	117	117	24	113	114	115	24	114	115	116	24	107	108	111	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>							
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
3/29	101	102	102	24	102	102	103	24	101	101	101	24	101	101	102	24	102	102	102	24
3/30	102	103	108	24	103	103	103	24	101	102	102	24	101	101	102	24	102	102	103	23
3/31	104	104	105	24	104	104	105	24	102	102	102	22	102	102	102	24	103	103	103	24
4/1	103	104	104	24	103	104	104	24	102	102	102	24	102	102	103	24	102	103	103	24
4/2	103	104	108	24	104	105	116	24	102	103	107	24	102	103	115	24	103	103	104	24
4/3	104	105	107	24	103	104	104	24	104	105	106	24	103	103	103	24	103	103	104	24
4/4	105	107	108	24	104	104	105	24	105	106	107	24	103	104	104	24	104	104	105	23
4/5	105	105	106	24	104	104	105	24	104	105	106	24	104	104	106	24	104	105	105	24
4/6	104	104	104	21	104	104	104	21	103	103	103	21	104	104	105	22	104	104	105	21
4/7	104	104	104	23	104	104	104	22	103	103	103	23	103	104	104	23	103	103	104	23
4/8	105	106	109	24	104	104	105	24	104	104	105	23	103	103	106	24	103	104	104	23
4/9	106	106	108	24	104	105	105	24	104	105	105	23	104	104	105	24	104	104	105	23
4/10	104	104	104	24	106	109	117	24	104	104	105	23	106	109	118	24	103	104	104	23
4/11	105	105	106	24	111	116	117	24	104	105	107	23	110	116	118	24	108	112	119	23

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

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Skamania</u>			<u>CamasWashugal</u>							
	24 h	12 h	#	24 h	12 h	#	24h	12h	#	24h	12h	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
3/29	102	102	103	23	101	102	102	24	102	102	103	24	101	102	103	14	102	103	105	19
3/30	102	103	103	23	102	103	103	24	103	103	104	24	---	---	---	0	104	105	106	23
3/31	103	103	104	23	103	103	103	24	103	104	104	24	---	---	---	0	104	105	106	23
4/1	103	103	104	23	103	103	103	24	103	104	104	24	---	---	---	0	104	105	106	23
4/2	104	105	119	24	103	104	105	24	104	104	106	24	---	---	---	0	104	105	106	24
4/3	104	104	105	23	104	104	104	24	104	105	105	24	---	---	---	0	104	106	107	23
4/4	104	105	105	23	105	105	106	24	105	106	107	24	---	---	---	0	105	107	108	23
4/5	105	105	105	23	105	105	106	24	105	106	106	24	---	---	---	0	105	106	106	23
4/6	104	104	105	22	105	105	105	21	105	105	106	21	---	---	---	0	105	106	107	22
4/7	104	104	104	23	104	104	104	23	105	105	105	23	---	---	---	0	105	106	106	21
4/8	104	104	105	24	104	105	105	23	105	106	106	23	---	---	---	0	106	107	109	24
4/9	104	105	105	24	105	105	105	23	105	105	105	23	---	---	---	0	105	105	106	24
4/10	104	105	109	23	104	104	105	23	105	105	106	23	---	---	---	0	104	105	105	24
4/11	114	116	119	24	105	105	105	23	106	106	107	23	---	---	---	0	105	105	106	24

# HATCHERY RELEASE SUMMARY LAST TWO WEEKS

## Hatchery Release Summary

From: 3/29/02 to 4/11/02

Agency	Hatchery	Species	Race	MiqYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Leavenworth	CH1	SP	2002	50,000	04-02-02	04-02-02	Omak Cr	Okanogan River
Colville Tribe	Winthrop	CH1	SP	2002	265,000	03-18-02	04-15-02	Okanogan R	Okanogan River
<b>Colville Tribe Total</b>					<b>315,000</b>				
IDFG	Clearwater	CH1	SP	2002	206,000	04-10-02	04-10-02	N Fk Clearwater R	Clearwater Rvr M F
IDFG	Clearwater	CH1	SP	2002	732,800	04-01-02	04-01-02	Crooked R Acclim Pd	S Fk Clearwater Rive
IDFG	Magic Valley	ST	SU	2002	85,000	04-09-02	04-09-02	Little Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2002	100,000	04-08-02	04-09-02	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2002	180,000	04-09-02	04-11-02	Hammer Cr	Salmon River
IDFG	Niagara Springs	ST	SU	2002	445,000	04-06-02	05-05-02	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2002	525,000	03-25-02	04-05-02	Hells Canyon Dam	Snake River
IDFG	Rapid River	CH1	SP	2002	2,600,000	03-11-02	04-22-02	Rapid River H	Little Salmon River
IDFG	Sawtooth	CH1	SP	2002	390,000	04-08-02	04-22-02	Sawtooth H	Salmon River
<b>IDFG Total</b>					<b>5,263,800</b>				
Nez Perce Tribe	Clearwater	CH1	SP	2002	20,200	04-01-02	04-19-02	Lochsa R	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	57,400	04-10-02	04-10-02	Papoose Cr	Lochsa River
Nez Perce Tribe	Clearwater	CH1	SP	2002	81,500	04-01-02	04-19-02	Lochsa R	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	115,000	04-01-02	04-19-02	Newsome Cr	S Fk Clearwater Rive
Nez Perce Tribe	Clearwater	CH1	SP	2002	149,300	04-01-02	04-19-02	Lolo Cr	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	297,500	04-01-02	04-19-02	Meadow Cr	Selway River
Nez Perce Tribe	Clearwater	ST	SU	2002	29,700	04-02-02	04-30-02	Lolo Cr	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	ST	SU	2002	50,000	04-02-02	04-30-02	Meadow Cr	S Fk Clearwater Rive
Nez Perce Tribe	Hagerman	ST	SU	2002	50,000	04-01-02	05-07-02	Hazard Cr/Little Salmon R	Little Salmon River
Nez Perce Tribe	Hagerman	ST	SU	2002	100,000	04-01-02	05-07-02	American R	S Fk Clearwater Rive
Nez Perce Tribe	Hagerman	ST	SU	2002	100,000	04-01-02	05-07-02	Newsome Cr	S Fk Clearwater Rive
Nez Perce Tribe	Hagerman	ST	SU	2002	140,000	04-01-02	05-07-02	Yankee Fk (Salmon R)	Salmon River
Nez Perce Tribe	Hagerman	ST	SU	2002	150,000	04-01-02	05-07-02	Little Salmon R	Salmon River
Nez Perce Tribe	Lookingglass	CH1	SP	2002	31,000	04-01-02	04-15-02	Lostine Accim Pd	Wallowa River
Nez Perce Tribe	Lookingglass	CH1	SP	2002	77,500	04-01-02	04-15-02	Lostine Accim Pd	Wallowa River
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Pittsburg Landing	Snake River
Nez Perce Tribe	Willard	CO	UN	2002	280,000	03-15-02	03-29-02	Lapwai Cr	Clearwater Rvr M F
Nez Perce Tribe	Willard	CO	UN	2002	280,000	03-15-02	03-29-02	Potlatch R	Clearwater Rvr M F
<b>Nez Perce Tribe Total</b>					<b>2,459,100</b>				
ODFW	Irrigon	ST	SU	2002	128,500	04-11-02	04-12-02	L Sheep Acclim Pd	Imnaha River
ODFW	Irrigon	ST	SU	2002	174,000	04-10-02	04-12-02	Big Canyon Acclim Pd	Grande Ronde River
ODFW	Lookingglass	CH1	SP	2002	303,800	03-21-02	04-17-02	Imnaha Acclim Pd	Imnaha River
ODFW	Round Butte	ST	SU	2002	162,000	04-01-02	04-05-02	Bel. Pelton Dam	Deschutes River
ODFW	Wallowa	ST	SU	2002	348,000	04-04-02	04-06-02	Wallowa Acclim Pd	Wallowa River
<b>ODFW Total</b>					<b>1,116,300</b>				
Umatilla Tribe	Bonneville	CH1	FA	2002	260,000	04-10-02	04-19-02	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe	Cascade	CO	UN	2002	750,000	04-08-02	04-19-02	Pendelton Acclim Pd	Umatilla River
Umatilla Tribe	Lookingglass	CH1	SP	2002	151,388	04-01-02	04-15-02	Grande Ronde Acclim Pd	Grande Ronde River
Umatilla Tribe	Lookingglass	CH1	SP	2002	180,500	04-01-02	04-15-02	Catherine Cr Acclim Pd	Grande Ronde River
Umatilla Tribe	Umatilla	ST	SU	2002	54,000	04-01-02	04-05-02	Bonifer Acclim Pd	Umatilla River
<b>Umatilla Tribe Total</b>					<b>1,395,888</b>				
USFWS	Dworshak	CH1	SP	2002	500,000	03-25-02	04-05-02	Kooskia H	Clearwater Rvr M F
USFWS	Entiat	CH1	SP	2002	550,000	04-01-02	04-02-02	Entiat H	Entiat River
USFWS	Hagerman	ST	SU	2002	750,000	04-01-02	05-07-02	Sawtooth H	Salmon River
USFWS	Kooskia	CH1	SP	2002	50,000	03-25-02	04-05-02	Clear Cr	Clearwater Rvr M F
USFWS	Spring Creek	CH0	FA	2002	4,000,000	03-29-02	03-29-02	Spring Creek H	L Col R (D/s McN Da
USFWS	Warm Springs	CH1	SP	2002	582,800	03-26-02	04-18-02	Warm Springs H	Deschutes River
USFWS	Winthrop	CO	SO	2002	200,000	04-02-02	04-02-02	Winthrop H	Methow River
<b>USFWS Total</b>					<b>6,632,800</b>				
Warm Spgs Tribe	Blackberry Pond	CH1	SP	2002	47,000	04-01-02	04-26-02	Blackberry Acclim Pd	Hood River
Warm Spgs Tribe	Jones Cr Pond	CH1	SP	2002	33,000	04-01-02	04-26-02	Jones Creek Acclim Pd	Hood River
Warm Spgs Tribe	Parkdale Pond	CH1	SP	2002	7,000	04-10-02	04-22-02	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Round Butte	CH1	SP	2002	31,000	04-01-02	04-15-02	Parkdale Acclim Pd	Hood River
<b>Warm Spgs Tribe Total</b>					<b>118,000</b>				
WDFW	Lyons Ferry	CH1	FA	2002	600,000	04-01-02	04-15-02	Lyons Ferry H	Snake River
WDFW	Lyons Ferry	ST	SU	2002	45,000	04-01-02	04-30-02	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2002	60,000	04-10-02	04-30-02	Tucannon H	Tucannon River
WDFW	Lyons Ferry	ST	SU	2002	100,000	04-01-02	04-30-02	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2002	100,000	04-10-02	04-30-02	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2002	200,000	04-01-02	04-30-02	Cottonwood Acclim Pd	Grande Ronde River
WDFW	Ringold Springs	ST	SU	2002	160,000	04-01-02	04-15-02	Ringold Springs H	Mid-Columbia River
WDFW	Tucannon	CH1	SP	2002	3,000	04-01-02	04-30-02	Curl Lake	Tucannon River
WDFW	Tucannon	CH1	SP	2002	105,000	04-01-02	04-30-02	Curl Lake	Tucannon River
WDFW	Washougal	CO	NO	2002	2,500,000	04-02-02	04-10-02	Klickitat R	Klickitat River
WDFW	Wells	CH1	SU	2002	551,000	04-11-02	04-25-02	Similkameen Acclim Pd	Okanogan River
<b>WDFW Total</b>					<b>4,424,000</b>				

# HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

## Hatchery Release Summary

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Winthrop	CH1	SP	2002	265,000	03-18-02	04-15-02	Okanogan R	Okanogan River
<b>Colville Tribe Total</b>					<b>265,000</b>				
IDFG	Clearwater	ST	SU	2002	40,000	04-14-02	04-14-02	Clear Cr	Clearwater Rvr M F
IDFG	Clearwater	ST	SU	2002	135,000	04-18-02	04-18-02	Crooked R Acclim Pd	S Fk Clearwater River
IDFG	Clearwater	ST	SU	2002	138,500	04-22-02	04-22-02	Redhouse (SF Clearwater R)	S Fk Clearwater River
IDFG	Clearwater	ST	SU	2002	180,000	04-17-02	04-17-02	Red River Acclim Pd	S Fk Clearwater River
IDFG	Magic Valley	ST	SU	2002	3,800	04-22-02	04-22-02	E Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2002	40,000	04-15-02	04-15-02	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2002	40,000	04-15-02	04-15-02	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2002	40,000	04-17-02	04-17-02	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2002	50,000	04-12-02	04-12-02	Little Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2002	80,000	04-16-02	04-17-02	Lemhi R	Salmon River
IDFG	Magic Valley	ST	SU	2002	110,000	04-18-02	04-22-02	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2002	120,000	04-19-02	04-22-02	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2002	150,000	04-12-02	04-18-02	Shoup Br (Salmon R)	Salmon River
IDFG	Magic Valley	ST	SU	2002	225,000	04-25-02	04-26-02	E Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2002	280,000	04-23-02	04-24-02	Squaw Cr	Salmon River
IDFG	Niagara Springs	ST	SU	2002	445,000	04-06-02	05-05-02	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2002	830,000	04-13-02	05-01-02	Pahsimeroi H	Pahsimeroi River
IDFG	Rapid River	CH1	SP	2002	2,600,000	03-11-02	04-22-02	Rapid River H	Little Salmon River
IDFG	Sawtooth	CH1	SP	2002	390,000	04-08-02	04-22-02	Sawtooth H	Salmon River
<b>IDFG Total</b>					<b>5,897,300</b>				
Nez Perce Tribe	Clearwater	CH1	SP	2002	20,200	04-01-02	04-19-02	Lochsa R	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	81,500	04-01-02	04-19-02	Lochsa R	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	115,000	04-01-02	04-19-02	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe	Clearwater	CH1	SP	2002	149,300	04-01-02	04-19-02	Lolo Cr	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	CH1	SP	2002	297,500	04-01-02	04-19-02	Meadow Cr	Selway River
Nez Perce Tribe	Clearwater	ST	SU	2002	29,700	04-02-02	04-30-02	Lolo Cr	Clearwater Rvr M F
Nez Perce Tribe	Clearwater	ST	SU	2002	50,000	04-02-02	04-30-02	Meadow Cr	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2002	50,000	04-01-02	05-07-02	Hazard Cr/Little Salmon R	Little Salmon River
Nez Perce Tribe	Hagerman	ST	SU	2002	100,000	04-01-02	05-07-02	American R	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2002	100,000	04-01-02	05-07-02	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2002	140,000	04-01-02	05-07-02	Yankee Fk (Salmon R)	Salmon River
Nez Perce Tribe	Hagerman	ST	SU	2002	150,000	04-01-02	05-07-02	Little Salmon R	Salmon River
Nez Perce Tribe	Lookingglass	CH1	SP	2002	31,000	04-01-02	04-15-02	Lostine Accim Pd	Wallowa River
Nez Perce Tribe	Lookingglass	CH1	SP	2002	77,500	04-01-02	04-15-02	Lostine Accim Pd	Wallowa River
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe	Lyons Ferry	CH1	FA	2002	150,000	04-09-02	04-17-02	Pittsburg Landing	Snake River
<b>Nez Perce Tribe Total</b>					<b>1,841,700</b>				
ODFW	Irrigon	ST	SU	2002	100,000	04-17-02	04-18-02	Big Sheep Cr	Imnaha River
ODFW	Irrigon	ST	SU	2002	128,500	04-11-02	04-12-02	L Sheep Acclim Pd	Imnaha River
ODFW	Irrigon	ST	SU	2002	174,000	04-10-02	04-12-02	Big Canyon Acclim.Pd	Grande Ronde River
ODFW	Lookingglass	CH1	SP	2002	303,800	03-21-02	04-17-02	Imnaha Acclim Pd	Imnaha River
ODFW	Round Butte	CH1	SP	2002	320,000	04-22-02	04-23-02	Bel. Pelton Dam	Deschutes River
<b>ODFW Total</b>					<b>1,026,300</b>				
Umatilla Tribe	Bonneville	CH1	FA	2002	260,000	04-10-02	04-19-02	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe	Cascade	CO	UN	2002	750,000	04-08-02	04-19-02	Pendelton Acclim Pd	Umatilla River
Umatilla Tribe	Lookingglass	CH1	SP	2002	151,388	04-01-02	04-15-02	Grande Ronde Acclim Pd	Grande Ronde River
Umatilla Tribe	Lookingglass	CH1	SP	2002	180,500	04-01-02	04-15-02	Catherine Cr Acclim Pd	Grande Ronde River
Umatilla Tribe	Umatilla	ST	SU	2002	54,000	04-22-02	04-30-02	Minthorn Acclim Pd	Umatilla River
Umatilla Tribe	Umatilla	ST	SU	2002	54,000	04-22-02	04-30-02	Pendelton Acclim Pd	Umatilla River
Umatilla Tribe	Willard	CH1	SP	2002	255,000	04-12-02	04-22-02	Imeques Acclim Pd	Umatilla River
<b>Umatilla Tribe Total</b>					<b>1,704,888</b>				
USFWS	Carson	CH1	SP	2002	1,420,000	04-18-02	04-25-02	Carson H	Wind River
USFWS	Dworshak	ST	SU	2002	580,000	04-15-02	04-19-02	Redhouse (SFk ClearH2O R)	S Fk Clearwater River
USFWS	Dworshak	ST	SU	2002	1,360,000	04-22-02	04-24-02	Dworshak H	Clearwater Rvr M F
USFWS	Hagerman	ST	SU	2002	750,000	04-01-02	05-07-02	Sawtooth H	Salmon River
USFWS	Kooskia	ST	SU	2002	260,000	04-15-02	04-19-02	Kooskia H	Clearwater Rvr M F
USFWS	L White Salmon	CH1	SP	2002	1,000,000	04-18-02	04-18-02	Little White Salmon H	Little White Salmon River
USFWS	Leavenworth	CH1	SP	2002	1,620,000	04-18-02	04-18-02	Leavenworth H	Wenatchee River
USFWS	Warm Springs	CH1	SP	2002	582,800	03-26-02	04-18-02	Warm Springs H	Deschutes River
USFWS	Willard	CO	UN	2002	950,000	04-18-02	04-18-02	Little White Salmon R	Little White Salmon River
USFWS	Winthrop	CH1	SP	2002	201,000	04-18-02	04-18-02	Winthrop H	Methow River
USFWS	Winthrop	ST	SU	2002	150,000	04-15-02	04-30-02	Winthrop H	Methow River
<b>USFWS Total</b>					<b>8,873,800</b>				
Warm Spgs Tribe	Blackberry Pond	CH1	SP	2002	47,000	04-01-02	04-26-02	Blackberry Acclim Pd	Hood River
Warm Spgs Tribe	Jones Cr Pond	CH1	SP	2002	33,000	04-01-02	04-26-02	Jones Creek Acclim Pd	Hood River
Warm Spgs Tribe	Parkdale Pond	CH1	SP	2002	7,000	04-10-02	04-22-02	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Round Butte	CH1	SP	2002	31,000	04-01-02	04-15-02	Parkdale Acclim Pd	Hood River
<b>Warm Spgs Tribe Total</b>					<b>118,000</b>				

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

**HATCHERY RELEASE SUMMARY NEXT TWO WEEKS**

**Hatchery Release Summary**

<b>From:</b>	<b>4/12/02</b>	<b>to</b>	<b>4/25/02</b>						
WDFW	East Bank	CH1	SP	2002	47,000	04-15-02	04-30-02	Chiwawa H	Wenatchee River
WDFW	East Bank	CH1	SU	2002	335,000	04-15-02	05-15-02	Turtle Rock H	Mid-Columbia River
WDFW	East Bank	CH1	SU	2002	943,000	04-23-02	04-23-02	Dryden Acclim Pd	Wenatchee River
WDFW	East Bank	ST	SU	2002	54,000	04-24-02	05-03-02	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2002	75,000	04-24-02	05-03-02	Wenatchee R	Wenatchee River
WDFW	East Bank	ST	SU	2002	93,000	04-24-02	05-03-02	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2002	120,500	04-24-02	05-03-02	Chiwawa H	Wenatchee River
WDFW	Lyons Ferry	CH1	FA	2002	600,000	04-01-02	04-15-02	Lyons Ferry H	Snake River
WDFW	Lyons Ferry	ST	SU	2002	45,000	04-01-02	04-30-02	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2002	50,000	04-15-02	04-30-02	Lyons Ferry H	Snake River
WDFW	Lyons Ferry	ST	SU	2002	60,000	04-10-02	04-30-02	Tucannon H	Tucannon River
WDFW	Lyons Ferry	ST	SU	2002	100,000	04-01-02	04-30-02	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2002	100,000	04-10-02	04-30-02	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2002	100,000	04-15-02	04-30-02	Walla Walla R	Walla Walla River
WDFW	Lyons Ferry	ST	SU	2002	200,000	04-01-02	04-30-02	Cottonwood Acclim Pd	Grande Ronde River
WDFW	Methow	CH1	SP	2002	157,000	04-17-02	04-20-02	Twisp Acclim Pd	Methow River
WDFW	Methow	CH1	SP	2002	266,000	04-17-02	04-20-02	Methow H	Methow River
WDFW	Methow	CH1	SU	2002	360,000	04-18-02	04-18-02	Carlton Acclim Pd	Methow River
WDFW	Ringold Springs	ST	SU	2002	160,000	04-01-02	04-15-02	Ringold Springs H	Mid-Columbia River
WDFW	Skamania	ST	WI	2002	20,000	04-25-02	04-30-02	White Salmon R	White Salmon River
WDFW	Tucannon	CH1	SP	2002	3,000	04-01-02	04-30-02	Curl Lake	Tucannon River
WDFW	Tucannon	CH1	SP	2002	105,000	04-01-02	04-30-02	Curl Lake	Tucannon River
WDFW	Wells	CH1	SU	2002	343,000	04-16-02	04-20-02	Wells H	Mid-Columbia River
WDFW	Wells	CH1	SU	2002	551,000	04-11-02	04-25-02	Similkameen Acclim Pd	Okanogan River
WDFW	Wells	ST	SU	2002	88,000	04-16-02	05-10-02	Chewuch R	Methow River
WDFW	Wells	ST	SU	2002	88,000	04-16-02	05-10-02	Methow R	Methow River
WDFW	Wells	ST	SU	2002	88,000	04-16-02	05-10-02	Twisp R	Methow River
WDFW	Wells	ST	SU	2002	113,000	04-16-02	05-10-02	Okanogan R	Okanogan River
<b>WDFW Total</b>					<b>5,264,500</b>				
Yakima Tribe	Cle Elum	CH1	SP	2002	265,500	03-18-02	06-07-02	Easton Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	288,000	03-18-02	06-07-02	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	288,000	03-18-02	06-07-02	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Leavenworth	CO	UN	2002	298,500	04-25-02	05-06-02	Nason Cr	Wenatchee River
Yakima Tribe	Leavenworth	CO	UN	2002	701,500	04-25-02	04-25-02	Icicle Cr	Wenatchee River
Yakima Tribe	Prosser	CH0	FA	2002	3,100	04-25-02	04-26-02	Prosser Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2002	80,000	04-22-02	05-22-02	Prosser Acclim Pd	Yakama River
Yakima Tribe	Winthrop	CO	UN	2002	150,000	04-25-02	05-10-02	Winthrop H	Methow River
<b>Yakima Tribe Total</b>					<b>2,074,600</b>				
<b>Grand Total</b>					<b>27,066,088</b>				

## Two-Week Summary of Passage Indices

### COMBINED YEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/29/2002 *	700	3,831	16	0	330	---	---	---	---	115	158
03/30/2002	---	---	---	---	370	---	---	---	---	130	228
03/31/2002	---	1,767	---	---	210	---	---	---	---	140	307
04/01/2002	528	2,725	38	5	590	---	---	2	---	120	354
04/02/2002 *	1,343	---	26	11	2,080	188	---	4	---	280	---
04/03/2002 *	3,226	158	72	12	2,040	406	1,000	1	180	290	---
04/04/2002 *	3,000	1,444	81	4	3,115	198	5,390	1	532	325	---
04/05/2002	2,089	855	95	7	1,722	146	10,450	5	588	315	189
04/06/2002 *	---	---	---	---	1,512	204	25,260	0	584	240	807
04/07/2002	---	213	---	---	1,639	354	6,630	0	672	300	623
04/08/2002 *	2,847	381	215	26	2,142	62	6,029	5	1,152	350	662
04/09/2002	3,044	514	304	26	1,758	198	---	10	1,579	420	1,653
04/10/2002	3,197	539	429	44	3,464	221	---	14	1,352	850	1,781
04/11/2002 *	2,244	---	352	48	6,797	494	---	119	1,711	778	2,567
04/12/2002	---	---	---	---	---	533	---	---	2,334	---	2,805
<b>Total:</b>	<b>22,218</b>	<b>12,427</b>	<b>1,628</b>	<b>183</b>	<b>27,769</b>	<b>3,004</b>	<b>54,759</b>	<b>161</b>	<b>10,684</b>	<b>4,653</b>	<b>12,134</b>
<b># Days:</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>
<b>Average:</b>	<b>2,222</b>	<b>1,243</b>	<b>163</b>	<b>18</b>	<b>1,984</b>	<b>273</b>	<b>9,127</b>	<b>15</b>	<b>1,068</b>	<b>332</b>	<b>1,011</b>
<b>YTD</b>	<b>29,416</b>	<b>22,509</b>	<b>1,690</b>	<b>199</b>	<b>28,789</b>	<b>3,004</b>	<b>54,759</b>	<b>161</b>	<b>10,684</b>	<b>5,263</b>	<b>19,246</b>

### COMBINED SUBYEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/29/2002 *	0	0	0	2	0	---	---	---	---	0	515
03/30/2002	---	---	---	---	0	---	---	---	---	10	548
03/31/2002	---	0	---	---	0	---	---	---	---	10	78,289
04/01/2002	0	0	0	1	0	---	---	0	---	0	152,904
04/02/2002 *	0	---	0	3	0	0	---	2	---	0	---
04/03/2002 *	0	0	0	0	20	0	0	0	0	10	---
04/04/2002 *	0	0	0	1	0	0	0	0	60	20	---
04/05/2002	0	0	0	0	0	0	0	1	126	25	3,785
04/06/2002 *	---	---	---	---	0	0	0	3	120	35	2,358
04/07/2002	---	0	---	---	0	0	0	4	24	10	1,994
04/08/2002 *	0	0	0	0	20	0	0	9	44	5	2,058
04/09/2002	0	0	0	1	0	0	---	1	84	25	2,215
04/10/2002	0	0	0	0	16	0	---	2	204	60	2,375
04/11/2002 *	0	---	0	3	16	0	---	11	495	50	3,934
04/12/2002	---	---	---	---	---	0	---	---	222	---	3,968
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>1,379</b>	<b>260</b>	<b>254,943</b>
<b># Days:</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>138</b>	<b>19</b>	<b>21,245</b>
<b>YTD</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>15</b>	<b>82</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>1,379</b>	<b>275</b>	<b>1,053,571</b>

\*The total, #days and average do not include the current day's data. \*See sampling comments. <http://www.fpc.org/current/daily/smpcomments.htm>. This means that one or more of the sites on this date had an incomplete or biased sample.

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

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.

## Two-Week Summary of Passage Indices

### COMBINED COHO

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/29/2002 *	0	0	0	0	0	---	---	---	---	5	6
03/30/2002	---	---	---	---	10	---	---	---	---	5	13
03/31/2002	---	0	---	---	0	---	---	---	---	0	12
04/01/2002	0	0	0	1	0	---	---	0	---	0	0
04/02/2002 *	0	---	0	0	0	0	---	0	---	5	---
04/03/2002 *	0	0	0	0	10	0	0	0	20	5	---
04/04/2002 *	0	0	0	1	0	4	0	0	24	0	---
04/05/2002	0	0	0	1	0	0	0	0	12	0	0
04/06/2002 *	---	---	---	---	0	0	0	0	20	0	0
04/07/2002	---	0	---	---	0	0	0	0	16	5	62
04/08/2002 *	0	0	0	0	0	0	0	0	32	5	147
04/09/2002	0	0	0	1	0	0	---	0	64	0	281
04/10/2002	0	0	0	2	0	0	---	0	64	0	267
04/11/2002 *	0	---	0	0	0	0	---	0	86	14	400
04/12/2002	---	---	---	---	---	0	---	---	26	---	684
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>364</b>	<b>44</b>	<b>1,872</b>
<b># Days:</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>3</b>	<b>156</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>364</b>	<b>59</b>	<b>1,985</b>

### COMBINED STEELHEAD

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/29/2002 *	0	16	1	1	90	---	---	---	---	15	19
03/30/2002	---	---	---	---	150	---	---	---	---	20	18
03/31/2002	---	12	---	---	140	---	---	---	---	15	25
04/01/2002	3	15	5	10	160	---	---	0	---	45	0
04/02/2002 *	0	---	2	14	520	188	---	0	---	135	---
04/03/2002 *	5	10	4	17	470	304	130	1	330	230	---
04/04/2002 *	6	7	4	9	1,141	224	180	0	548	245	---
04/05/2002	11	3	0	15	772	154	290	2	570	460	0
04/06/2002 *	---	---	---	---	1,336	310	360	0	344	330	62
04/07/2002	---	26	---	---	1,323	218	300	0	308	180	62
04/08/2002 *	3	12	196	79	2,815	141	268	0	296	210	196
04/09/2002	8	7	120	90	3,404	384	---	2	594	645	374
04/10/2002	26	10	120	67	3,842	390	---	4	788	695	327
04/11/2002 *	21	---	132	131	5,975	1,369	---	8	800	530	300
04/12/2002	---	---	---	---	---	1,895	---	---	463	---	718
<b>Total:</b>	<b>83</b>	<b>118</b>	<b>584</b>	<b>433</b>	<b>22,138</b>	<b>5,577</b>	<b>1,528</b>	<b>17</b>	<b>5,041</b>	<b>3,755</b>	<b>2,101</b>
<b># Days:</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>
<b>Average:</b>	<b>8</b>	<b>12</b>	<b>58</b>	<b>43</b>	<b>1,581</b>	<b>507</b>	<b>255</b>	<b>2</b>	<b>504</b>	<b>268</b>	<b>175</b>
<b>YTD</b>	<b>83</b>	<b>201</b>	<b>587</b>	<b>443</b>	<b>22,338</b>	<b>5,577</b>	<b>1,528</b>	<b>17</b>	<b>5,041</b>	<b>3,890</b>	<b>2,144</b>

# Two-Week Summary of Passage Indices

## COMBINED SOCKEYE

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/29/2002 *	0	0	0	0	20	---	---	---	---	5	5
03/30/2002	---	---	---	---	30	---	---	---	---	0	1
03/31/2002	---	0	---	---	0	---	---	---	---	0	0
04/01/2002	0	0	0	3	20	---	---	0	---	0	0
04/02/2002 *	0	---	0	0	30	24	---	0	---	15	---
04/03/2002 *	0	0	0	0	40	8	10	2	0	5	---
04/04/2002 *	0	0	0	0	39	32	0	1	16	40	---
04/05/2002	0	0	0	0	99	0	20	0	24	40	0
04/06/2002 *	---	---	---	---	137	23	20	0	16	35	62
04/07/2002	---	0	---	---	165	0	0	0	4	15	0
04/08/2002 *	0	0	0	0	61	0	20	0	0	0	49
04/09/2002	0	0	0	0	144	28	---	2	8	25	0
04/10/2002	0	0	0	0	297	11	---	9	12	10	0
04/11/2002 *	0	---	0	0	300	21	---	11	12	14	67
04/12/2002	---	---	---	---	---	21	---	---	13	---	137
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1,382</b>	<b>168</b>	<b>70</b>	<b>25</b>	<b>105</b>	<b>204</b>	<b>321</b>
<b># Days:</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>15</b>	<b>12</b>	<b>2</b>	<b>11</b>	<b>15</b>	<b>27</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1,452</b>	<b>168</b>	<b>70</b>	<b>25</b>	<b>105</b>	<b>204</b>	<b>360</b>

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

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.

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



**Cumulative Adult Passage at Mainstem Dams Through: 04/11**

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	12,995	7	102,773	118	18,463	41	0	0	0	0	0	0	0	0	0	0	0	0
TDA	3,583	8	39,827	17	5,726	15	0	0	0	0	0	0	0	0	0	0	0	0
JDA	1,518	0	28,138	12	3,945	9	0	0	0	0	0	0	0	0	0	0	0	0
MCN	1,039	1	8,806	34	1,211	7	0	0	0	0	0	0	0	0	0	0	0	0
IHR	243	0	5,167	7	720	1	0	0	0	0	0	0	0	0	0	0	0	0
LMN	179	0	3,424	5	470	1	0	0	0	0	0	0	0	0	0	0	0	0
LGS	22	0	1,202	5	177	1	0	0	0	0	0	0	0	0	0	0	0	0
LWG	26	0	414	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RIS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RRH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WEL	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

DAM	Coho						Sockeye			Steelhead			
	2002		2001		10-Yr Avg.		10-Yr			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2002	2001	Avg.	2002	2001	Avg.	2002
BON	0	0	0	0	0	0	0	0	0	2,250	1,804	1,309	538
TDA	0	0	0	0	0	0	0	0	0	1,148	413	477	345
JDA	0	0	0	0	0	0	0	0	0	4,838	925	1,247	1,394
MCN	0	0	0	0	0	0	0	0	0	2,798	816	890	945
IHR	0	0	0	0	0	0	0	0	0	2,504	839	1,234	614
LMN	0	0	0	0	0	0	0	0	0	3,289	1,049	1,276	1,172
LGS	0	0	0	0	0	0	0	0	0	3,501	1,073	476	1,117
LWG	0	0	0	0	0	0	0	0	0	7,605	4,615	3,684	1,446
PRD	---	---	---	---	---	---	---	---	---	---	---	---	**
RIS	---	---	---	---	---	---	---	---	---	---	---	---	---
RRH	---	---	---	---	---	---	---	---	---	---	---	---	---
WEL	---	---	---	---	---	---	---	---	---	---	---	---	---

TDA, MCN and LGR are through 04/10/02. IHR is missing counts for 04/09/02.

\*\*PRD is not reporting Wild Steelhead numbers.

These numbers were collected from the COE's Running Sums text files.

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.

### Two Week Transportation Summary

		03/30/02 TO 04/12/02						
		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
<b>LGR</b>	Sum of NumberCollected	50	18,624	20	890	13,816	33,400	
	Sum of NumberBarged	19	5,204	0	403	6,386	12,012	
	Sum of NumberBypassed	0	698	0	0	834	1,532	
	Sum of Numbertrucked	29	9,167	20	296	3,275	12,787	
	Sum of TotalProjectMortalities	1	80	0	33	6	120	
<b>LGS</b>	Sum of NumberCollected		1,830	4	109	3,030	4,973	
	Sum of NumberBarged		779	0	30	2,000	2,809	
	Sum of NumberBypassed		0	0	0	0	0	
	Sum of Numbertrucked		1,034	4	74	1,024	2,136	
	Sum of TotalProjectMortalities		17	0	5	6	28	
<b>LMN</b>	Sum of NumberCollected		54,759		70	1,528	56,357	
	Sum of NumberBarged		0		0	0	0	
	Sum of NumberBypassed		34,538		57	1,165	35,760	
	Sum of Numbertrucked		20,104		13	356	20,473	
	Sum of TotalProjectMortalities		117		0	7	124	
<b>MCN</b>	Sum of NumberCollected	1,122	9,192	324	96	4,586	15,320	
	Sum of NumberBarged	0	0	0	0	0	0	
	Sum of NumberBypassed	1,119	9,174	324	96	4,581	15,294	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of TotalProjectMortalities	3	18	0	0	5	26	
Total Sum of NumberCollected		1,172	84,405	348	1,165	22,960	110,050	
Total Sum of NumberBarged		19	5,983	0	433	8,386	14,821	
Total Sum of NumberBypassed		1,119	44,410	324	153	6,580	52,586	
Total Sum of Numbertrucked		29	30,305	24	383	4,655	35,396	
Total Sum of TotalProjectMortalities		4	232	0	38	24	298	

### YTD Transportation Summary

TO: 04/12/02

Site	Data	Species					Grand Total
		CH0	CH1	CO	SO	ST	
<b>LGR</b>	Sum of NumberCollected	60	19,644	20	960	14,016	34,700
	Sum of NumberBarged	19	5,204	0	403	6,386	12,012
	Sum of NumberBypassed	0	698	0	0	834	1,532
	Sum of NumberTrucked	29	9,847	20	343	3,383	13,622
	Sum of TotalProjectMortalities	2	92	0	36	8	138
<b>LGS</b>	Sum of NumberCollected		1,830	4	109	3,030	4,973
	Sum of NumberBarged		779	0	30	2,000	2,809
	Sum of NumberBypassed		0	0	0	0	0
	Sum of NumberTrucked		1,034	4	74	1,024	2,136
	Sum of TotalProjectMortalities		17	0	5	6	28
<b>LMN</b>	Sum of NumberCollected		54,759		70	1,528	56,357
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		34,538		57	1,165	35,760
	Sum of NumberTrucked		20,104		13	356	20,473
	Sum of TotalProjectMortalities		117		0	7	124
<b>MCN</b>	Sum of NumberCollected	1,122	9,192	324	96	4,586	15,320
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	1,119	9,174	324	96	4,581	15,294
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	3	18	0	0	5	26
Total Sum of NumberCollected		1,182	85,425	348	1,235	23,160	111,350
Total Sum of NumberBarged		19	5,983	0	433	8,386	14,821
Total Sum of NumberBypassed		1,119	44,410	324	153	6,580	52,586
Total Sum of NumberTrucked		29	30,985	24	430	4,763	36,231
Total Sum of TotalProjectMortalities		5	244	0	41	26	316

