



Fish Passage Center

Weekly Report #03 - 1

March 21, 2003

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PLEASE NOTE:

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Summary of Events:

Water Supply: Water Year 2003 has been below average in terms of precipitation, snowpack, and forecasted runoff volumes within the Columbia and Snake River Basins. Early season snowpacks were extremely low throughout the basin; however, over the last month several large storms have added significantly to existing snowpacks. Currently (3-20-03), snow water equivalents recorded by the Natural Resources Conservation Service are 72% of average within the Columbia Basin. Water Year 2003 precipitation has generally been below average, with respect to the years 1971 through 2000, throughout much of the Columbia River Basin, ranging between 63-118% of average. However, the month of March has been very wet, with recorded precipitation varying between 76-280% of average. Table 1 summarizes both early March precipitation and cumulative October through March precipitation at select locations.

Table 1. Summary of early 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 1-17, 2003		Cumulative October, 1 2002 to March 17, 2003	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	2.30	234	11.36	84
SNAKE RIVER ABOVE ICE HARBOR	1.21	133	8.69	91
Columbia Above The Dalles	1.98	188	11.90	89
Kootenai	2.14	219	11.03	80
Clark Fork	1.60	243	7.81	92
Flathead	2.50	280	9.82	86
Pend Oreille/Spokane	2.72	179	18.14	96
Central Washington	0.40	87	6.54	118
SNAKE RIVER PLAIN	0.47	76	3.51	63
Clearwater	4.21	274	19.13	110
SW Washington Cascades/Cowlitz	6.32	163	41.69	83
Willamette Valley	5.25	150	36.53	86

Below average precipitation and snowpacks throughout the Columbia and Snake River Basins have led to lower than average runoff volume forecasts. Table 2 displays the February and March Final runoff volume forecasts as well as the March Mid-Month for multiple reservoirs. Generally, runoff forecasts have remained relatively consistent between the two months, however, as a likely result of the higher than average precipitation in March, the March Mid-Month Forecast shows increased runoff volumes throughout all basins listed.

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

Location	February Final		March Final		March Mid-Month	
	% Average (1971-2000)	Runoff Volume (Kaf)	% Average (1971-2000)	Runoff Volume (Kaf)	% Average (1971-2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	70	75600	70	74900	75	80100
Grand Coulee (Jan-July)	76	48100	74	46300	81	51000
Libby Res. Inflow, MT (Jan-July)	75	4730	70	4440	78	4940
Hungry Horse Res. Inflow, MT (Jan-July)	69	1530	66	1470	81	1800
Lower Granite Res. Inflow (Apr-July)	68	14700	68	14700	77	16600
Brownlee Res. Inflow (Apr-July)	55	3490	49	3100	50	3140
Dworshak Res. Inflow (Apr-July)	65	1730	70	1860	90	2380

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 March 20, 2003 for Libby, Hungry Horse, Grand Coulee, Brownlee, and Dworshak.

Table 3. March Flood Control Targets along with actual reservoir elevations recorded on March 20, 2003 for Libby, Hungry Horse, Grand Coulee, Brownlee, and Dworshak.

Reservoir	Actual Elevation March 20, 2003	March 31 st , 2003 Flood Control Target	April 15 th , 2003 Flood Control Target
Libby	2404.4	2448.0	2452.5
Hungry Horse	3507.7	3553.0	3553.6
Grand Coulee	1284.5	1283.3	1283.3
Brownlee	2065.9	2076.3	2076.7
Dworshak	1567.8	1578.9	1585.5

The Libby Reservoir is currently 43.6 feet below its end of March Flood Control Target (Table 3). Libby has been operating to a minimum discharge of 4.0 Kcfs for over the last month and a half.

The Hungry Horse Reservoir is currently 45.3 feet below its end of March Flood Control Target (Table 3). Hungry Horse has been operating to meet the Columbia Falls Minimum discharge, which is currently 3,372 cfs.

The Dworshak reservoir is currently 11.1 feet below its end of March flood Control Elevation (Table 3). Over the last ten days, increased local inflows have led to Dworshak refilling over 13 feet. To increase the possibility of meeting the BiOp required April 10th reservoir elevation, Dworshak has been operated over the winter to a minimum discharge of approximately 1.5 Kcfs, with several exceptions. Near the end of the first week of March, an outage at the Columbia Generating Station (CGS) created the need for 1100-1200 MW of additional hydropower generation. Both Grand Coulee and Dworshak reservoirs were drafted to generate the needed power. Over a five-day period, outflows at Dworshak were increased from 1.5 Kcfs to approximately 4.5 kcf, resulting in the use of 27.1 Kaf of stored water. Additionally, outflows have increased from Dworshak over the last two days (3-19 and 3-20) to aid in the release of hatchery fish below Dworshak.

This year, the decision to spill or not spill in the Snake River under the Biological Opinion will

be very close. If spring flows are predicted to be less than 85 Kcfs, spill will not occur on the Snake River. Presently the Action Agencies are considering that no spill will occur for planning purposes.

The Grand Coulee reservoir is currently 1.2 feet above its end of March Flood Control Elevation. Over the winter Grand Coulee has been generally operated to meet the Vernita Bar minimum flows of 70 Kcfs below Priest Rapids.

The Brownlee Reservoir is currently 10.4 feet from its end of March Flood control elevation.

The USBR reservoir systems along the Boise, Payette, and Upper Snake Basins are currently 44%, 62%, and 53% of capacity.

Spill: Spring Creek National Fish Hatchery released 7.8 million tule fall chinook on March 8, 2003. Spill commenced at 1800 hours on March 10 and continued for a 36 hour period. Spill levels were approximately 50 Kcfs per hour and hourly total dissolved gas levels rarely exceeded 105% during the spill period.

Smolt Monitoring: Sampling of juvenile migrant salmonids has begun at several sites in March. The Imnaha Trap, operated by the Nez Perce began operating March 6, with the first fish processed March 7, while the Lewiston Trap located on the Snake River just above the confluence with the Clearwater River and operated by Idaho Department of Fish and Game (IDFG), began operations March 9. The WhiteBird Trap located on the Salmon River in Idaho, and operated by IDFG, also began operations on March 9. The Grande Ronde Trap, located on the Grande Ronde River in Eastern Oregon, and operated by Oregon Department of Fish and Wildlife also began operations on March 9.

At the Snake River basin traps the first significant numbers of yearling chinook have been captured in the past week. At the White Bird Trap a weekly high of 1,729 yearling chinook was collected March 19. Of those fish captured on the 19th, 1066 were clipped hatchery fish. For the season to date about 85% of the chinook were wild origin. It is likely that a good portion of the ad-clipped fish came from releases this past week of

2.5 million Rapid River hatchery fish, both volitionally at the hatchery and direct released into Hazard Creek on the Little Salmon River. Numbers of yearling chinook captured at both the Grande Ronde and Imnaha traps increased significantly this past week with a daily maximum of 179 at the Imnaha Trap and 260 collected at the Grande Ronde Trap. At the Grande Ronde the percent wild yearling chinook captured to date was 56% while at the Imnaha Trap all yearling chinook collected to date have been unclipped, wild fish (with no coded wire tags).

Sampling began March 10 at Bonneville Dam just shortly after the March 8 Spring Creek Hatchery release of 7.6 million subyearling chinook. The largest numbers appeared to have passed by the night of the 10th with the passage index of 256, 000 reported on March 11 by far the highest reported, compared to 62,000 on the 12th and 16,000 on March 13.

All other SMP sites are scheduled to begin sampling in the two weeks.

Sampling began at John Day Dam on March 18 and also at the Grande Ronde Trap on March 21. Sampling will begin March 25 at Lower Granite and McNary dams.

Spring Creek releases of subyearling chinook salmon continued passing Bonneville Dam this past week, with passage index numbers rapidly decreasing from the peak of 385,000 on March 14 to 2,600 on March 21. It is likely that well over 90% of the fish had passed the project by March 21.

Hatchery Releases: The preliminary hatchery release schedules for the three Columbia River Basin Zones have been received from the fishery agencies and tribal agencies release coordinators or in some cases directly from the hatcheries for the 2003 juvenile fish migration. There are a few release groups that have not been reported, but we assume that they will be added to the database in the next two weeks. Updates will be made 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 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 21-Mar-2003			
	Snake R	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	4053632	12280000	25287990	41621622
Spring Chinook	10571545	3495419	5440500	19507464
Summer Chinook	2330250	3096750		5427000
Coho	1245712	953538	5634000	7833250
Sockeye	140410	208986		349396
Summer Steelhead	9643957	1287300	466900	11398157
Winter Steelhead			90000	90000
Total	27985506	21321993	36919390	86226889

The release information will include fish release groups that were completed last fall (02) and would be expected to migrate this spring 03. Examples of these fall releases would include sockeye that are released into Lake Wenatchee or the upper Salmon River basin lakes as well as a portion of the spring chinook that are released into the Clearwater River during the fall season.

Snake River - Most hatchery facilities were at or near production levels this season, with almost 28 million smolts expected for release from State, Federal, and Tribal hatcheries and acclimation ponds. Yearling spring chinook are being released or have been released into the Clearwater River basin, into the Little Salmon and

Rapid R, below Hells Canyon Dam, from acclimation ponds in the Grande Ronde R basin, and into the Tucannon R from the Curl Lake acclimation pond. In addition, yearling summer chinook were released into Johnson Creek (S. Fk. Salmon River basin). Most yearling spring and summer chinook releases will be completed by Mid-April. The yearling fall chinook are scheduled for release in April from the various acclimation ponds and release hatcheries.

About 140,000 hatchery sockeye were mainly released last fall (02) in the upper Salmon R basin lakes. From March 11-13, about 550,000 yearling coho salmon were released 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.

Mid-Columbia River [above McNary Dam]- At present, the Mid-Columbia River Zone will release about 21.3 million yearling and subyearling salmon this migration year. Yearling spring chinook are volitionally released from the acclimation ponds in the Yakima River basin, and they normally will completed by mid-May. Other releases of yearling chinook will occur in April from Federal, State, and Tribal facilities. Fall chinook in this Zone are subyearling fish that 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. Numbers of coho expected for release in this Zone should increase by near 1 million above the present total. The yearling chinook and yearling coho are normally released from early to mid-April through mid-May in this Zone. The juvenile steelhead releases are scheduled for April and early May as well.

Lower Columbia River [Bonneville Dam to McNary dam]- The Lower Columbia River Zone is scheduled to release about 37 million salmon for the 2003 migration. The majority of fish released in this Zone is comprised of subyearling fall chinook, many from Spring Creek NFH. About 7.6 million subyearling fall chinook were released

on March 8 from that hatchery. About 607,000 yearling spring chinook were released into the Klickitat River on March 8 with the acclimation ponds in Umatilla River basin also starting release of yearling fall and spring chinook. Most yearling chinook and coho salmon are scheduled for release in April with winter and summer steelhead releases in April and May.

Adult Fish Passage: Most COE projects will begin counting on April 1 with the PUD facilities beginning near April 15. Counts officially started at Lower Granite Dam on March 1st with Bonneville Dam counts beginning March 15. The adult fish passage season begins when the fish start moving and passing upstream, which in many cases is prior to the start of the official fish counting season. Because of numbers of winter-run steelhead passing Bonneville Dam throughout the winter season, counting of adult fish is now required from January on through March 14 whenever the fish ladders were operating. We've included a small table below the Cumulative Adult Table to show passage numbers across Bonneville Dam prior to March 14. Note that the adult chinook total during that time frame exceeded 3,700 while the steelhead exceeded 3,400. Since March 15, about 3,200 adult spring chinook have been tallied at Bonneville Dam. This is well above the 2002 and 10-year average. One interesting item: based on PIT tagged fish passing Bonneville Dam to date, nearly all of the adult fish fall into the 5-year old category. Only 1-PIT tagged chinook was listed as a 2001 migration year fish or 4-year old spring chinook salmon from greater than 100 PIT tagged fish detected at the project. From the PIT tags, these spring chinook appear to be from most of the major river basins, i.e., Clearwater, Salmon, Grande Ronde, Wenatchee, Methow, and Yakima Rivers. This does not mean that other drainages do not have early run fish rather, they may not have marked any of their release groups with PIT tags. Based on adult spring chinook returns to Bonneville, the questions as to whether the run is early, will be greater than expected, or be comprised of more 5-year old fish will be debated until the spring chinook run is completed, but until then,

the answer will remain unclear.

About 10,000 adult summer steelhead have been counted at Lower Granite Dam to date, and this total is far above the norm. Basically this means that a lot of steelhead over-wintered below Lower Granite or other dams and are now moving upstream to complete the spawning cycle.

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
03/07/03	76.1	0.0	77.8	0.0	79.8	0.0	86.5	0.0	91.6	0.0	97.6	0.0	94.7	0.0
03/08/03	70.5	0.0	70.3	0.0	70.8	0.0	62.0	0.0	64.6	0.0	74.7	0.0	84.0	0.0
03/09/03	31.7	0.0	34.8	0.0	37.8	0.0	42.4	0.0	45.9	0.0	72.1	0.0	72.5	0.0
03/10/03	66.5	0.0	65.5	0.0	67.5	0.0	65.7	0.0	68.4	0.0	64.3	0.0	72.2	0.0
03/11/03	66.8	0.0	72.4	0.0	73.2	0.0	73.4	0.0	75.0	0.0	74.0	0.0	71.9	0.0
03/12/03	75.6	0.0	71.5	0.0	69.6	0.0	66.8	0.0	70.6	0.0	76.7	0.0	72.5	0.0
03/13/03	76.5	0.0	72.3	0.0	72.4	0.0	68.7	0.0	71.1	0.0	67.0	0.0	72.0	0.0
03/14/03	82.5	0.0	86.2	0.0	89.2	6.7	86.4	0.0	91.7	0.0	70.6	0.0	71.3	0.0
03/15/03	59.4	0.0	63.0	0.0	66.7	0.0	71.8	0.0	80.4	0.0	82.6	0.0	71.3	0.0
03/16/03	47.1	0.0	49.6	0.0	61.1	0.0	62.0	0.0	66.6	0.0	70.0	0.0	72.5	0.0
03/17/03	88.3	0.0	86.4	0.0	77.1	0.0	69.2	0.0	77.3	0.0	76.7	0.0	84.2	0.0
03/18/03	74.8	0.0	76.0	0.0	78.2	0.0	77.4	0.0	81.5	0.0	83.1	0.0	79.9	0.0
03/19/03	70.0	0.0	71.9	0.0	72.6	0.0	70.7	0.0	76.9	0.0	80.1	0.0	81.9	0.0
03/20/03	57.3	0.0	61.0	0.0	62.5	0.0	60.4	0.0	64.3	0.0	73.1	0.0	71.5	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
03/07/03	4.5	0.0	11.6	13.1	32.3	0.0	35.9	0.0	38.5	0.0	37.2	0.0
03/08/03	4.5	0.0	11.5	16.0	30.0	0.0	28.6	0.0	31.0	0.0	29.5	0.0
03/09/03	4.5	0.0	10.4	9.8	36.4	0.0	34.2	0.0	36.4	0.0	37.5	0.0
03/10/03	3.8	0.0	11.8	10.8	38.0	0.0	38.1	0.0	39.1	0.0	37.7	0.0
03/11/03	1.5	0.0	11.1	15.1	46.7	0.0	43.2	0.0	46.1	0.0	37.7	0.0
03/12/03	1.5	0.0	11.8	14.2	54.2	0.0	54.9	0.0	57.3	0.0	54.5	0.0
03/13/03	1.5	0.0	10.9	11.1	69.8	0.0	72.6	0.0	78.7	0.0	75.7	0.0
03/14/03	1.5	0.0	12.9	10.0	60.4	0.0	61.7	0.0	67.5	0.0	64.4	0.0
03/15/03	1.5	0.0	13.2	9.1	58.6	0.0	58.2	0.0	61.7	0.0	59.7	0.0
03/16/03	1.5	0.0	14.8	8.9	60.7	0.0	62.6	0.0	67.2	0.0	61.4	0.0
03/17/03	1.5	0.0	15.7	16.1	56.9	0.0	58.6	0.0	64.1	0.0	61.8	0.0
03/18/03	1.5	0.0	14.7	18.2	57.3	0.0	58.3	0.0	65.1	0.0	63.4	0.0
03/19/03	2.2	0.0	13.3	16.2	55.4	0.0	55.7	0.0	60.1	0.0	57.2	0.0
03/20/03	3.1	0.0	---	---	47.6	0.0	48.7	0.0	53.9	0.0	52.3	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		
03/07/03	145.7	0.0	146.2	0.0	146.6	0.0	148.1	1.8	23.0	116.6
03/08/03	126.1	0.0	141.3	0.0	144.3	0.0	176.1	1.8	40.9	126.7
03/09/03	117.4	0.0	123.0	0.0	125.2	0.0	169.2	1.8	38.5	122.2
03/10/03	112.9	0.0	124.9	0.0	132.4	0.0	147.5	14.8	12.1	113.8
03/11/03	115.4	0.0	121.3	0.0	120.7	0.0	163.3	52.0	0.0	104.6
03/12/03	129.6	0.0	120.0	0.0	120.7	0.0	129.4	14.7	0.4	107.6
03/13/03	106.0	0.0	126.3	0.0	127.9	0.0	148.1	1.6	23.0	116.7
03/14/03	135.9	0.0	137.0	0.0	139.7	0.0	152.9	1.6	28.0	116.6
03/15/03	136.1	0.0	140.3	0.0	143.4	0.0	148.0	1.6	18.7	120.8
03/16/03	134.7	0.0	143.5	0.0	147.0	0.0	161.0	1.6	37.0	115.5
03/17/03	153.4	0.0	168.8	0.0	171.2	0.0	176.4	1.8	45.5	122.4
03/18/03	150.4	0.0	173.8	0.0	178.3	0.0	198.7	1.8	68.9	121.2
03/19/03	157.3	0.0	185.1	0.0	187.5	0.0	190.8	1.8	51.9	130.3
03/20/03	201.8	0.0	165.1	0.0	167.4	0.0	180.8	1.2	52.4	120.4

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst			#	Boundary			#	Grand Coulee			#	Grand C. Tlwr			#	Chief Joseph			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
3/7	---	---	---	0	96	96	96	24	101	101	101	24	101	102	103	23	---	---	---	0
3/8	---	---	---	0	95	95	95	2	100	100	100	24	100	100	102	24	---	---	---	0
3/9	---	---	---	0	---	---	---	0	100	100	100	24	101	103	107	24	---	---	---	0
3/10	---	---	---	0	96	96	97	8	100	101	103	24	100	101	106	23	---	---	---	0
3/11	---	---	---	0	97	97	97	24	101	101	101	16	101	101	103	23	---	---	---	0
3/12	---	---	---	0	96	97	97	24	101	101	102	17	101	101	104	23	---	---	---	0
3/13	97	98	98	24	97	97	97	24	102	102	102	24	102	102	107	23	---	---	---	0
3/14	98	98	99	24	97	98	103	24	102	102	102	24	101	102	104	23	---	---	---	0
3/15	100	100	100	24	101	104	106	24	---	---	---	0	102	102	106	23	---	---	---	0
3/16	100	100	100	24	100	101	107	24	---	---	---	0	102	103	108	23	---	---	---	0
3/17	100	101	102	24	101	103	104	24	101	101	102	21	100	100	103	23	---	---	---	0
3/18	100	100	101	24	98	98	99	24	100	101	101	24	100	101	102	23	---	---	---	0
3/19	99	100	101	24	99	100	105	24	101	102	102	24	101	102	105	23	---	---	---	0
3/20	96	96	97	24	98	99	100	24	102	102	102	24	102	103	106	23	---	---	---	0

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			#	Wells			#	Wells Dwnstrm			#	Rocky Reach			#	Rocky R. Tlwr			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			#	Rock I. Tlwr			#	Wanapum			#	Wanapum Tlwr			#	Priest Rapids			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High	
3/7	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/8	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/9	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/10	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/11	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/12	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/13	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/14	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwtr-Peck</u>			<u>Anatone</u>							
	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr				
3/7	---	---	---	0	101	102	102	24	98	98	98	24	---	---	---	0	---	---	---	0
3/8	---	---	---	0	100	101	101	24	97	97	98	24	---	---	---	0	---	---	---	0
3/9	---	---	---	0	102	103	103	24	97	97	98	24	---	---	---	0	---	---	---	0
3/10	---	---	---	0	102	103	103	24	99	101	105	24	---	---	---	0	---	---	---	0
3/11	---	---	---	0	102	102	103	16	106	106	107	16	---	---	---	0	---	---	---	0
3/12	---	---	---	0	103	103	104	24	105	106	106	19	---	---	---	0	---	---	---	0
3/13	---	---	---	0	104	104	104	24	105	106	106	24	---	---	---	0	---	---	---	0
3/14	---	---	---	0	104	105	105	24	105	105	106	24	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	102	103	104	24	107	108	109	24	---	---	---	0	---	---	---	0
3/18	---	---	---	0	102	103	103	24	106	106	107	24	---	---	---	0	---	---	---	0
3/19	---	---	---	0	103	104	105	24	105	107	108	24	---	---	---	0	---	---	---	0
3/20	---	---	---	0	103	103	104	24	103	105	108	24	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwtr-Lewiston</u>			<u>Lower Granite</u>			<u>L. Granite Tlwr</u>			<u>Little Goose</u>			<u>L. Goose Tlwr</u>							
	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr				
3/7	---	---	---	0	102	102	102	24	102	102	102	24	---	---	---	0	---	---	---	0
3/8	---	---	---	0	101	101	102	24	101	101	101	24	---	---	---	0	---	---	---	0
3/9	---	---	---	0	102	102	102	24	101	101	102	24	---	---	---	0	---	---	---	0
3/10	---	---	---	0	101	101	101	24	101	101	101	24	---	---	---	0	---	---	---	0
3/11	---	---	---	0	101	101	102	16	101	101	102	16	---	---	---	0	---	---	---	0
3/12	---	---	---	0	101	102	102	20	101	102	102	19	---	---	---	0	---	---	---	0
3/13	---	---	---	0	103	103	103	24	103	103	103	24	---	---	---	0	---	---	---	0
3/14	---	---	---	0	102	102	103	24	102	102	103	24	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	100	100	101	24	100	100	101	24	---	---	---	0	---	---	---	0
3/18	---	---	---	0	99	100	102	24	99	100	104	24	---	---	---	0	---	---	---	0
3/19	---	---	---	0	100	101	101	24	100	100	101	24	---	---	---	0	---	---	---	0
3/20	---	---	---	0	101	101	101	24	100	100	101	24	---	---	---	0	---	---	---	0

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>							
	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr				
3/7	---	---	---	0	---	---	---	0	101	102	102	24	101	101	102	24	101	101	102	24
3/8	---	---	---	0	---	---	---	0	101	101	101	24	100	101	101	24	100	100	101	24
3/9	---	---	---	0	---	---	---	0	101	101	101	24	101	101	101	24	100	100	101	24
3/10	---	---	---	0	---	---	---	0	101	101	101	24	101	101	101	24	100	100	101	24
3/11	---	---	---	0	---	---	---	0	102	102	102	15	101	102	102	16	101	101	102	16
3/12	---	---	---	0	---	---	---	0	103	103	103	24	102	103	103	24	102	103	103	24
3/13	---	---	---	0	---	---	---	0	103	103	103	24	103	103	104	24	103	103	104	24
3/14	---	---	---	0	---	---	---	0	103	103	103	24	102	103	103	24	103	104	104	24
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	101	102	102	24	101	101	102	24	102	103	104	24
3/18	---	---	---	0	---	---	---	0	101	102	102	24	101	101	102	24	101	102	103	24
3/19	---	---	---	0	---	---	---	0	103	103	105	24	102	103	103	24	101	102	102	24
3/20	---	---	---	0	---	---	---	0	102	102	102	24	102	102	103	24	102	102	102	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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
3/7	101	102	102	24	101	101	101	24	---	---	---	0	---	---	---	0	---	---	---	0
3/8	100	101	101	24	100	100	100	24	---	---	---	0	---	---	---	0	---	---	---	0
3/9	101	101	101	24	100	100	100	24	---	---	---	0	---	---	---	0	---	---	---	0
3/10	101	101	102	24	100	100	100	14	---	---	---	0	---	---	---	0	---	---	---	0
3/11	101	101	102	16	101	101	101	5	---	---	---	0	---	---	---	0	---	---	---	0
3/12	103	103	104	24	102	103	103	20	---	---	---	0	---	---	---	0	---	---	---	0
3/13	104	104	104	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/14	104	104	105	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/15	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	102	102	103	24	101	101	102	24	---	---	---	0	---	---	---	0	---	---	---	0
3/18	101	102	102	24	101	101	101	24	---	---	---	0	---	---	---	0	---	---	---	0
3/19	102	103	103	24	102	102	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/20	102	102	102	24	102	102	102	24	102	102	102	14	101	101	102	12	102	102	102	9

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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
3/7	---	---	---	0	101	101	101	24	101	102	102	24	---	---	---	0
3/8	---	---	---	0	100	100	101	24	101	101	102	24	---	---	---	0
3/9	---	---	---	0	101	101	101	24	101	101	102	24	---	---	---	0
3/10	---	---	---	0	101	101	101	24	102	102	104	24	101	102	103	20
3/11	---	---	---	0	101	102	102	18	105	105	106	18	102	102	104	19
3/12	---	---	---	0	102	103	103	24	104	104	105	20	103	104	104	23
3/13	---	---	---	0	103	104	104	24	104	105	105	24	103	103	104	22
3/14	---	---	---	0	104	104	105	24	104	105	105	24	104	105	106	23
3/15	---	---	---	0	104	104	104	2	105	105	105	2	104	104	104	3
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	101	101	102	24	102	103	103	24	101	102	102	23
3/18	---	---	---	0	101	101	101	24	104	105	105	24	101	101	101	23
3/19	---	---	---	0	102	102	102	24	104	105	106	24	101	101	102	23
3/20	---	---	---	0	101	102	102	24	103	103	103	24	101	102	102	23

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 3/7/2003 to 3/20/2003

Agency		Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Clearwater	CH1	SP	2003	104,122	03-17-03	03-31-03	Boulder Creek	Lochsa River
IDFG	Rapid River	CH1	SP	2003	200,000	03-17-03	03-17-03	Hazard Creek/Little Salmon R	Little Salmon River
IDFG	Rapid River	CH1	SP	2003	300,000	03-18-03	03-19-03	Hells Canyon Dam	Snake River
IDFG	Rapid River	CH1	SP	2003	2,330,000	03-17-03	04-25-03	Rapid River	Little Salmon River
IDFG Total					2,934,122				
Nez Perce Tribe	Clearwater	CH1	SP	2003	44,341	03-17-03	03-31-03	Mill Cr Bridge	S Fk Clearwater River
Nez Perce Tribe	Clearwater	CH1	SP	2003	74,903	03-17-03	03-31-03	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Clearwater	CH1	SP	2003	150,091	03-17-03	03-31-03	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Clearwater	CH1	SP	2003	300,000	03-17-03	03-31-03	Meadow Creek - SELW	Selway River
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2003	275,000	03-11-03	03-11-03	Lapwai Creek	Clearwater River M F
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2003	275,000	03-13-03	03-13-03	Potlatch River	Clearwater River M F
Nez Perce Tribe	Lookingglass	CH1	SP	2003	109,900	03-17-03	03-24-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe	McCall	CH1	SU	2003	72,000	03-18-03	03-19-03	Johnson Cr Idaho	South Fork Salmon River
Nez Perce Tribe Total					1,301,235				
USFWS	Dworshak NFH	CH1	SP	2003	1,035,703	03-19-03	03-20-03	Dworshak	Clearwater River M F
USFWS	Spring Creek NFH	CH0	FA	2003	7,600,000	03-08-03	03-08-03	Spring Creek	L Col R (D/s McN Dam)
USFWS Total					8,635,703				
Umatilla Tribe	Bonneville	CH1	FA	2003	240,000	03-01-03	03-07-03	Thornhollow Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass	CH1	SP	2003	105,400	03-17-03	03-24-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass	CH1	SP	2003	110,200	03-17-03	03-24-03	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe Total					455,600				
WDFW	Klickitat	CH1	SP	2003	607,500	03-05-03	03-08-03	Klickitat	Klickitat River
WDFW	Tucannon	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
WDFW	Tucannon	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
WDFW Total					907,500				
Yakama Tribe	Cle Elem	CH1	SP	2003	38,564	03-14-03	05-15-03	Easton Pond	Yakama River
Yakama Tribe	Cle Elem	CH1	SP	2003	81,301	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem	CH1	SP	2003	249,854	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
Yakama Tribe Total					369,719				
Grand Total					14,603,879				

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary

From: **3/21/2003** to **4/3/2003**

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Clearwater	CH1	SP	2003	104,122	03-17-03	03-31-03	Boulder Creek	Lochsa River
IDFG	Rapid River	CH1	SP	2003	2,330,000	03-17-03	04-25-03	Rapid River Hatchery	Little Salmon River
IDFG Total					2,434,122				
Nez Perce Tribe	Clearwater	CH1	SP	2003	44,341	03-17-03	03-31-03	Mill Cr Bridge	S Fk Clearwater River
Nez Perce Tribe	Clearwater	CH1	SP	2003	74,903	03-17-03	03-31-03	Newsome Creek	S Fk Clearwater River
Nez Perce Tribe	Clearwater	CH1	SP	2003	150,091	03-17-03	03-31-03	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Clearwater	CH1	SP	2003	300,000	03-17-03	03-31-03	Meadow Creek - SELW	Selway River
Nez Perce Tribe	Lookingglass	CH1	SP	2003	109,900	03-17-03	03-24-03	Lostine Accim Pond	Wallowa River
Nez Perce Tribe Total					679,235				
Umatilla Tribe	Lookingglass	CH1	SP	2003	105,400	03-17-03	03-24-03	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass	CH1	SP	2003	110,200	03-17-03	03-24-03	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe Total					215,600				
WDFW	Tucannon	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
WDFW	Tucannon	CH1	SP	2003	150,000	03-15-03	04-18-03	Curl Lake	Tucannon River
WDFW Total					300,000				
Yakama Tribe	Cle Elem	CH1	SP	2003	38,564	03-14-03	05-15-03	Easton Pond	Yakama River
Yakama Tribe	Cle Elem	CH1	SP	2003	81,301	03-14-03	05-15-03	Clark Flat Acclim Pond	Yakama River
Yakama Tribe	Cle Elem	CH1	SP	2003	249,854	03-14-03	05-15-03	Jack Creek Acclim Pond	Yakama River
Yakama Tribe Total					369,719				
Grand Total					3,998,676				

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

Two-Week Summary of Passage Indices

Date	COMBINED YEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/07/2003	---	5	---	---	---	---	---	---	---	---	---
03/08/2003	---	8	---	---	---	---	---	---	---	---	---
03/09/2003	---	6	---	---	---	---	---	---	---	---	---
03/10/2003	0	6	5	1	---	---	---	---	---	---	---
03/11/2003 *	2	30	0	1	---	---	---	---	---	---	538
03/12/2003	5	27	31	9	---	---	---	---	---	---	585
03/13/2003 *	19	33	0	5	---	---	---	---	---	---	208
03/14/2003 *	79	10	---	13	---	---	---	---	---	---	1,111
03/15/2003 *	---	---	---	---	---	---	---	---	---	---	501
03/16/2003 *	---	---	---	---	---	---	---	---	---	---	398
03/17/2003 *	379	---	14	2	---	---	---	---	---	---	409
03/18/2003	493	90	76	4	---	---	---	---	---	---	605
03/19/2003	1,729	179	100	3	---	---	---	---	---	---	532
03/20/2003	979	107	260	1	---	---	---	---	---	---	522
Total:	3,685	501	486	39	0	0	0	0	0	0	5,409
# Days:	9	11	8	9	0	0	0	0	0	0	10
Average:	409	46	61	4	0	0	0	0	0	0	541
YTD	3,685	548	486	39	0	0	0	0	0	0	5,409

Date	COMBINED SUBYEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
03/07/2003	---	1	---	---	---	---	---	---	---	---	---
03/08/2003	---	0	---	---	---	---	---	---	---	---	---
03/09/2003	---	0	---	---	---	---	---	---	---	---	---
03/10/2003	0	0	0	13	---	---	---	---	---	---	---
03/11/2003 *	0	0	0	2	---	---	---	---	---	---	256,056
03/12/2003	0	0	0	5	---	---	---	---	---	---	62,621
03/13/2003 *	1	0	2	0	---	---	---	---	---	---	16,830
03/14/2003 *	0	0	---	4	---	---	---	---	---	---	5,861
03/15/2003 *	---	---	---	---	---	---	---	---	---	---	940
03/16/2003 *	---	---	---	---	---	---	---	---	---	---	1,148
03/17/2003 *	0	---	0	5	---	---	---	---	---	---	708
03/18/2003	0	0	0	3	---	---	---	---	---	---	576
03/19/2003	0	0	0	1	---	---	---	---	---	---	745
03/20/2003	0	0	0	0	---	---	---	---	---	---	386
Total:	1	1	2	33	0	0	0	0	0	0	345,871
# Days:	9	11	8	9	0	0	0	0	0	0	10
Average:	0	0	0	4	0	0	0	0	0	0	34,587
YTD	1	1	2	33	0	0	0	0	0	0	345,871

*The total, #days and average do not include the current day's data. *See sampling comments. [http://www.fpc.org/current daily/smpcomments.htm](http://www.fpc.org/current%20daily/smpcomments.htm). This means that one or more of the sites on this date had an incomplete or biased sample.

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

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's), subyearling chinook (chinook 0's), steelhead, coho, and sockeye. Two classes of fish counts are shown in these tables: collection counts, which account for sample rates but are not adjusted for flow; and passage indices, which are collection counts divided by the proportion of water passing through the sampled powerhouse. Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations. The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Two-Week Summary of Passage Indices

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)
03/07/2003	---	0	---	---	---	---	---	---	---	---	---
03/08/2003	---	0	---	---	---	---	---	---	---	---	---
03/09/2003	---	0	---	---	---	---	---	---	---	---	---
03/10/2003	0	0	0	0	---	---	---	---	---	---	---
03/11/2003 *	0	0	0	0	---	---	---	---	---	---	0
03/12/2003	0	0	0	0	---	---	---	---	---	---	0
03/13/2003 *	0	0	0	0	---	---	---	---	---	---	0
03/14/2003 *	0	0	---	0	---	---	---	---	---	---	0
03/15/2003 *	---	---	---	---	---	---	---	---	---	---	0
03/16/2003 *	---	---	---	---	---	---	---	---	---	---	0
03/17/2003 *	0	---	0	0	---	---	---	---	---	---	0
03/18/2003	0	0	0	0	---	---	---	---	---	---	0
03/19/2003	0	0	0	0	---	---	---	---	---	---	8
03/20/2003	0	0	0	0	---	---	---	---	---	---	7
Total:	0	0	0	0	0	0	0	0	0	0	15
# Days:	9	11	8	9	0	0	0	0	0	0	10
Average:	0	0	0	0	0	0	0	0	0	0	2
YTD	0	0	0	0	0	0	0	0	0	0	15

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: 03/20

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	3,248	1	526	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	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	276	146	190	8
TDA	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	0	0	0	0	0	0	0	0	0	10,040	2,530	1,320	1,426
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

BON is through 03/19 and LGR is through 03/18. 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: 3/21/2003

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

