



Fish Passage Center

Weekly Report #03 - 3

April 04, 2003

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

Summary of Events:

Water Supply: The Columbia Basin snowpack above The Dalles increased from 74% of average on March 1st to 86% on April 1st. Additionally, the snowpack above Grand Coulee increased 13% between March 1st and April 1st to 85% of average and snowpacks above Ice Harbor increased 14% to 94% of average over the same period.

Most Columbia Basin watersheds received heavy precipitation through the 24th of March (Table 1). The Clearwater Basin received 245% of average precipitation through March 24th, snowpacks in this basin increased nearly 20% of average over the month of March.

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

Location	March 1-24, 2003		Cumulative October, 1 2002 to March 24, 2003	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	2.98	215	12.03	87
SNAKE RIVER Above Ice Harbor	1.66	130	9.13	92
Columbia Above The Dalles	2.65	178	12.57	91
Kootenai	2.84	206	11.69	82
Clark Fork	2.01	216	8.21	94
Flathead	3.07	243	10.39	88
Pend Oreille/Spokane	4.14	193	19.56	100
Central Washington	0.50	78	6.64	116
SNAKE RIVER Plain	0.55	63	3.59	61
Clearwater	5.31	245	20.47	114
SW Washington Cascades/Cowlitz	9.58	175	44.95	87
Willamette Valley	8.10	164	39.38	90

Table 2 displays the February and March Final runoff volume forecasts as well as the April Early Bird for multiple reservoirs. Generally, runoff forecasts have remained relatively consistent between the February and March Final Forecasts, however, as result of the higher than average precipitation in March, the April Early Bird Forecast shows increased runoff volumes throughout all basins listed. The Official (Final) April Water Supply Forecast is expected to be released on the 8th of April.

Table 2. February and March 2003 Final Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins, along with the April Early Bird Forecast.

Location	February Final		March Final		April 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)	70	75600	70	74900	77	83100
Grand Coulee (Jan-July)	76	48100	74	46300	83	52400
Libby Res. Inflow, MT (Jan-July)	75	4730	70	4440	80	5040
Hungry Horse Res. Inflow, MT (Jan-July)	69	1530	66	1470	84	1870
Lower Granite Res. Inflow (Apr-July)	68	14700	68	14700	78	16900
Brownlee Res. Inflow (Apr-July)	55	3490	49	3100	51	3250
Dworshak Res. Inflow (Apr-July)	65	1730	70	1860	92	2420

Operations have varied at the major reservoirs within the Columbia and Snake River Basins. Table 3 displays the March Flood Control Targets along with actual reservoir elevations recorded on April 3rd, 2003 for Libby, Hungry Horse, Grand Coulee, Brownlee, and Dworshak.

Table 3. March Flood Control Targets along with actual reservoir elevations recorded on March 27, 2003 for Libby, Hungry Horse, Grand Coulee, Brownlee, and Dworshak.

Reservoir	Actual Elevation April 3, 2003	March 31, 2003 Flood Control Target	April 15, 2003 Flood Control Target
Libby	2404.6	2448.0	2452.5
Hungry Horse	3510.3	3553.0	3553.6
Grand Coulee	1283.5	1283.3	1283.3
Brownlee	2071.8	2076.3	2076.7
Dworshak	1581.5	1578.9	1585.5

The Libby Reservoir ended March 43.7 feet below its March 31st flood control elevation. Currently, Libby is 47.9 feet below its April 15th Flood Control Target (Table 3). Libby has been operating to a minimum discharge of 4.0 Kcfs.

The Hungry Horse Reservoir ended March 43.7 feet below its March 31st flood control elevation. Currently, Hungry Horse is 42.7 feet below its April 15th Flood Control Target (Table 3). Hungry Horse continues to operate to meet the Columbia Falls Minimum discharge, which is currently 3,372 cfs.

The Dworshak reservoir ended March at 1580.5 feet, 1.6 feet above its end of March system flood control elevation and just slightly (0.2 feet) above its end of March local flood control elevation. The filling of Dworshak reservoir to (or above) its local flood control elevation was requested in SOR-2003-4, which asked for Dworshak to be filled as high as possible to save water for the spring juvenile salmonids outmigration. Because of increased precipitation and snowpack in the Clearwater Basin, the COE has forecasted the April-July Runoff Volume to be 2.4 Maf above Dworshak, up approximately 0.6 Maf. As result of the increased forecast, the COE has projected the end of April flood control eleva-

tion to drop to 1535 feet. Currently, Dworshak is at an elevation of 1581.5 feet and releasing 14.5 kcfs of water (9.5 Kcfs through the powerhouse and the rest spill).

The Grand Coulee Reservoir ended March 0.5 feet above its March 31st flood control elevation. Currently, Grand Coulee is 0.2 feet above its April 15th Flood Control Target (Table 3).

The Brownlee Reservoir ended March 3.8 feet below its March 31st flood control elevation. Currently, Brownlee is 4.9 feet below its April 15th Flood Control Target (Table 3).

The USBR reservoir systems along the Boise, Payette, and Upper Snake Basins are currently 51% (+3% from last week), 66% (+1% from last week), and 57% (+2% from last week) of capacity.

Spill: Spill is presently occurring at Dworshak Dam. The project is operating at full powerhouse and spill will occur up to the 110% TDG gas cap. This operation is expected to continue for some time based on the runoff volume forecast for Dworshak Reservoir. Biological Opinion spill was initiated at Lower Granite Dam at 1800 hours on April 3, 2003. Spill will be phased in at the downstream Snake River projects at two-day intervals beginning with Little Goose on April 5 and followed by Lower Monumental on April 7 and Ice Harbor Dam on April 9.

Smolt Monitoring: Sampling began April 1 at Little Goose, Lower Monumental, McNary, John Day and Rock Island dams, while sampling is ongoing at the Snake River basin SMP traps, Lower Granite, and Bonneville dams.

At the White Bird Trap a weekly high of 1,576 yearling chinook was collected April 2. The average daily collection was 550 yearling chinook compared to just over 1,000 last week. Numbers of yearling chinook captured at the Grande Ronde trap increased significantly this past week with a daily maximum of 1,938 on April 3 and daily average of 663, compared to a daily average of 548 last week. At the Imnaha Trap the average daily catch this week was 286 compared to 80 fish per

day average last week. At the Lewiston Trap small numbers of yearling chinook were captured this past week with a daily average of 9 compared to 6 last week. At all four traps low numbers of steelhead were reported.

At Lower Granite Dam the passage index has steadily increased since the first day of sampling, March 26, when it was 1,050 to 9,800 on April 3. The steelhead passage index at Lower Granite has also increased steadily since the start of sampling from 230 March 25 to 1,800 on April 3. At Little Goose and Lower Monumental dams small numbers of chinook and steelhead were reported the first few days of sampling.

Rock Island Dam has reported small numbers of yearling chinook and steelhead to date, with only 3 sample dates reported.

In the Lower Columbia, at McNary, where sampling is carried out every other day, in conjunction with NMFS transportation study that begins April 20, there has only been a single day of sampling reported and few fish were reported. At John Day Dam small numbers of small numbers of smolts have been reported in the first few days of sampling. At Bonneville Dam, the average daily index for yearling chinook was 980 compared to 530 last week. Low numbers of steelhead, coho, sockeye and subyearling chinook were also reported in the collection at Bonneville Dam.

Hatchery Releases - The preliminary hatchery release schedules for the three Columbia River Basin Zones are updated daily or weekly throughout the migration season. The FPC hatchery release numbers can be obtained from the FPC website.

The following Table gives numbers of juvenile fish that have been or will be released in the River Zones from Bonneville to McNary Dam (Lower Columbia); from above McNary Dam to below Chief Joseph Dam (Mid-Columbia); and upstream from the mouth of the Snake River and its tributaries (Snake River).

Hatchery Zone Release Report	Friday 4-April-2003			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	4,053,632	12,232,000	25,287,990	41,573,622
Spring Chinook	10,438,239	3,492,419	5,460,500	19,391,158
Summer Chinook	2,329,918	3,096,750		5,426,668
Coho	1,245,712	1,879,085	5,634,000	8,758,797
Sockeye	140,410	208,986		349,396
Summer Steelhead	9,643,957	1,287,300	466,900	11,398,157
Winter Steelhead			90,000	90,000
Total	27,851,868	22,196,540	36,939,390	86,987,798

The release information includes fish that were outplanted last fall (02) and would be expected to migrate in spring 03. Fall releases include sockeye that are released into Lake Wenatchee or the upper Salmon River basin lakes as well as a portion of the spring chinook released into the Clearwater River basin.

Snake River - Hatchery facilities were near normal production levels this season, with 27.9 million smolts released from State, Federal, and Tribal hatcheries and acclimation ponds. About 10.4 million yearling spring chinook will be released into the Salmon River basin, into Rapid River and Little Salmon R, below Hells Canyon Dam, the Clearwater River basin, from acclimation ponds in the Grande Ronde R and Imnaha basin, and into the Tucannon R from the Curl Lake acclimation pond. Yearling summer chinook were released into Pahsimeroi R, Johnson Creek, and into the S. Fk. Salmon River from McCall H. Yearling spring and summer chinook releases should be completed by Mid-April. About 500,000 yearling fall chinook are scheduled for release in April from the acclimation ponds with an on-site release of approximately 650,000 yearling fall chinook from Lyons Ferry Hatchery.

About 140,000 hatchery sockeye were released last fall (02) in the upper Salmon R basin lakes. About 550,000 yearling coho salmon were released in early March into Lapwai Creek and Potlatch River. Most juvenile steelhead (9.6 million) will be released during April and May, with these fish released throughout the Snake, Salmon, Clearwater, Imnaha, Grande Ronde, and Tucannon River basins. Most steelhead releases scheduled

for the Salmon River basin will begin during the next two weeks.

Mid-Columbia River - About 22.2 million yearling and subyearling salmon will be released in the Mid-Columbia during the 03 migration year. Volitional release of yearling spring chinook are ongoing from the acclimation ponds in the Yakima River basin, and they should be completed by mid-May. Releases of yearling chinook will begin during the next two weeks from Federal hatcheries. Subyearling fall chinook will be released later in the season, normally late May or June. 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 coho are scheduled for release in this Zone. The yearling chinook and yearling coho are normally released from early to mid-April through mid-May. Approximately 1.3 million juvenile steelhead will be released in April and early May as well.

Lower Columbia River - The Lower Columbia River Zone is scheduled to release about 37 million salmon for the 2003 migration. The majority of fish released is comprised of subyearling fall chinook, many from Spring Creek NFH. About 7.6 million subyearling fall chinook were released on March 8 with another 4.1 million scheduled from that hatchery on April 10. About 607,000 yearling spring chinook were released into the Klickitat River on March 8 with the acclimation ponds in Umatilla River basin also releasing yearling fall and spring chinook. Warm Springs NFH began volitional release of their yearling spring chinook (Deschutes River) this week as well. The Deschutes and Hood rivers will see yearling chinook releases during the next two weeks from ODFW and Warm Springs tribal releases. About 2.5 million coho salmon were released this week into the Klickitat River with additional releases scheduled for the next two weeks. Winter and summer steelhead releases will begin in April and be completed in May.

Adult Fish Passage - Most COE projects began counting adult fish on April 1 with the PUD facilities initiating counts near April 15. Counts officially started at Lower Granite Dam on March 1st with Bonneville Dam counts beginning March 15. Adult fish counts at Bonneville Dam recorded by video prior to March 14 are summarized below the Cumulative Adult Table, with adult chinook and steelhead counts exceeding 3,700 and 3,400, respectively.

During the past week, daily counts of adult spring chinook at Bonneville Dam ranged from a low of 1,293 on 4/3 to a high count of 2,580 on 3/31. Since March 15, the cumulative count of adult spring chinook was 20,790, still well above the 2002 and 10-year average to date. PIT tagged spring chinook have been from the major river basins, i.e., Clearwater, Salmon, Grande Ronde, Wenatchee, Methow, Umatilla, and Yakima rivers. Other river basins may have early run fish; however, they may not have marked release groups (hatchery or wild spring chinook) with PIT tags. PIT tag data to date indicate that adult returning chinook have primarily been 5-year old fish based on PIT tag data from Bonneville Dam. During the past few days, four-year old spring chinook began passing Bonneville Dam.

Counts of adult spring chinook at The Dalles increased from 1,017 on April 1 to 3,057 by April 3, with the cumulative 6,594. Upstream at McNary Dam, 1,200 were counted past the project with greater than 100 into the Snake River to date.

About 13,500 adult summer steelhead have been counted at Lower Granite Dam to date, and this total remained far above the 2002 and 10-year average for the spring migration. Steelhead that over-wintered below Lower Granite or other dams and are now moving upstream to their spawning areas.

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
03/21/03	77.6	0.0	76.5	0.0	78.5	0.0	76.4	0.0	79.9	0.0	77.1	0.0	73.3	0.0
03/22/03	48.5	0.0	49.6	0.0	52.1	0.0	53.4	0.0	57.6	0.0	74.2	0.0	74.7	0.0
03/23/03	46.7	0.0	46.7	0.0	45.8	0.0	44.2	0.0	50.0	0.0	69.7	0.0	72.8	0.0
03/24/03	88.6	0.0	90.0	0.0	89.2	0.0	82.8	0.0	85.1	0.0	65.9	0.0	72.9	0.0
03/25/03	98.9	0.0	101.0	0.0	103.7	0.0	101.6	0.0	107.2	0.0	106.5	0.0	91.7	0.0
03/26/03	108.8	0.0	111.4	0.0	115.2	0.0	118.1	0.0	121.8	0.0	127.3	0.0	130.7	0.0
03/27/03	122.5	0.0	122.7	0.0	123.8	0.0	115.4	0.0	119.7	0.0	129.5	0.0	133.4	0.0
03/28/03	119.7	0.0	122.2	0.0	124.2	0.0	123.3	0.0	128.9	0.0	129.0	0.0	127.0	0.0
03/29/03	114.1	0.0	116.6	0.0	119.4	0.0	119.1	0.0	123.1	0.0	130.2	0.0	130.9	0.0
03/30/03	90.2	0.0	89.1	0.0	89.5	0.0	88.8	0.0	92.9	0.0	109.4	0.0	116.9	0.0
03/31/03	117.0	0.0	115.6	0.0	117.0	0.0	113.3	0.0	117.6	0.0	110.4	0.0	110.0	0.0
04/01/03	83.9	0.0	87.5	0.0	93.3	0.0	93.0	0.0	102.2	0.0	106.1	0.0	99.7	0.0
04/02/03	89.6	0.0	88.8	0.0	90.2	0.0	90.8	0.0	95.7	0.0	93.7	0.0	95.9	0.0
04/03/03	98.8	0.0	98.9	0.0	99.3	0.0	97.6	0.0	104.1	0.0	104.1	0.0	99.5	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
03/21/03	1.5	0.0	13.6	12.0	38.3	0.0	38.9	0.0	40.5	0.0	35.3	0.0
03/22/03	1.5	0.0	12.5	10.0	38.2	0.0	39.1	0.0	43.9	0.0	43.1	0.0
03/23/03	1.5	0.0	14.6	11.8	49.4	0.0	48.3	0.0	50.4	0.0	46.6	0.0
03/24/03	1.6	0.0	19.9	10.0	57.7	0.0	59.3	0.0	66.6	0.0	62.5	0.0
03/25/03	6.8	0.0	16.8	12.3	51.2	0.0	52.1	0.0	55.7	0.0	52.8	0.0
03/26/03	8.0	0.0	18.0	15.2	55.5	0.0	55.9	0.0	60.3	0.0	57.0	0.0
03/27/03	7.8	0.0	18.9	16.6	61.4	0.0	64.9	0.0	71.6	0.0	68.6	0.0
03/28/03	2.2	0.0	16.1	13.4	52.6	0.0	51.7	0.0	58.1	0.0	56.5	0.2
03/29/03	2.2	0.0	16.8	13.8	42.3	0.0	48.1	0.0	51.0	0.0	47.9	0.0
03/30/03	2.2	0.0	14.0	14.4	40.2	0.0	46.0	0.0	49.8	0.0	49.3	0.0
03/31/03	3.2	0.0	14.6	16.3	42.5	0.0	48.5	0.0	56.4	0.0	52.9	0.0
04/01/03	8.8	0.0	16.0	18.0	61.7	0.0	59.3	0.0	59.1	0.0	54.9	0.0
04/02/03	9.5	0.0	16.3	20.3	69.8	0.0	76.8	0.0	85.6	0.0	82.8	0.0
04/03/03	14.5	4.9	---	---	76.3	10.2	56.8	0.0	53.5	0.0	47.3	0.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
03/21/03	125.6	0.0	146.5	0.0	149.0	0.0	166.6	1.2	47.7	111.0
03/22/03	115.0	0.0	124.5	0.0	127.2	0.0	157.8	1.9	44.5	104.8
03/23/03	111.0	0.0	105.6	0.0	111.0	0.0	142.4	1.7	30.8	103.1
03/24/03	139.6	0.0	120.4	0.0	126.1	0.0	135.2	1.6	22.0	104.9
03/25/03	147.9	0.0	149.8	0.0	155.1	0.1	166.7	1.7	35.8	122.4
03/26/03	176.1	0.0	169.5	0.0	173.3	0.0	177.1	1.7	44.2	125.4
03/27/03	206.3	0.0	217.5	0.0	215.5	0.0	228.1	1.9	83.3	136.2
03/28/03	197.1	0.0	219.2	0.0	222.3	0.0	237.3	2.0	90.8	137.9
03/29/03	181.5	0.0	190.3	0.0	192.3	0.0	208.3	1.9	73.5	126.2
03/30/03	185.6	0.0	187.8	0.0	188.1	0.0	191.8	2.0	75.8	107.3
03/31/03	169.7	0.0	177.8	0.0	183.0	0.0	194.2	1.9	73.6	112.1
04/01/03	169.4	0.0	170.4	0.0	175.1	0.0	184.9	2.1	58.8	117.4
04/02/03	169.2	0.0	186.7	0.0	192.1	0.0	208.1	2.1	77.6	121.7
04/03/03	201.8	0.0	163.9	0.0	173.6	0.0	185.7	1.9	53.1	123.8

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
3/21	96	96	97	24	98	98	98	24	102	102	102	24	101	102	105	23	---	---	---	0
3/22	99	100	100	24	98	99	99	24	102	102	103	24	103	104	110	24	---	---	---	0
3/23	100	101	101	24	100	103	107	24	101	102	102	24	103	104	106	23	---	---	---	0
3/24	100	101	101	24	99	100	103	24	101	102	102	24	101	101	106	23	---	---	---	0
3/25	101	101	102	24	103	104	105	24	102	102	104	21	101	102	104	19	---	---	---	0
3/26	100	101	102	24	103	105	110	20	102	102	102	24	101	102	105	23	---	---	---	0
3/27	100	100	104	24	107	111	111	24	101	102	103	24	100	101	102	23	---	---	---	0
3/28	99	99	99	24	110	111	112	24	100	101	101	24	100	101	101	23	---	---	---	0
3/29	98	99	99	24	107	111	113	24	101	101	102	16	100	101	101	23	---	---	---	0
3/30	99	100	100	24	106	108	112	24	102	102	103	21	102	102	103	23	---	---	---	0
3/31	100	100	101	24	105	106	106	24	103	103	104	21	103	103	105	23	---	---	---	0
4/1	100	100	100	24	105	106	106	24	104	104	104	24	104	104	105	23	---	---	---	0
4/2	99	100	100	16	106	108	114	24	104	104	105	24	104	104	108	23	---	---	---	0
4/3	100	100	100	16	105	107	110	24	103	103	104	24	103	103	106	23	---	---	---	0

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/27	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/28	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/30	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/31	---	---	---	0	104	104	104	11	104	104	105	11	105	105	105	15	105	105	105	15
4/1	---	---	---	0	105	105	105	22	105	105	105	22	105	105	105	23	105	105	106	23
4/2	---	---	---	0	104	105	105	23	104	105	106	23	105	105	105	24	105	105	105	24
4/3	100	100	100	14	104	104	104	20	104	104	105	20	104	104	105	24	104	104	105	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/27	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/28	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/30	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/31	107	107	107	15	107	107	107	13	---	---	---	0	---	---	---	0	---	---	---	0
4/1	107	107	108	23	107	107	108	22	---	---	---	0	---	---	---	0	---	---	---	0
4/2	107	107	108	24	107	107	108	24	---	---	---	0	---	---	---	0	---	---	---	0
4/3	105	106	107	24	105	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	Priest R. Dnst			Pasco			Dworshak			Clrwtr-Peck			Anatone			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
3/21	---	---	---	0	103	104	104	24	105	106	106	24	---	---	---	0	---	---	---	0
3/22	---	---	---	0	103	103	104	24	106	107	107	24	---	---	---	0	---	---	---	0
3/23	---	---	---	0	101	102	103	24	107	108	109	24	---	---	---	0	---	---	---	0
3/24	---	---	---	0	103	103	104	19	105	106	107	24	---	---	---	0	---	---	---	0
3/25	---	---	---	0	103	104	104	24	98	100	103	24	---	---	---	0	---	---	---	0
3/26	---	---	---	0	103	103	103	24	97	97	97	23	99	99	100	9	---	---	---	0
3/27	---	---	---	0	102	103	103	24	96	96	96	24	99	99	100	24	102	102	111	9
3/28	---	---	---	0	102	103	104	24	97	98	100	24	101	102	103	24	102	102	103	24
3/29	---	---	---	0	103	103	104	16	98	98	100	16	100	101	102	16	102	102	103	15
3/30	---	---	---	0	104	105	106	24	98	99	100	24	101	102	103	24	103	104	104	19
3/31	---	---	---	0	105	105	106	24	100	102	103	24	101	101	102	24	102	103	103	24
4/1	---	---	---	0	105	106	107	24	99	100	104	24	100	101	101	24	102	102	103	23
4/2	---	---	---	0	105	105	106	24	97	98	98	24	100	100	100	24	101	102	102	24
4/3	---	---	---	0	103	104	104	24	106	107	107	24	102	103	103	24	101	102	102	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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
3/21	---	---	---	0	101	101	102	24	101	101	102	24	---	---	---	0	---	---	---	0
3/22	---	---	---	0	102	102	102	24	102	102	105	24	---	---	---	0	---	---	---	0
3/23	---	---	---	0	102	102	102	24	101	102	102	24	---	---	---	0	---	---	---	0
3/24	---	---	---	0	101	101	102	24	101	101	101	24	---	---	---	0	---	---	---	0
3/25	---	---	---	0	101	102	102	19	101	101	102	14	100	100	101	13	100	100	100	13
3/26	96	96	96	3	101	101	101	24	99	99	99	8	101	101	101	24	100	101	101	24
3/27	---	---	---	0	100	100	101	24	98	98	99	24	100	100	100	24	100	100	101	24
3/28	96	96	97	10	100	101	102	24	99	100	100	24	100	101	102	24	100	100	100	24
3/29	96	96	97	9	100	101	103	16	100	100	100	16	100	101	101	16	100	100	100	16
3/30	98	98	100	12	102	102	103	24	100	101	101	24	101	101	102	20	101	101	101	24
3/31	99	99	100	24	103	103	104	24	102	102	102	24	101	102	102	24	101	102	102	24
4/1	98	99	100	24	104	105	106	24	103	104	105	24	103	103	103	24	103	103	103	24
4/2	96	96	97	7	105	105	105	24	104	104	105	12	103	103	103	24	103	103	103	24
4/3	95	95	96	10	102	102	103	24	110	110	119	11	102	102	102	24	102	102	102	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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
3/21	---	---	---	0	---	---	---	0	102	103	103	24	102	103	103	24	103	103	104	24
3/22	---	---	---	0	---	---	---	0	103	103	103	24	103	103	104	24	103	103	104	24
3/23	---	---	---	0	---	---	---	0	102	102	102	24	102	102	102	24	102	102	102	24
3/24	101	101	101	9	101	101	102	8	101	102	103	24	101	102	102	24	102	103	104	24
3/25	100	101	101	24	101	101	102	24	101	101	101	24	101	101	102	24	102	102	103	24
3/26	100	101	101	24	101	102	103	24	101	101	102	24	101	101	102	24	101	101	102	24
3/27	99	100	100	24	100	101	101	24	100	100	100	24	100	100	100	23	101	101	101	24
3/28	99	100	101	24	100	100	101	24	99	99	101	24	99	100	101	24	101	102	104	24
3/29	99	100	100	16	100	100	102	16	100	100	100	16	100	100	101	15	101	101	104	16
3/30	101	102	102	20	102	103	103	24	101	101	102	20	101	101	102	24	102	103	105	20
3/31	102	103	103	24	104	104	105	24	102	102	103	24	102	102	103	24	103	103	104	24
4/1	103	103	103	22	104	104	105	24	103	103	103	24	103	103	104	24	104	105	105	24
4/2	103	103	103	24	103	103	104	24	103	103	103	24	103	103	103	23	104	104	105	24
4/3	102	102	102	24	102	103	104	24	102	102	102	24	102	102	103	24	103	103	103	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>AVG</u>	<u>High</u>	<u>#</u>	
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
3/21	103	104	104	24	103	103	104	24	102	103	104	24	102	102	103	24	102	102	103	24
3/22	104	104	104	24	104	104	104	24	103	103	104	24	102	103	103	24	103	103	104	24
3/23	102	102	102	24	103	103	103	24	102	102	103	24	102	102	102	24	101	101	102	24
3/24	103	104	104	24	102	103	103	23	102	102	103	24	101	101	102	24	101	102	102	24
3/25	103	103	104	24	103	103	103	24	102	103	103	24	102	102	102	24	102	102	103	24
3/26	102	103	103	24	102	102	103	24	102	102	103	24	102	102	102	24	102	102	103	24
3/27	101	101	101	24	101	101	102	24	101	101	101	24	100	101	101	24	101	101	101	24
3/28	101	102	103	24	101	101	102	24	101	102	103	24	100	101	101	24	101	101	101	24
3/29	102	102	104	16	102	102	103	16	101	102	103	18	101	101	101	16	101	101	101	18
3/30	105	105	106	20	104	104	105	24	103	103	103	20	102	102	102	20	102	103	103	22
3/31	105	106	106	24	104	105	105	24	103	103	104	24	102	102	103	24	103	103	104	24
4/1	105	105	106	24	104	105	105	24	104	104	104	24	103	103	104	24	103	103	104	24
4/2	105	105	106	24	104	104	105	24	104	104	104	24	103	103	104	24	103	103	104	24
4/3	103	103	104	24	103	103	103	24	103	103	104	24	103	103	103	24	103	103	103	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>Camas\Washugal</u>						
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>#</u>			
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
3/21	102	102	102	13	102	102	102	6	103	103	103	24	102	102	102	20
3/22	102	103	103	24	---	---	---	0	103	104	104	24	102	102	102	23
3/23	101	101	101	23	---	---	---	0	103	103	103	24	101	102	102	23
3/24	101	101	102	23	---	---	---	0	103	104	104	24	102	103	103	23
3/25	101	102	102	23	---	---	---	0	103	103	104	24	103	103	104	22
3/26	101	101	102	15	---	---	---	0	102	103	103	24	102	102	103	22
3/27	102	103	104	23	---	---	---	0	102	102	102	19	101	101	102	23
3/28	100	101	101	23	---	---	---	0	---	---	---	0	101	102	102	23
3/29	101	101	101	15	---	---	---	0	103	103	103	6	101	102	103	15
3/30	102	102	103	23	---	---	---	0	103	104	104	24	103	104	105	23
3/31	103	103	103	23	---	---	---	0	104	104	105	24	104	104	105	23
4/1	103	104	104	23	103	104	104	24	104	105	105	24	104	105	105	23
4/2	103	104	104	23	103	103	104	24	104	104	105	24	104	104	105	23
4/3	103	103	103	23	102	102	103	24	103	103	103	24	102	102	103	23

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 3/21/03 to 4/3/03

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Wildlife	Clearwater Hatchery	CH1	SP	2003	630,000	04-02-03	04-11-03	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Wildlife	McCall Hatchery	CH1	SU	2003	1,052,000	03-31-03	04-04-03	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	Niagara Springs	ST	SU	2003	525,000	03-24-03	04-04-03	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Wildlife	Pahsimeroi Hatchery	CH1	SU	2003	295,992	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Wildlife	Pahsimeroi Hatchery	CH1	SU	2003	909,926	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Wildlife	Rapid River Hatchery	CH1	SP	2003	2,330,000	03-17-03	04-25-03	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Wildlife Total					5,742,918				
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2003	73,090	03-21-03	03-21-03	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Hagerman NFH	ST	SU	2003	200,000	03-31-03	04-09-03	Hazard Creek/Little Salmon R	Little Salmon River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2003	109,900	03-17-03	03-24-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2003	133,170	03-28-03	04-14-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Big Canyon (Clearwater R)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe Total					966,160				
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2003	268,600	04-01-03	04-15-03	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife Total					268,600				
U.S. Fish and Wildlife Service	Kooskia NFH	CH1	SP	2003	600,000	03-28-03	04-04-03	Kooskia Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2003	620,000	03-26-03	04-16-03	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service Total					1,220,000				
Umatilla Tribe	Cascade Hatchery	CO	UN	2003	750,000	04-01-03	04-15-03	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	24,400	03-28-03	04-14-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	105,400	03-17-03	03-24-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	110,200	03-17-03	03-24-03	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	127,200	03-28-03	04-14-03	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2003	50,000	04-01-03	04-11-03	Bonifer Acclim Pond	Umatilla River
Umatilla Tribe Total					1,167,200				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2003	39,900	04-03-03	05-01-03	Blackberry Acclim Pond	Hood River
Warm Springs Tribe Total					39,900				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2003	650,000	04-01-03	04-15-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	100,000	04-01-03	04-30-03	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	200,000	04-01-03	04-30-03	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2003	2,500,000	03-31-03	04-04-03	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					3,750,000				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	38,564	03-14-03	05-15-03	Easton Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	81,301	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	249,854	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
Yakama Tribe Total					369,719				
Grand Total					13,524,497				

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary

From: **4/4/03** to **4/17/03**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Wildlife	Clearwater Hatchery	CH1	SP	2003	350,000	04-10-03	04-10-03	Powell Acclim Pond	Lochsa River
Idaho Dept. of Fish and Wildlife	Clearwater Hatchery	CH1	SP	2003	351,000	04-11-03	04-11-03	Red River Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Wildlife	Clearwater Hatchery	CH1	SP	2003	630,000	04-02-03	04-11-03	Crooked R Acclim Pond	S Fk Clearwater River
Idaho Dept. of Fish and Wildlife	Magic Valley Hatchery	ST	SU	2003	132,000	04-07-03	04-08-03	Squaw Cr Acclim Pond	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	Magic Valley Hatchery	ST	SU	2003	180,000	04-11-03	04-15-03	Hammer Creek	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	Magic Valley Hatchery	ST	SU	2003	355,000	04-08-03	04-11-03	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	McCall Hatchery	CH1	SU	2003	1,052,000	03-31-03	04-04-03	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	Niagara Springs	ST	SU	2003	275,000	04-05-03	04-10-03	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Wildlife	Niagara Springs	ST	SU	2003	525,000	03-24-03	04-04-03	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Wildlife	Pahsimeroi Hatchery	CH1	SU	2003	295,992	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Wildlife	Pahsimeroi Hatchery	CH1	SU	2003	909,926	03-29-03	04-06-03	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Wildlife	Rapid River Hatchery	CH1	SP	2003	2,330,000	03-17-03	04-25-03	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Wildlife Total					7,385,918				
Nez Perce Tribe	Hagerman NFH	ST	SU	2003	200,000	03-31-03	04-09-03	Hazard Creek/Little Salmon R	Little Salmon River
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2003	133,170	03-28-03	04-14-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Big Canyon (Clearwater R)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2003	150,000	04-01-03	04-10-03	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe Total					783,170				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	128,500	04-09-03	04-10-03	L Sheep Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	166,000	04-14-03	04-16-03	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2003	330,000	04-11-03	04-15-03	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2003	268,600	04-01-03	04-15-03	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2003	162,000	04-08-03	04-08-03	Bel. Pelton Dam	Deschutes River
Oregon Dept. of Fish and Wildlife Total					1,055,100				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2003	1,678,000	04-16-03	04-17-03	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Entiat Hatchery	CH1	SP	2003	395,000	04-10-03	04-10-03	Entiat Hatchery	Entiat River
U.S. Fish and Wildlife Service	Kooskia NFH	CH1	SP	2003	600,000	03-28-03	04-04-03	Kooskia Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2003	1,050,000	04-17-03	04-17-03	Little White Salmon Hatchery	Little White Salmon River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2003	4,100,000	04-10-03	04-10-03	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Warm Springs NFH	CH1	SP	2003	620,000	03-26-03	04-16-03	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service	Willard Hatchery	CO	UN	2003	634,000	04-17-03	04-17-03	Little White Salmon River	Little White Salmon River
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2003	460,000	04-15-03	04-15-03	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					9,537,000				
Umatilla Tribe	Cascade Hatchery	CO	UN	2003	750,000	04-01-03	04-15-03	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	24,400	03-28-03	04-14-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2003	127,200	03-28-03	04-14-03	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2003	50,000	04-01-03	04-11-03	Bonifer Acclim Pond	Umatilla River
Umatilla Tribe Total					951,600				
Warm Springs Tribe	Oak Springs Hatchery	ST	SU	2003	39,900	04-03-03	05-01-03	Blackberry Acclim Pond	Hood River
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2003	30,000	04-04-03	04-04-03	Parkdale Acclim Pond	Hood River
Warm Springs Tribe Total					69,900				
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2003	650,000	04-01-03	04-15-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	100,000	04-01-03	04-30-03	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2003	200,000	04-01-03	04-30-03	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	WI	2003	20,000	04-15-03	04-15-03	Salmon Creek (WA)	Columbia River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
Washington Dept. of Fish and Wildlife	Washougal Hatchery	CO	NO	2003	2,500,000	03-31-03	04-04-03	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					3,770,000				
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	38,564	03-14-03	05-15-03	Easton Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	81,301	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2003	249,854	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2003	12,000	04-12-03	04-13-03	Yakama River	Yakama River
Yakama Tribe Total					381,719				
Grand Total					23,934,407				

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

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)
03/21/2003	986	94	185	0	---	---	---	---	---	---	429
03/22/2003 *	---	82	---	---	---	---	---	---	---	---	391
03/23/2003 *	---	13	---	---	---	---	---	---	---	---	450
03/24/2003	2,640	49	415	10	---	---	---	---	---	---	524
03/25/2003	737	103	1,215	3	---	---	---	---	---	---	508
03/26/2003	565	83	516	16	1,050	---	---	---	---	---	605
03/27/2003	254	67	410	2	1,550	---	---	---	---	---	798
03/28/2003 *	141	126	334	9	1,950	---	---	---	---	---	1,138
03/29/2003	---	---	---	---	2,320	---	---	---	---	---	1,269
03/30/2003	---	186	---	---	1,440	---	---	---	---	---	845
03/31/2003 *	35	126	213	4	1,150	---	---	---	---	---	795
04/01/2003 *	291	147	197	3	2,930	---	---	4	---	430	815
04/02/2003 *	1,576	371	635	6	6,920	441	330	13	---	595	887
04/03/2003	706	846	1,938	23	9,820	497	560	5	575	1,115	1,147
Total:	7,931	2,293	6,058	76	29,130	938	890	22	575	2,140	10,601
# Days:	10	13	10	10	9	2	2	3	1	3	14
Average:	793	176	606	8	3,237	469	445	7	575	713	757
YTD	11,616	2,840	6,544	115	29,130	938	890	22	575	2,140	16,010

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)
03/21/2003	0	0	0	0	---	---	---	---	---	---	259
03/22/2003 *	---	0	---	---	---	---	---	---	---	---	309
03/23/2003 *	---	0	---	---	---	---	---	---	---	---	129
03/24/2003	0	0	0	0	---	---	---	---	---	---	346
03/25/2003	0	0	0	14	---	---	---	---	---	---	259
03/26/2003	0	0	0	2	50	---	---	---	---	---	173
03/27/2003	0	0	0	1	40	---	---	---	---	---	416
03/28/2003 *	0	0	0	2	60	---	---	---	---	---	326
03/29/2003	---	---	---	---	50	---	---	---	---	---	405
03/30/2003	---	0	---	---	100	---	---	---	---	---	240
03/31/2003 *	0	0	0	1	0	---	---	---	---	---	475
04/01/2003 *	0	0	0	4	140	---	---	136	---	0	191
04/02/2003 *	0	0	0	0	20	0	0	61	---	25	249
04/03/2003	0	1	0	3	120	5	20	36	2,710	10	745
Total:	0	1	0	27	580	5	20	233	2,710	35	4,522
# Days:	10	13	10	10	9	2	2	3	1	3	14
Average:	0	0	0	3	64	3	10	78	2,710	12	323
YTD	1	2	2	60	580	5	20	233	2,710	35	350,393

* 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)
03/21/2003	0	0	0	2	---	---	---	---	---	---	6
03/22/2003	*	---	0	---	---	---	---	---	---	---	0
03/23/2003	*	---	0	---	---	---	---	---	---	---	11
03/24/2003	0	0	0	0	---	---	---	---	---	---	16
03/25/2003	0	0	0	0	---	---	---	---	---	---	5
03/26/2003	0	0	0	0	0	---	---	---	---	---	11
03/27/2003	0	0	0	0	0	---	---	---	---	---	17
03/28/2003	*	0	0	0	0	---	---	---	---	---	13
03/29/2003	---	---	---	---	0	---	---	---	---	---	20
03/30/2003	---	0	---	---	0	---	---	---	---	---	13
03/31/2003	*	0	0	0	0	---	---	---	---	---	0
04/01/2003	*	0	0	0	0	---	---	0	---	0	13
04/02/2003	*	0	0	0	20	0	0	0	---	0	12
04/03/2003	0	0	0	0	20	0	0	0	5	5	46
Total:	0	0	0	2	40	0	0	0	5	5	183
# Days:	10	13	10	10	9	2	2	3	1	3	14
Average:	0	0	0	0	4	0	0	0	5	2	13
YTD	0	0	0	5	40	0	0	0	5	5	213

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)
03/21/2003	2	19	4	0	---	---	---	---	---	---	19
03/22/2003	*	---	23	---	---	---	---	---	---	---	35
03/23/2003	*	---	19	---	---	---	---	---	---	---	28
03/24/2003	1	42	22	4	---	---	---	---	---	---	84
03/25/2003	1	39	6	4	---	---	---	---	---	---	108
03/26/2003	0	34	2	6	230	---	---	---	---	---	124
03/27/2003	0	37	4	3	300	---	---	---	---	---	86
03/28/2003	*	1	17	7	8	440	---	---	---	---	133
03/29/2003	---	---	---	---	740	---	---	---	---	---	108
03/30/2003	---	30	---	---	530	---	---	---	---	---	50
03/31/2003	*	1	26	1	6	490	---	---	---	---	92
04/01/2003	*	0	63	2	8	730	---	---	0	---	160
04/02/2003	*	1	105	0	7	2,130	140	150	1	---	210
04/03/2003	0	40	6	11	1,820	180	290	0	595	620	376
Total:	7	494	54	57	7,410	320	440	1	595	990	1,607
# Days:	10	13	10	10	9	2	2	3	1	3	14
Average:	1	38	5	6	823	160	220	0	595	330	115
YTD	20	757	90	66	7,410	320	440	1	595	990	2,180

* See sampling comments

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

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/21/2003	0	0	0	0	---	---	---	---	---	---	6
03/22/2003 *	---	0	---	---	---	---	---	---	---	---	0
03/23/2003 *	---	0	---	---	---	---	---	---	---	---	6
03/24/2003	0	0	0	0	---	---	---	---	---	---	10
03/25/2003	0	0	0	0	---	---	---	---	---	---	0
03/26/2003	0	0	0	0	10	---	---	---	---	---	5
03/27/2003	0	0	0	0	10	---	---	---	---	---	0
03/28/2003 *	0	0	0	0	0	---	---	---	---	---	7
03/29/2003	---	---	---	---	0	---	---	---	---	---	7
03/30/2003	---	0	---	---	10	---	---	---	---	---	0
03/31/2003 *	0	0	0	0	10	---	---	---	---	---	7
04/01/2003 *	0	0	0	0	0	---	---	0	---	0	6
04/02/2003 *	0	0	0	0	20	0	10	1	---	0	6
04/03/2003	0	0	0	0	20	5	30	0	10	10	7
Total:	0	0	0	0	80	5	40	1	10	10	67
# Days:	10	13	10	10	9	2	2	3	1	3	14
Average:	0	0	0	0	9	3	20	0	10	3	5
YTD	0	0	0	0	80	5	40	1	10	10	82

* 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: 04/03

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	20,970	78	3,811	1	3,970	4	0	0	0	0	0	0	0	0	0	0	0	0
TDA	6,594	2	645	0	786	1	0	0	0	0	0	0	0	0	0	0	0	0
JDA	1,727	2	195	0	323	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	1,242	0	127	0	79	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	111	0	37	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	44	0	8	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	19	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	56	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2003		2002		10-Yr Avg.		2003	2002	10-Yr Avg.	2003	2002	10-Yr Avg.	Wild 2003
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	0	1,357	1,343	891	196
TDA	0	0	0	0	0	0	0	0	0	189	432	185	82
JDA	0	0	0	0	0	0	0	0	0	303	1,754	524	210
MCN	0	0	0	0	0	0	0	0	0	402	668	363	200
IHR	0	0	0	0	0	0	0	0	0	389	626	433	141
LMN	0	0	0	0	0	0	0	0	0	479	1,129	474	203
LGS	0	0	0	0	0	0	0	0	0	379	1,127	282	186
LWG	0	0	0	0	0	0	0	0	0	13,546	5,324	2,982	2,248
PRD	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0

LGR is missing data for 3/3, 3/4 and 3/6.

**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.

*As Chelan CO PUD does not report wild, these numbers are from the COE.

Page last updated on: 4/4/03

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

03/22/03 TO 04/04/03

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	580	29,130		40	80	7,410	37,240
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	0	0		0	0	0	0
	Sum of Numbertrucked	457	18,991		20	58	5,573	25,099
	Sum of TotalProjectMortalities	3	353		0	2	18	376
LGS	Sum of NumberCollected		938				320	1,258
	Sum of NumberBarged		0				0	0
	Sum of NumberBypassed		0				0	0
	Sum of Numbertrucked		440				140	580
	Sum of TotalProjectMortalities		24				5	29
LMN	Sum of NumberCollected		890			40	440	1,370
	Sum of NumberBarged		0			0	0	0
	Sum of NumberBypassed		0			0	0	0
	Sum of Numbertrucked		328			10	150	488
	Sum of TotalProjectMortalities		3			0	7	10
MCN	Sum of NumberCollected	2,710	575		5	10	595	3,895
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	2,698	574		5	10	595	3,882
	Sum of Numbertrucked	0	0		0	0	0	0
	Sum of TotalProjectMortalities	12	1		0	0	0	13
Total Sum of NumberCollected		3,290	31,533		45	130	8,765	43,763
Total Sum of NumberBarged		0	0		0	0	0	0
Total Sum of NumberBypassed		2,698	574		5	10	595	3,882
Total Sum of Numbertrucked		457	19,759		20	68	5,863	26,167
Total Sum of TotalProjectMortalities		15	381		0	2	30	428

YTD Transportation Summary

TO: 04/04/03

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	580	29,130		40	80	7,410	37,240
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	0	0		0	0	0	0
	Sum of NumberTrucked	457	18,991		20	58	5,573	25,099
	Sum of TotalProjectMortalities	3	353		0	2	18	376
LGS	Sum of NumberCollected		938				320	1,258
	Sum of NumberBarged		0				0	0
	Sum of NumberBypassed		0				0	0
	Sum of NumberTrucked		440				140	580
	Sum of TotalProjectMortalities		24				5	29
LMN	Sum of NumberCollected		890			40	440	1,370
	Sum of NumberBarged		0			0	0	0
	Sum of NumberBypassed		0			0	0	0
	Sum of NumberTrucked		328			10	150	488
	Sum of TotalProjectMortalities		3			0	7	10
MCN	Sum of NumberCollected	2,710	575		5	10	595	3,895
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	2,698	574		5	10	595	3,882
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of TotalProjectMortalities	12	1		0	0	0	13
Total Sum of NumberCollected		3,290	31,533		45	130	8,765	43,763
Total Sum of NumberBarged		0	0		0	0	0	0
Total Sum of NumberBypassed		2,698	574		5	10	595	3,882
Total Sum of NumberTrucked		457	19,759		20	68	5,863	26,167
Total Sum of TotalProjectMortalities		15	381		0	2	30	428

