



Fish Passage Center

Weekly Report #03 - 11

May 30, 2003

2501 SW First Ave., Suite 230
 Portland, OR 97201-4752
 phone: 503/230-4582
 fax: 503/230-7559

Summary of Events:

Water Supply: Most Columbia Basin watersheds have received slightly less than average precipitation over the first three-quarters of May (Table 1). For the water year (October 1, 2002 to May 26, 2003), precipitation in most basins has been near average, with the Central Washington and Clearwater locations receiving the highest yearly totals at 114% and 110% of average, respectively. Snowpacks throughout the Columbia Basin are also near normal for this time of year.

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

Location	May 1-26, 2003		Cumulative October, 1 2002 to May 26, 2003	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.63	87	16.28	92
SNAKE RIVER ABOVE ICE HARBOR	1.45	92	13.21	99
Columbia Above The Dalles	1.35	82	16.76	95
Kootenai	1.58	85	15.65	86
Clark Fork	1.45	84	11.73	98
Flathead	1.65	81	13.63	86
Pend Oreille/Spokane	1.68	77	23.99	97
Central Washington	0.19	29	8.19	114
SNAKE RIVER PLAIN	1.15	93	6.6	79
Salmon/Boise/Payette	1.54	102	16.23	102
Clearwater	2.54	100	26.08	110
SW Washington Cascades/Cowlitz	1.95	61	55.71	90
Willamette Valley	2.18	74	50.57	95

Table 2 displays the April Final, May Final, and June Early-Bird runoff volume forecasts for multiple reservoirs. Generally, runoff volume forecasts have been steadily rising over the spring; however, as a result of the slightly decreased precipitation throughout May, most June Early-Bird runoff volume forecasts have decreased relative to the May Final.

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

Location	April Final		May Final		June Early-Bird	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	79	85300	84	90200	83	89300
Grand Coulee (Jan-July)	84	52900	88	55500	88	55600
Libby Res. Inflow, MT (Jan-July)	79	4960	82	5200	81	5130
Hungry Horse Res. Inflow, MT (Jan-July)	81	1800	85	1900	84	1870
Lower Granite Res. Inflow (Apr- July)	79	17100	86	18500	82	17700
Brownlee Res. Inflow (Apr-July)	53	3370	56	3520	51	3230
Dworshak Res. Inflow (Apr-July)	90	2390	88	2330	86	2270

Based on the April Final Forecasts, the following Biological Opinion actions will be targeted in the spring of 2003:

- ◆ Lower Granite: The Spring Flow Objective will be 89.1 Kcfs between April 3rd and June 20th. To date, the average flow at Lower Granite between April 3rd and May 29th, 2003 has been 79.6 Kcfs.
- ◆ McNary: The Spring Flow Objective will be 220 Kcfs between April 10th and June 30th. To date, the average flow at McNary between April 10th and May 29th, 2003 has been 218.7 Kcfs.
- ◆ Priest Rapids: The Spring Flow Objective will be 135 Kcfs between April 10th and June 30th. To date, the average flow at Priest Rapids between April 10th and May 29th, 2003 has been 136.0 Kcfs.

Over the last week, Snake River flows have increased dramatically. Flows at Lower Granite are currently at 172.1 Kcfs (5-29-03), up nearly 100 Kcfs from one week ago.

On April 17th, SOR 2003-7 was submitted to the Action Agencies and asked for the Biological Opinion flow objective of 135 Kcfs to be met at Priest Rapids from April 24th through the end of June. This SOR was accepted by the Action Agencies. Outflows at Priest Rapids averaged 139.3 Kcfs April 24-30, 141.5 Kcfs May 1-7, 142.5 Kcfs May 8-14, 148.4 Kcfs May 15-21, and 140.4 Kcfs May 22-28.

Also on the 17th of April, SOR 2003-8 was submitted to the Action Agencies based upon survey reports indicating increased stranding and entrapment of juvenile fall chinook below Priest Rapids Dam. The SOR asks for flow fluctuations to be limited relative to the previous days flow average. The action agencies maintain that Grant County PUD is the responsible party and Grant County has maintained that federal flow control is responsible. No indication of compromise between Grant County PUD and the Action Agencies on the implementation of SOR 2003-8 has been indicated to date. However, since the submittal of SOR 2003-8, flow fluctuations have been monitored and compared to the flow bands indicated in the SOR. The following table displays the actual

daily average flow (determines flow band), actual daily flow fluctuations, and the flow band suggested by SOR 2003-8 at Priest Rapids Dam over the last week.

Table 3. Actual daily average flow (determines flow band), actual daily flow fluctuation, and the flow band suggested by SOR 2003-8 at Priest Rapids Dam from May 23rd to May 29th.

Date	Daily Average Flow (Kcfs)	Daily Flow Fluctuation (Kcfs)	Flow Band According to SOR 2003-8
5-23-2003	183.2	65.4	20
5-24-2003	121.6	41.2	20
5-25-2003	89.6	59.1	20
5-26-2003	117.1	37.9	20
5-27-2003	136.2	37.6	20
5-28-2003	143.0	42.8	20
5-29-2003	181.3	89.8	20

From Table 3, the flow bands recommended by SOR 2003-8 at Priest Rapids Dam were met in four of the forty-three days since April 17th, 2003.

The Libby Reservoir is currently at an elevation of 2431.8 feet and has been operating to a minimum discharge of 4.0 Kcfs. Inflows to Libby are currently 48.7 Kcfs (5-29-03); over the last week Libby has filled 10.7 feet.

The Hungry Horse Reservoir is currently at an elevation of 3537.2 feet, and has refilled 9.4 feet in the last week.

The Dworshak Reservoir is currently at an elevation of 1573.3 feet and has been releasing approximately 1.5 kcf of water. Inflows to Dworshak have ranged between 10.1 and 24.2 Kcfs over the last week and has refilled 12.6 feet.

The Grand Coulee Reservoir ended May 29th at an elevation of 1267.9 feet and the project has refilled 2.6 feet in the last week.

The Brownlee Reservoir was at an elevation of 2076.9 on May 29th, 2003, 0.1 feet from its full pool elevation. Outflows at Brownlee have ranged between 14.6 and 24.6 Kcfs over the last week.

The USBR reservoir systems along the Boise, Payette, and Upper Snake Basins are currently 78% (up 12% from last week), 84% (up 8% from last week), and 62% of capacity (up 2% from last week).

Spill: No spill occurred at Dworshak Dam over the past week. The actual volume of spill occurring system-wide has increased in accordance with the increased flows from the Snake River. Lower Granite, Little Goose, Lower Monumental and Ice Harbor dams over the past week averaged spill at 33%, 22%, 25% and 55% of average daily flow, respectively.

Spill over the past week at McNary, John Day, The Dalles and Bonneville dams over the past week averaged 33%, 22%, 38%, and 40% of average daily flow, respectively.

Total dissolved gas levels have increased considerably from last week and are exceeding the gas waiver limits at some projects. The Lower Granite project is limited to 5 units and consequently must spill a large proportion of the freshet. Total dissolved gas levels below the project have exceeded the 120% total dissolved gas waiver for the past four days, and have reached levels of 128%. This increased gas is being passed through to the projects downstream as evidenced by the increase in gas levels at Little Goose and Lower Monumental dams. The lower Columbia project gas readings are closer to the waiver limits. Fish are responding to the higher gas levels in the system as observed in the sampling that occurred at Little Goose Dam where 7% of the fish sampled have signs of GBT.

Smolt Monitoring: With the increasing flows over the past week, the numbers of smolts captured increased at lower tributary traps and at the smolt monitoring dams. At the Snake River tributary traps yearling chinook continued to be collected in low numbers over the past week, except at the Lewiston Trap where relatively large numbers of yearling chinook were captured beginning May 26, when flows in the Snake River above Lewiston reached 90 kcfs. Steelhead numbers were relatively low at all but the Lewiston Trap as well. The passage indices of yearling chinook at Lower Snake dams remained high this past week, but lower than the previous week. Steelhead passage in the Lower Snake rose dramatically over last week as flows reached 150 kcfs. In the Lower Columbia the numbers of yearling chinook, steel-

head, sockeye and coho have again remained relatively high this past week at all SMP sites.

The White Bird Trap was removed from the main channel of the Salmon River due to high flows beginning on May 24, when flows exceeded 40 kcfs and by May 30 climbed to 85 kcfs. At the Imnaha Trap the average daily catch of yearling chinook this week was 15 compared to 43 last week. The numbers of steelhead were relatively lower at 407 per day average collection compared to 791 per day last week. Numbers of yearling chinook captured at the Grande Ronde Trap were low again this week with a daily average of 26 chinook compared to 27 last week. Steelhead collection was lower, at 45 per day this week compared to 69 per day last week. The Lewiston Trap had to be discontinued sampling May 27 when large amounts of woody debris clogged the trap. For the few days the Lewiston Trap collected fish at the high flows, yearling chinook collection was up dramatically, to 310 per day average, compared to 35 last week, and steelhead collection was also higher at 241 per day this week compared to 164 per day last. A lone water skier was also captured in the trap this past week, which hopefully marks the peak in water skier collection for this season.

At Lower Granite Dam the flows rose dramatically passing 150 kcfs on May 27. The numbers of migrants increased in response to the flows. While the average daily passage index for yearling chinook decreased to 32,000 this past week compared to 70,600 last week, numbers did increase in response to higher flows with a one-day spike of 61,000 on May 28. The average daily index for steelhead rose to 119,000 compared to 83,000 last week, with a season high index of 230,000 on May 27. The index for coho averaged 8,000 this past week, up from 3,700 last week. Sockeye indices averaged 480 this week compared to 60 per day average last week. Increasing numbers of subyearling chinook were also captured this past week with the daily average index rising to 3,000. Little Goose and Lower Monumental dams both continued to have relatively large numbers of yearling chinook, and steelhead numbers increased substantially at the projects. At Little Goose the index for yearling chinook averaged

33,700 this week compared to 50,000 last week, while at Lower Monumental the index averaged 10,300 this week compared to 20,000 last. The index for steelhead at Little Goose averaged approximately 145,000 compared to 36,000 last week and at Lower Monumental the index was up considerably at 107,000 compared to 41,000 last week.

The bypass at Rock Island continues to sample at partial capacity while repairs are being made to the seals and guides in slide gates that feed water into the bypass. The site reports a relative increases in steelhead, coho and sockeye indices this week, while small numbers of yearling chinook and subyearling chinook continue to be collected.

In the Lower Columbia, at McNary, where sampling is carried out every other day, in conjunction with NMFS transportation study that began April 20, the passage index for yearling chinook decreased again this week to 50,000 compared to 96,000 last week. Steelhead indices increased from 10,000 last week to 20,000 this week. The daily average index for subyearling chinook increased from 4,200 per day last week to 12,000 this week. Sockeye indices were down to 7,900 this week compared to 76,000 the previous week. At John Day Dam the average daily index for yearling chinook remained steady at 61,000 this week compared to 63,000 last week. Steelhead indices continued to increase this week, with an average of 13,000 versus 9,600 last week. Coho indices increased this week averaging 7,200 this week compared to 3,270 last week. Sockeye numbers decreased to an average of 17,500 per day compared to 48,000 per day last week. Subyearling chinook indices increased steadily from 137 on May 24 to 8,747 on May 29.

At Bonneville Dam, the average daily index for yearling chinook was at 78,000 this week compared to 125,000 last week. The steelhead index averaged 31,000 this week compared to 33,700 last week. The indices for coho were up this week with an average index of 44,500 compared to 33,000 per day last week. Subyearling chinook daily indices averaged 10,000 per day this week compared to 15,000 per day last week. Sockeye indices decreased rapidly over the past two weeks with the weekly average index this week 24,400 compared to 101,000 last week.

Hatchery Releases - The preliminary hatchery total of juvenile salmonids released above Bonneville Dam for the 2003 migration season will approximate 86.6 million from Columbia River Basin hatcheries. Approximately 11 million juvenile salmonids were released or releases were initiated during the past two weeks, with additional fish scheduled for release in the upcoming two weeks.

Snake River - About 27.5 million smolts will be released in the Snake River Basin from State, Federal, and Tribal hatcheries and acclimation ponds for the 2003 migration year. All yearling spring, summer, and fall chinook have been released from hatcheries, acclimation facilities, or directly released river systems in Idaho, SE Washington, and NE Oregon.

During fall 2002, approximately 140,000 sockeye were released in the upper Salmon R basin lakes. About 1.2 million yearling coho salmon were released in the Clearwater River basin for the 2003 migration season.

Releases of juvenile steelhead (9.5 million scheduled) have been completed. Releases occurred throughout the Snake, Salmon, Clearwater, Imnaha, Grande Ronde, and Tucannon River basins for the 2003 migration.

Subyearling fall chinook releases are occurring in the Snake River and Clearwater River. Fall chinook releases will continue through June.

Mid-Columbia River - About 22.1 million yearling and subyearling salmon species will be released in the Mid-Columbia River and its tributaries during the 2003 migration year. The scheduled yearling spring chinook from the acclimation ponds in the Yakima River basin; releases of yearling spring chinook from the upper mid-Columbia are now completed for the spring season.

Yearling summer chinook released from Wells and Eastbank Complex hatcheries have been completed for the season with only the research release groups remaining. Yearling summer chinook were released into the Methow, Wenatchee, and mainstem Mid-Columbia rivers for the 2003 migration.

Subyearling fall and summer chinook are scheduled for release from late May through June. These fish comprise the highest percentage and

numbers of juvenile salmon released in the Mid-Columbia River (about 12.5 million scheduled). About 209,000 sockeye were released last fall into Lake Wenatchee; there will be no sockeye releases made into the Okanogan R basin this year. About 1.9 million yearling coho were released in the Yakama River basin, the Wenatchee River basin and the Methow River basin this migration season.

Approximately 1.3 million juvenile steelhead are scheduled for release from mid-April through mid-May. These releases should be completed by this week or early next week from the Wells Hatchery complex. Steelhead were released in the Okanogan, Methow, Entiat, Wenatchee, and mainstem Mid-Columbia rivers for the 2003 migration.

Subyearling summer and fall chinook salmon will be released from late May thru late June or early July. About 12 million will be released in this Mid-Columbia Reach.

Lower Columbia River - The Lower Columbia River Zone is scheduled to release about 36.9 million salmon and steelhead for the 2003 migration. Fish remaining to be released are the upriver bright fall chinook.

Release of yearling spring chinook from State, Tribal and Federal hatcheries is completed for the year. Fish were released in the Klickitat, Umatilla, Deschutes, Hood, Wind, and Little White Salmon rivers with yearling fall chinook released in the Umatilla River basin.

Yearling coho salmon have been released in the Klickitat, Little White Salmon, and Umatilla rivers to date. Klickitat Hatchery should complete volitional release of about 1.0 million yearling coho the end of May.

Summer steelhead were released in the Klickitat, possibly Little White Salmon (Drano L), Big White Salmon, Umatilla, Deschutes, and Hood rivers this year. Releases should be completed at all the sites. Winter steelhead were released in the Hood River and Big White Salmon River for the 2003 season.

Subyearling fall chinook releases will be completed by the end of May. Other release groups are scheduled for the Klickitat and Little White Salmon rivers in June.

Adult Fish Passage - During the past week, daily counts of adult spring chinook at Bonneville Dam ranged from a high count of 2,047 to a low of 974. Through May 29, the cumulative count of adult spring chinook was 188,693 about 71.2% of the 2002 count, and 156% of the 10-year average count. No updates were posted for sampling of adult fish at Bonneville Dam for the week. Also at Bonneville Dam, counts of Jack spring chinook salmon are greater than double the year 2002 and 10-year average count and now exceeds the Year 2001 Jack chinook total through May 29.

Counts of adult spring chinook at The Dalles ranged from 884 to 1,699 with the average passage for the week of 1,180 per day, about equal to last week. The cumulative count was 125,653 about 66.6% of the Bonneville count through May 29th. At McNary Dam, 88,326 were counted through May 29 with about 68,136 counted into the Snake River at Ice Harbor Dam. At Priest Rapids Dam, close to 16,274 adult spring chinook have been tallied through May 29. For the Yakama River, over 3,500 adult chinook have been counted at Prosser Dam. These three counting sites account for most all of the spring chinook past McNary Dam.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/16/03	141.3	0.0	141.8	0.0	150.5	9.1	146.0	33.8	150.0	28.2	155.4	56.2	160.2	62.9
05/17/03	101.5	0.0	108.7	0.0	124.4	8.8	130.0	31.7	135.6	26.2	132.6	48.0	137.4	64.7
05/18/03	91.1	0.0	85.1	0.0	87.7	6.4	83.6	27.5	89.1	22.3	126.4	45.7	131.5	70.9
05/19/03	136.2	0.0	137.9	0.0	146.5	9.1	144.8	34.6	146.0	29.1	122.7	25.7	128.8	79.8
05/20/03	139.2	0.0	138.8	0.0	147.5	9.2	146.9	33.5	149.5	27.8	152.9	12.2	158.5	98.5
05/21/03	144.2	0.0	140.9	5.0	148.3	8.7	148.2	35.0	149.7	28.9	151.7	15.1	158.9	77.7
05/22/03	149.8	0.0	148.8	1.1	166.2	9.8	166.8	35.6	168.6	28.4	183.5	52.5	192.7	96.6
05/23/03	131.0	0.0	144.0	0.0	147.7	9.6	146.2	36.5	150.6	27.4	173.9	62.7	182.6	70.2
05/24/03	99.8	0.2	103.7	0.0	115.8	8.1	116.2	35.6	122.0	25.5	125.2	45.5	121.6	68.3
05/25/03	78.4	0.2	78.5	0.0	88.2	6.6	90.0	30.9	100.4	23.8	93.0	33.4	89.6	55.3
05/26/03	83.9	0.2	79.4	0.0	95.8	7.0	97.8	30.6	108.8	23.5	118.2	42.6	117.1	73.3
05/27/03	101.3	0.2	106.9	0.0	124.8	7.9	123.9	38.3	130.2	31.9	134.9	47.3	136.2	69.6
05/28/03	143.0	0.2	126.8	5.5	139.5	12.0	133.6	26.0	141.5	32.7	139.4	28.7	143.0	63.9
05/29/03	121.7	0.2	134.4	0.0	157.7	14.6	159.6	33.7	170.3	27.7	179.6	46.4	181.3	87.0

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

Date	Dworshak		Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/16/03	13.1	3.6	20.5	20.8	87.0	15.3	85.7	17.9	84.1	34.3	88.9	52.7
05/17/03	9.5	0.0	19.4	21.4	89.7	20.4	89.1	18.5	88.7	34.5	94.3	46.9
05/18/03	7.5	1.4	17.9	21.3	83.8	25.6	81.6	19.9	78.8	35.0	84.0	48.1
05/19/03	15.3	5.3	17.0	13.5	83.8	20.5	84.1	20.4	82.7	36.9	88.5	60.3
05/20/03	15.2	5.2	17.0	13.5	72.1	15.4	72.0	20.4	67.8	31.9	75.5	43.9
05/21/03	14.9	4.9	16.5	14.1	74.4	20.4	75.5	20.4	72.6	32.0	78.8	39.2
05/22/03	10.0	0.0	16.5	18.1	72.0	25.6	66.9	18.9	62.7	28.9	70.4	44.9
05/23/03	10.0	0.0	17.0	21.1	79.7	20.5	78.4	18.0	75.6	29.1	81.3	57.6
05/24/03	9.8	0.0	18.2	20.1	95.7	20.5	94.3	17.0	91.2	26.0	97.5	54.8
05/25/03	7.3	0.0	20.3	18.1	122.7	30.6	120.8	19.8	118.1	23.5	122.6	60.7
05/26/03	1.5	0.0	21.1	16.3	146.7	53.8	141.2	25.5	139.7	25.5	142.4	67.0
05/27/03	1.5	0.0	23.7	23.1	155.2	61.4	153.8	36.7	153.0	30.5	158.7	91.8
05/28/03	1.6	0.0	23.2	25.0	156.8	63.0	151.9	38.7	150.9	32.5	154.5	84.0
05/29/03	1.6	0.0	---	---	172.1	77.9	169.7	53.6	166.6	47.8	170.3	86.9

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
05/16/03	242.7	72.7	244.4	64.3	242.2	96.0	261.5	146.3	9.2	99.3
05/17/03	241.3	71.4	237.9	56.6	235.9	92.7	245.6	148.7	1.1	89.1
05/18/03	224.9	71.2	239.0	60.2	236.9	93.5	254.9	100.2	43.6	104.4
05/19/03	217.8	71.8	222.6	61.4	220.9	86.8	257.4	101.1	49.2	102.9
05/20/03	215.6	72.6	212.3	48.7	212.6	89.2	226.6	153.1	0.0	66.6
05/21/03	217.0	71.7	218.6	42.7	221.9	83.5	245.8	146.6	5.3	87.1
05/22/03	245.2	82.4	248.8	58.3	247.2	93.5	259.8	97.4	60.2	94.8
05/23/03	249.2	85.8	249.8	63.1	246.7	93.0	268.4	96.3	59.2	106.2
05/24/03	259.7	90.1	247.2	60.5	251.4	99.3	272.4	137.7	23.0	105.1
05/25/03	221.2	65.8	230.0	50.7	232.2	98.2	251.3	134.5	10.8	99.3
05/26/03	248.3	76.8	247.5	56.7	240.5	98.5	276.6	94.9	61.6	113.4
05/27/03	291.9	117.8	317.4	66.2	310.8	113.8	310.8	102.1	83.2	119.2
05/28/03	298.8	124.9	310.0	70.6	322.9	112.7	338.9	130.5	86.5	115.0
05/29/03	201.8	153.0	271.1	55.8	270.0	96.4	282.0	103.3	61.3	110.7

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				Fish with L. Line GBT	
								Rank 1	Rank 2	Rank 3	Rank 4	Num Fish	Avg. Rank
Lower Granite Dam													
	05/06/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/20/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/27/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
Little Goose Dam													
	05/21/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/28/03	Chinook + Steelhead	100	7	7	7.00%	0.00%	7	0	0	0		
Lower Monumental Dam													
	05/26/03	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0		
McNary Dam													
	05/22/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/26/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
Bonneville Dam													
	05/22/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/26/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/29/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
Rock Island Dam													
	05/22/03	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0		
	05/26/03	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0		
	05/29/03	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	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>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		#	Avg		Avg	#		Avg	Avg		#	Avg			Avg	#		
5/16	98	98	98	24	117	120	121	24	108	108	108	24	106	107	108	24	106	107	107	23
5/17	98	99	99	24	116	119	120	24	108	108	108	24	106	107	109	24	106	106	106	23
5/18	97	97	98	12	112	112	119	9	107	107	107	24	106	106	107	8	105	106	106	23
5/19	97	97	97	24	117	119	119	24	107	107	107	24	105	106	107	24	105	105	106	22
5/20	98	98	99	24	115	120	121	24	107	108	110	24	107	108	127	24	106	107	107	23
5/21	98	99	99	24	114	120	120	23	108	109	109	24	106	107	107	24	107	107	107	23
5/22	99	99	99	24	116	120	121	24	109	109	109	24	107	107	109	24	107	107	107	23
5/23	99	99	99	24	114	119	121	24	108	109	110	21	107	108	109	24	107	107	108	24
5/24	99	99	99	24	116	120	122	24	111	111	112	24	109	110	111	24	108	109	109	24
5/25	99	99	100	24	113	115	120	24	111	111	112	24	109	110	111	24	108	108	109	24
5/26	98	99	99	24	118	121	123	24	110	111	112	24	109	109	112	24	108	108	108	23
5/27	98	98	99	24	119	122	122	24	109	110	111	24	108	109	112	24	108	109	109	23
5/28	98	99	99	24	122	122	123	24	110	111	113	24	109	109	111	24	109	110	110	23
5/29	99	99	100	24	122	124	125	24	110	110	110	24	109	109	110	24	110	110	111	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>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		#	Avg		Avg	#		Avg	Avg		#	Avg			Avg	#		
5/16	106	106	107	23	106	106	106	24	107	107	108	24	107	107	107	24	109	110	112	23
5/17	105	106	106	23	106	106	106	17	107	107	108	17	106	106	106	8	108	108	109	6
5/18	105	105	106	23	105	105	105	24	106	107	107	24	105	105	106	23	109	110	111	23
5/19	105	105	105	22	105	105	106	23	107	107	108	23	106	106	107	24	109	110	110	23
5/20	106	106	107	23	106	106	106	23	108	108	108	23	107	107	108	21	109	110	111	19
5/21	111	115	132	23	106	107	107	24	108	109	109	24	108	108	108	23	110	111	112	22
5/22	107	108	112	23	107	107	108	24	109	109	110	24	108	109	109	23	111	111	112	20
5/23	106	107	107	24	107	107	107	2	109	109	109	2	109	110	110	23	111	113	113	23
5/24	108	108	108	24	---	---	---	0	---	---	---	0	111	111	111	24	113	114	114	22
5/25	108	108	108	24	---	---	---	0	---	---	---	0	110	110	110	23	113	113	114	21
5/26	107	107	108	23	---	---	---	0	---	---	---	0	109	109	110	24	112	112	114	24
5/27	107	107	108	23	108	108	112	14	109	109	109	14	108	109	109	24	112	112	113	24
5/28	110	112	118	23	108	109	110	24	110	111	116	24	109	110	110	24	111	112	114	23
5/29	109	109	110	23	109	110	110	24	113	114	125	24	110	110	111	22	111	112	114	20

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>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High	<u>24 h</u>	<u>12 h</u>	High					
	Avg	Avg		#	Avg		Avg	#		Avg	Avg		#	Avg			Avg	#		
5/16	110	111	111	23	117	119	122	21	110	111	111	24	117	117	118	24	116	116	116	24
5/17	110	110	110	8	121	121	123	8	109	110	110	24	114	115	116	24	113	114	115	24
5/18	109	109	110	23	115	118	121	23	108	108	109	24	114	114	115	24	111	112	112	24
5/19	109	110	110	24	117	120	123	24	109	112	114	24	113	114	115	24	112	113	114	24
5/20	110	111	112	20	118	119	125	20	112	113	114	24	113	113	114	24	113	114	115	24
5/21	111	111	112	23	118	119	123	23	112	114	115	24	114	115	116	24	113	114	115	24
5/22	111	112	112	23	118	119	125	20	11	11	12	24	10	10	10	24	11	11	11	24
5/23	112	112	113	22	118	120	125	22	113	114	115	24	118	119	119	24	118	119	120	24
5/24	114	114	115	23	119	120	124	22	115	116	118	24	119	119	119	24	120	121	124	24
5/25	112	113	113	22	118	119	120	22	114	114	115	24	118	118	119	24	116	117	117	24
5/26	111	112	112	24	118	120	124	23	114	114	115	24	116	116	117	24	114	115	117	24
5/27	111	112	113	24	119	121	122	24	115	117	119	24	116	116	116	9	114	116	119	24
5/28	112	113	113	22	119	121	124	21	115	116	118	24	---	---	---	0	116	117	118	24
5/29	111	111	112	22	118	119	122	21	---	---	---	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	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/16	114	114	115	24	111	112	112	24	105	108	108	24	102	103	104	24	102	103	103	24
5/17	113	113	114	24	111	112	112	24	98	98	99	24	101	101	102	24	103	103	104	24
5/18	113	114	114	24	111	111	112	24	103	106	107	24	101	102	103	24	103	103	103	24
5/19	115	116	116	24	111	113	114	23	107	107	108	24	104	105	106	24	104	105	105	24
5/20	117	117	117	24	114	115	115	21	107	108	108	24	104	104	105	24	104	104	105	24
5/21	116	116	117	24	114	115	116	21	107	107	108	24	104	104	104	24	103	104	105	24
5/22	11	11	11	24	114	115	115	24	99	99	99	17	101	102	103	24	104	104	105	23
5/23	118	118	120	24	116	118	119	24	99	99	100	17	---	---	---	0	104	105	106	24
5/24	117	118	119	24	116	117	117	24	100	100	100	24	---	---	---	0	105	106	107	24
5/25	114	115	117	24	114	114	115	24	99	99	100	24	103	104	104	24	105	105	105	24
5/26	116	117	117	24	112	112	113	24	107	109	109	24	104	105	106	24	107	107	108	23
5/27	116	116	117	24	114	115	115	24	108	109	110	24	105	106	107	24	108	109	109	24
5/28	115	116	116	24	115	116	116	24	106	108	108	24	105	106	106	24	109	109	109	24
5/29	---	---	---	0	114	115	116	24	105	105	106	24	105	107	107	24	109	110	110	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	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/16	102	103	104	24	103	103	103	24	108	113	118	24	107	107	108	24	111	114	115	24
5/17	100	101	102	24	101	101	102	24	109	117	118	24	105	106	106	24	110	114	115	24
5/18	100	101	103	24	100	101	101	24	111	114	118	24	104	104	105	24	110	115	116	24
5/19	103	105	106	24	101	102	103	24	108	109	110	24	105	106	107	24	111	116	117	24
5/20	103	104	105	24	102	103	103	23	107	112	118	23	106	108	109	24	112	117	117	24
5/21	103	104	105	24	104	105	107	24	111	118	119	24	109	109	110	24	113	116	117	24
5/22	102	104	105	24	106	106	107	24	113	115	119	24	109	109	109	24	112	116	117	24
5/23	102	104	106	24	106	107	108	24	110	111	112	24	109	110	113	24	111	115	116	24
5/24	102	104	105	24	106	107	108	24	110	110	111	24	112	114	114	24	113	115	116	24
5/25	101	102	102	24	105	105	105	24	114	117	121	24	111	112	113	24	113	114	115	24
5/26	102	103	104	24	103	104	104	24	122	123	124	24	108	108	110	24	112	115	115	24
5/27	103	104	105	24	104	105	107	24	125	127	128	24	112	115	116	24	116	118	119	24
5/28	104	104	104	24	107	108	108	24	126	128	128	24	118	119	120	24	118	119	120	24
5/29	103	104	105	24	108	108	109	24	126	128	130	24	120	121	121	24	120	123	124	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	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/16	111	111	112	24	118	119	119	24	112	112	113	24	114	115	117	24	109	110	110	24
5/17	109	111	112	24	118	119	120	24	111	112	112	24	114	114	114	24	108	108	109	24
5/18	109	110	111	24	118	119	119	24	111	112	112	24	113	114	114	24	109	110	111	24
5/19	109	112	114	24	119	120	121	24	112	114	115	24	114	114	115	24	109	110	112	23
5/20	110	112	115	24	118	120	121	24	114	115	117	23	113	114	115	24	110	111	113	24
5/21	111	114	115	24	119	120	121	24	116	117	118	24	113	114	115	24	113	116	121	24
5/22	112	113	115	24	118	120	121	24	117	117	119	24	113	114	116	24	114	116	118	24
5/23	114	115	118	24	119	120	121	24	117	118	119	24	114	116	118	24	115	116	118	24
5/24	115	116	117	24	119	120	121	24	118	118	118	24	115	116	118	24	115	116	119	24
5/25	112	113	114	24	118	118	119	24	115	116	117	24	116	117	117	24	116	117	119	24
5/26	112	113	114	24	118	119	120	24	112	113	114	24	117	118	120	24	114	115	116	24
5/27	111	112	113	24	120	122	123	24	112	113	114	24	119	120	121	24	112	113	115	24
5/28	115	117	118	24	122	124	125	24	114	114	114	24	119	119	120	24	113	113	114	24
5/29	118	120	121	24	124	127	130	24	115	117	118	24	120	121	123	24	116	117	118	24

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>AVG</u>	<u>High</u>	#	
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High	hr	Avg		AVG
5/16	108	109	109	24	114	120	120	24	109	110	110	23	114	118	119	24	112	115	116	23
5/17	107	107	108	24	114	120	120	24	108	109	109	23	113	117	119	24	109	110	111	23
5/18	107	108	109	24	113	119	120	24	106	107	107	23	112	117	119	24	108	110	111	23
5/19	109	111	112	24	114	119	120	24	107	108	110	23	111	117	119	24	110	113	116	23
5/20	110	111	112	24	115	120	121	24	107	107	108	23	112	117	118	24	110	113	115	23
5/21	113	114	115	24	116	120	121	24	107	108	109	23	112	117	119	24	109	110	113	19
5/22	115	116	117	24	117	120	121	24	110	110	112	23	113	117	119	24	110	112	113	23
5/23	116	117	118	24	117	120	120	24	114	116	118	24	115	118	120	24	113	116	118	24
5/24	116	117	119	24	118	120	120	24	116	116	116	24	117	118	119	24	115	117	118	24
5/25	116	117	117	24	117	119	120	24	115	116	116	24	116	117	118	24	113	113	114	24
5/26	114	115	116	24	116	119	120	24	114	115	116	23	116	118	119	24	113	114	115	23
5/27	113	114	116	24	118	119	120	24	113	114	115	23	116	119	121	24	114	115	116	23
5/28	114	114	115	24	119	119	120	24	113	113	113	15	116	119	121	24	114	115	116	23
5/29	115	116	117	24	121	123	123	24	113	113	117	15	114	117	118	24	113	115	117	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washugal</u>						
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	
	Avg	Avg		High	hr		Avg	Avg		High	hr		Avg	Avg		High
5/16	117	118	119	24	111	111	111	23	117	117	118	23	112	112	112	24
5/17	115	116	118	24	111	112	112	23	118	118	119	23	111	112	112	24
5/18	115	116	116	24	110	111	111	23	113	115	117	23	111	112	114	24
5/19	116	118	119	24	111	111	112	23	113	115	118	23	109	110	112	24
5/20	116	117	118	24	114	115	115	23	119	119	120	23	112	115	116	24
5/21	116	117	118	24	114	115	116	23	119	119	120	23	116	117	118	24
5/22	116	117	118	24	115	116	117	23	116	117	118	23	115	116	117	24
5/23	117	119	120	24	114	115	115	24	115	116	117	24	114	115	117	24
5/24	119	119	120	24	116	117	117	24	118	119	119	24	114	115	116	24
5/25	117	118	119	24	114	115	115	24	117	118	118	24	114	114	115	24
5/26	118	118	118	24	113	114	114	22	114	115	117	23	113	113	114	24
5/27	118	119	121	24	114	115	117	23	115	116	117	23	112	114	115	24
5/28	118	119	119	24	117	117	117	23	118	118	122	23	114	116	117	24
5/29	118	119	121	24	116	117	118	23	119	123	129	23	118	121	126	24

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 5/16/03 to 5/29/03

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Wildlife	Oxbow-Idaho		FA	2003	500,000	05-16-03	05-20-03	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Wildlife Total					500,000				
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003	250,000	05-19-03	05-31-03	Lapwai Creek	Clearwater River M
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003	250,000	05-19-03	06-07-03	Cherry Lane Hatchery	Clearwater River M
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	400,000	05-19-03	05-30-03	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-19-03	05-30-03	Big Canyon (Clearwater R)	Clearwater River M
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-19-03	05-30-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe Total					1,900,000				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	130,500	05-08-03	05-23-03	Big Canyon Acclim.Pd (G R)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	217,000	05-07-03	05-22-03	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife Total					347,500				
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2003	300,000	05-21-03	05-30-03	Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2003	300,000	05-21-03	05-30-03	Umatilla River	Umatilla River
Umatilla Tribe Total					600,000				
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2003	4,000,000	05-26-03	06-30-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CO	NO	2003	1,000,000	05-19-03	05-31-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2003	120,000	04-13-03	05-23-03	Above Rocky Reach Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2003	121,000	04-07-03	05-30-03	Bel. Priest Rapids Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	57,095	04-21-03	05-16-03	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	57,095	04-21-03	05-16-03	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	105,890	04-15-03	05-16-03	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	107,055	04-21-03	05-16-03	Chewuch River	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	107,055	04-21-03	05-16-03	Methow River	Methow River
Washington Dept. of Fish and Wildlife Total					5,675,190				
Yakama Tribe	Little White Salmon NFH	CH0	FA	2003	1,700,000	05-19-03	06-02-03	Prosser Acclim Pond	Yakama River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2003	320,000	05-05-03	05-20-03	Prosser Acclim Pond	Yakama River
Yakama Tribe Total					2,020,000				
Grand Total					11,042,690				

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

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary

From:	5/30/03	to	6/12/03						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003	250,000	05-19-03	05-31-03	Lapwai Creek	Clearwater River M F
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003	250,000	05-19-03	06-07-03	Cherry Lane Hatchery	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	400,000	05-19-03	05-30-03	Pittsburg Landing Acc Pd	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-19-03	05-30-03	Big Canyon (Clearwater R)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-19-03	05-30-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe Total					1,900,000				
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2003	300,000	05-21-03	05-30-03	Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2003	300,000	05-21-03	05-30-03	Umatilla River	Umatilla River
Umatilla Tribe Total					600,000				
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2003	4,000,000	05-26-03	06-30-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CO	NO	2003	1,000,000	05-19-03	05-31-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2003	200,000	05-30-03	06-06-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2003	121,000	04-07-03	05-30-03	Bel. Priest Rapids Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					5,321,000				
Yakama Tribe	Little White Salmon NFH	CH0	FA	2003	1,700,000	05-19-03	06-02-03	Prosser Acclim Pond	Yakama River
Yakama Tribe Total					1,700,000				
Grand Total					9,521,000				

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

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

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/16/2003 *	24	68	71	13	67,266	85,689	30,619	---	---	76,006	112,103
05/17/2003 *	---	41	---	---	110,367	76,444	31,040	162	127,535	54,159	153,754
05/18/2003 *	---	52	---	---	144,582	59,211	27,820	196	---	65,966	146,837
05/19/2003 *	39	57	33	102	59,444	39,484	13,521	81	104,522	69,454	143,087
05/20/2003 *	42	22	14	28	53,650	31,662	22,782	130	---	65,868	132,522
05/21/2003 *	20	32	10	15	37,756	40,475	5,204	156	56,282	45,354	79,621
05/22/2003 *	10	31	5	17	21,009	17,955	10,476	212	---	65,879	105,323
05/23/2003 *	2	57	13	27	17,844	16,530	3,069	257	69,170	100,459	71,428
05/24/2003 *	---	15	---	---	15,858	19,560	3,861	240	0	68,456	67,191
05/25/2003 *	---	---	---	---	22,672	51,223	10,926	153	71,836	49,657	108,442
05/26/2003 *	---	---	52	444	50,132	40,818	12,465	122	---	39,497	104,980
05/27/2003 *	---	1	23	459	61,900	38,388	15,574	97	44,371	39,471	63,400
05/28/2003 *	---	4	19	---	36,244	33,291	13,848	109	---	61,007	65,747
05/29/2003 *	---	0	23	---	22,127	35,941	12,456	163	66,623	66,046	64,171
Total:	137	380	263	1,105	720,851	586,671	213,661	2,078	540,339	867,279	1,418,606
# Days:	6	12	10	8	14	14	14	13	8	14	14
Average:	23	32	26	138	51,489	41,905	15,262	160	67,542	61,949	101,329
YTD	32,064	33,778	10,965	2,417	3,507,191	2,088,803	726,851	13,658	1,506,541	1,655,192	3,545,183

COMBINED SUBYEARLING CHINOOK											
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/16/2003 *	0	4	1	63	0	0	0	---	---	98	20,429
05/17/2003 *	---	6	---	---	0	0	166	15	4,024	0	16,594
05/18/2003 *	---	4	---	---	197	0	135	3	---	0	8,287
05/19/2003 *	0	0	1	9	0	0	0	8	5,127	0	13,878
05/20/2003 *	0	0	2	10	198	0	0	66	---	0	14,962
05/21/2003 *	0	1	4	14	0	566	114	8	3,527	0	14,126
05/22/2003 *	0	1	1	24	0	0	18	7	---	0	15,850
05/23/2003 *	0	0	10	36	207	3	27	11	8,478	0	5,291
05/24/2003 *	---	0	---	---	0	1	0	8	0	137	7,217
05/25/2003 *	---	---	---	---	0	0	78	8	6,840	932	6,379
05/26/2003 *	---	---	1	44	5,127	0	231	16	---	1,555	10,090
05/27/2003 *	---	0	2	20	4,336	0	0	15	17,036	2,179	11,142
05/28/2003 *	---	0	2	---	2,480	267	0	32	---	6,554	16,533
05/29/2003 *	---	1	1	---	9,305	0	105	31	27,760	8,747	15,054
Total:	0	17	25	220	21,850	837	874	228	72,792	20,202	175,832
# Days:	6	12	10	8	14	14	14	13	8	14	14
Average:	0	1	3	28	1,561	60	62	18	9,099	1,443	12,559
YTD	1	61	47	355	26,996	1,197	1,076	1,610	106,461	21,076	1,851,880

* 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.

Two-Week Summary of Passage Indices

COMBINED COHO												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/16/2003	*	0	0	0	0	1,385	1,040	306	---	---	3,226	42,901
05/17/2003	*	---	0	---	---	3,859	1,287	1,093	162	862	2,966	42,263
05/18/2003	*	---	0	---	---	5,910	4	438	179	---	6,337	19,682
05/19/2003	*	0	0	0	1	8,323	796	1,043	144	754	3,007	34,934
05/20/2003	*	0	0	0	0	3,378	658	446	311	---	4,451	45,955
05/21/2003	*	0	0	0	0	2,278	1,205	1,139	296	613	792	23,116
05/22/2003	*	0	0	0	0	1,260	3,469	1,826	1,148	---	2,079	25,052
05/23/2003	*	0	0	0	1	1,867	3,000	53	973	1,968	2,088	26,455
05/24/2003	*	---	0	---	---	2,016	1,212	518	875	0	4,556	23,144
05/25/2003	*	---	---	---	---	3,986	8,576	1,575	845	4,197	4,758	45,673
05/26/2003	*	---	---	0	5	9,685	9,018	3,336	1,853	---	5,027	61,258
05/27/2003	*	---	0	0	0	18,787	13,041	3,623	2,903	2,666	6,502	58,615
05/28/2003	*	---	0	0	---	15,875	10,648	2,595	2,573	---	15,566	48,062
05/29/2003	*	---	0	0	---	3,519	12,393	4,862	1,942	17,176	12,285	48,327
Total:		0	0	0	7	82,128	66,347	22,853	14,204	28,236	73,640	545,437
# Days:		6	12	10	8	14	14	14	13	8	14	14
Average:		0	0	0	1	5,866	4,739	1,632	1,093	3,530	5,260	38,960
YTD		0	0	0	17	87,335	68,390	25,265	14,804	31,353	116,478	1,576,663

COMBINED STEELHEAD												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/16/2003	*	9	1,503	101	104	67,266	47,377	23,890	---	---	9,238	37,538
05/17/2003	*	---	885	---	---	81,424	43,814	42,237	152	15,103	7,995	41,485
05/18/2003	*	---	712	---	---	105,974	23,272	55,842	294	---	13,663	32,112
05/19/2003	*	24	708	129	480	117,700	28,883	24,368	262	8,004	13,101	29,191
05/20/2003	*	24	482	70	150	91,204	45,442	63,999	443	---	9,977	30,459
05/21/2003	*	15	403	27	41	46,874	36,722	29,930	599	6,906	4,399	25,042
05/22/2003	*	16	847	17	46	70,376	28,253	44,488	541	---	8,617	39,879
05/23/2003	*	11	934	21	33	46,685	18,318	14,768	289	6,672	10,297	21,164
05/24/2003	*	---	1,066	---	---	58,594	42,404	32,305	233	0	6,126	28,618
05/25/2003	*	---	---	---	---	70,758	112,230	69,246	271	29,090	6,114	30,874
05/26/2003	*	---	---	131	509	147,832	242,044	159,305	939	---	8,294	57,415
05/27/2003	*	---	13	36	181	230,259	186,474	210,808	1,014	30,272	10,502	34,621
05/28/2003	*	---	19	15	---	191,639	217,679	133,222	873	---	17,697	21,531
05/29/2003	*	---	1	21	---	87,256	198,762	130,855	1,385	35,923	32,745	24,559
Total:		99	7,573	568	1,544	1,413,841	1,271,674	1,035,263	7,295	131,970	158,765	454,488
# Days:		6	12	10	8	14	14	14	13	8	14	14
Average:		17	631	57	193	100,989	90,834	73,947	561	16,496	11,340	32,463
YTD		2,347	47,903	2,407	5,601	3,052,119	2,287,061	1,601,780	11,598	198,612	302,085	818,808

Note 1: 4/27-5/1 Little Goose Dam coho -potential misidentification of species; sample correction pending further analysis

Note 2: May 1 Little Goose Dam sample partly estimated based on electronic counts.

* See sampling comments

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

Two-Week Summary of Passage Indices

		COMBINED SOCKEYE										
		WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	*	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/16/2003	*	0	0	0	0	0	0	0	---	---	40,765	12,257
05/17/2003	*	---	0	---	---	0	3	0	13	151,658	63,057	62,487
05/18/2003	*	---	0	---	---	0	0	0	20	---	94,687	84,425
05/19/2003	*	1	0	0	3	0	0	0	15	53,250	60,096	191,903
05/20/2003	*	0	0	0	1	0	1	0	11	---	25,339	149,087
05/21/2003	*	0	0	0	0	0	1	0	10	25,003	31,896	118,789
05/22/2003	*	0	0	0	0	421	549	0	10	---	22,328	91,007
05/23/2003	*	0	0	0	0	0	0	0	6	14,384	22,370	33,333
05/24/2003	*	---	0	---	---	0	130	0	5	0	19,554	35,089
05/25/2003	*	---	---	---	---	249	0	58	7	7,004	22,856	33,171
05/26/2003	*	---	---	0	7	142	0	280	34	---	11,459	25,945
05/27/2003	*	---	0	0	0	481	246	24	103	6,960	14,950	20,027
05/28/2003	*	---	0	0	---	1,241	0	0	77	---	14,126	14,226
05/29/2003	*	---	0	0	---	1,259	539	221	72	10,930	17,154	9,111
Total:		1	0	0	11	3,793	1,469	583	383	269,189	460,637	880,857
# Days:		6	12	10	8	14	14	14	13	8	14	14
Average:		0	0	0	1	271	105	42	29	33,649	32,903	62,918
YTD		1	0	0	11	4,989	2,219	887	9,342	769,071	599,556	1,059,325

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

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: 05/29

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2003		2002		10-Yr Avg.		2003		2002		10-Yr Avg.		2003		2002		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	188,693	14,177	264,869	6,288	120,879	5,966	0	0	0	0	0	0	0	0	0	0	0	0
TDA	125,653	10,722	172,282	3,479	78,151	3,874	0	0	0	0	0	0	0	0	0	0	0	0
JDA	95,198	9,184	131,322	2,077	64,195	2,849	0	0	0	0	0	0	0	0	0	0	0	0
MCN	88,326	9,594	118,119	3,084	57,219	2,687	0	0	0	0	0	0	0	0	0	0	0	0
IHR	68,136	6,092	73,778	1,334	33,909	1,511	0	0	0	0	0	0	0	0	0	0	0	0
LMN	58,896	5,355	62,263	918	31,853	1,435	0	0	0	0	0	0	0	0	0	0	0	0
LGS	56,246	4,963	59,688	933	29,980	1,441	0	0	0	0	0	0	0	0	0	0	0	0
LWG	52,857	4,972	54,778	1,169	28,017	1,313	0	0	0	0	0	0	0	0	0	0	0	0
PRD	16,274	484	32,764	155	14,216	234	0	0	0	0	0	0	0	0	0	0	0	0
RIS	14,884	419	19,166	649	9,354	300	0	0	0	0	0	0	0	0	0	0	0	0
RRH	3,795	172	7,931	40	3,235	53	0	0	0	0	0	0	0	0	0	0	0	0
WEL	1,341	31	4,694	4	1,714	49	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2003		2002		10-Yr Avg.		10-Yr			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2003	2002	Avg.	2003	2002	Avg.	2003
BON	0	0	0	0	0	0	1	1	4	4,166	6,188	4,298	1,016
TDA	0	0	0	0	0	0	3	0	1	1,019	2,694	1,377	492
JDA	0	0	0	0	0	0	0	0	0	1,497	8,259	3,633	825
MCN	0	0	0	0	0	0	3	0	0	1,440	4,918	2,157	829
IHR	0	0	0	0	0	0	0	0	0	1,612	4,641	2,328	793
LMN	0	0	0	0	0	0	0	0	0	1,912	5,071	2,397	1,157
LGS	0	0	0	0	0	0	0	0	0	2,110	6,165	1,838	1,318
LWG	0	0	0	0	0	0	2	0	0	15,796	12,466	5,512	3,714
PRD	0	0	0	0	0	0	1	0	15	9	36	7	0
RIS	0	0	0	0	0	0	3	1	0	30	69	38	25
RRH	0	0	7	0	0	0	0	2	0	46	174	55	35
WEL	0	0	0	0	0	0	0	0	0	21	64	12	13

RIS, RRH are through 05/27. WEL is through 5/28. IHR is missing 5/16.

LGR is missing data for 3/6 and 5/12.

Although WEL began their counts early on 4/15, they won't have data posted until later in the season.

**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: 5/30/03

BON counts from January 1, 2003 to March 14, 2003 (our counts begin March 15)

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
3,758	0	3,443	408

Two Week Transportation Summary

		05/17/03 TO 05/30/03					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	13,749	524,220	55,977	2,391	982,546	1,578,883
	Sum of NumberBarged	13,656	511,020	55,789	2,373	959,881	1,542,719
	Sum of NumberBypassed	0	11,466	0	0	22,038	33,504
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	93	1,734	188	18	627	2,660
LGS	Sum of NumberCollected	606	456,043	52,107	1,105	999,639	1,509,500
	Sum of NumberBarged	602	441,110	52,027	1,104	998,836	1,493,679
	Sum of NumberBypassed	0	13	0	0	2	15
	Sum of Numbertrucked	0	14,348	0	0	0	14,348
	Sum of TotalProjectMortalities	4	572	80	1	801	1,458
LMN	Sum of NumberCollected	595	137,445	16,550	464	751,655	906,709
	Sum of NumberBarged	594	132,714	15,867	461	675,446	825,082
	Sum of NumberBypassed	0	4,487	681	0	75,531	80,699
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1	244	2	3	678	928
MCN	Sum of NumberCollected	46,011	355,064	17,201	182,158	84,600	685,034
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	46,004	354,816	17,199	182,040	84,525	684,584
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	7	248	2	118	75	450
Total Sum of NumberCollected		60,961	1,472,772	141,835	186,118	2,818,440	4,680,126
Total Sum of NumberBarged		14,852	1,084,844	123,683	3,938	2,634,163	3,861,480
Total Sum of NumberBypassed		46,004	370,782	17,880	182,040	182,096	798,802
Total Sum of Numbertrucked		0	14,348	0	0	0	14,348
Total Sum of TotalProjectMortalities		105	2,798	272	140	2,181	5,496

YTD Transportation Summary

TO: 05/30/03

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	17,551	2,516,823	59,658	3,277	2,153,483	4,750,792
	Sum of NumberBarged	16,633	2,444,196	59,527	3,267	2,108,157	4,631,780
	Sum of NumberBypassed	0	38,497	0	0	45,637	84,134
	Sum of NumberTrucked	816	54,208	40	78	15,402	70,544
	Sum of TotalProjectMortalities	102	5,253	191	29	964	6,539
LGS	Sum of NumberCollected	862	1,555,605	53,597	1,634	1,743,386	3,355,084
	Sum of NumberBarged	849	1,503,340	53,514	1,629	1,741,484	3,300,816
	Sum of NumberBypassed	0	22	0	0	3	25
	Sum of NumberTrucked	5	52,601	0	0	850	53,456
	Sum of TotalProjectMortalities	8	1,581	83	5	1,049	2,726
LMN	Sum of NumberCollected	760	422,859	17,820	664	1,053,839	1,495,942
	Sum of NumberBarged	699	400,388	17,131	621	975,426	1,394,265
	Sum of NumberBypassed	0	6,573	681	0	75,763	83,017
	Sum of NumberTrucked	60	15,149	0	40	1,637	16,886
	Sum of TotalProjectMortalities	1	749	8	3	1,013	1,774
MCN	Sum of NumberCollected	71,235	971,818	19,207	499,034	128,030	1,689,324
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	71,193	971,120	19,205	498,810	127,860	1,688,188
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	42	605	2	228	127	1,004
Total Sum of NumberCollected		90,408	5,467,105	150,282	504,609	5,078,738	11,291,142
Total Sum of NumberBarged		18,181	4,347,924	130,172	5,517	4,825,067	9,326,861
Total Sum of NumberBypassed		71,193	1,016,212	19,886	498,810	249,263	1,855,364
Total Sum of NumberTrucked		881	121,958	40	118	17,889	140,886
Total Sum of TotalProjectMortalities		153	8,188	284	265	3,153	12,043

