



Fish Passage Center

# Weekly Report #03 - 12

June 06, 2003

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## Summary of Events:

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

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

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

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

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

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

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

- ? Lower Granite: The Spring Flow Objective will be 89.1 Kcfs between April 3rd and June 20th. To date, the average flow at Lower Granite between April 3rd and June 5th, 2003 has been 88.9 Kcfs.
- ? McNary: The Spring Flow Objective will be 220 Kcfs between April 10th and June 30th. To date, the average flow at McNary between April 10th and June 5th, 2003 has been 230.1 Kcfs.
- ? Priest Rapids: The Spring Flow Objective will be 135 Kcfs between April 10th and June 30th. To date, the average flow at Priest Rapids between April 10th and June 5th, 2003 has been 136.4 Kcfs.

On April 17th, SOR 2003-7 was submitted to the Action Agencies and asked for the Biological Opinion flow objective of 135 Kcfs to be met at Priest Rapids from April 24th through the end of June. This SOR was accepted by the Action Agencies. Outflows at Priest Rapids averaged 139.3 Kcfs April 24-30, 141.5 Kcfs May 1-7, 142.5 Kcfs May 8-14, 148.4 Kcfs May 15-21, 140.4 Kcfs May 22-28, and 143.3 Kcfs May 29-June 4. Current projections estimate daily average flows will range between 107 and 127 kcfs at Priest Rapids Dam in the last one-half of June.

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

**Table 3. Actual daily average flow (determines flow band), actual daily flow fluctuation, and the flow band suggested by SOR 2003-8 at Priest Rapids Dam from May 30th to June 5th.**

Date	Daily Average Flow (Kcfs)	Daily Flow Fluctuation (Kcfs)	Flow Band According to SOR 2003-8
5-30-2003	163.5	57.7	20
5-31-2003	127.2	33.0	20
6-1-2003	107.1	18.6	10
6-2-2003	129.2	58.1	20
6-3-2003	153.7	56.3	20
6-4-2003	141.0	28.6	20
6-5-2003	150.9	52.1	20

From Table 3, the flow bands recommended by SOR 2003-8 at Priest Rapids Dam were not met between May 30th and June 5th. At the 6-4-02 TMT Meeting, Grant County and BPA indicated that the restrictions on flow fluctuations would be lifted once 400 Temperature Units (TU's) were reached. Grant PUD estimated that 400 TU's would be reached on the 5th of June (yesterday), and they would not attempt to reduce flows fluctuations after that date.

The Libby Reservoir is currently at an elevation of 2444.9 feet and has increased outflows from 4.0 Kcfs to 22.0 Kcfs for flood control purposes to control the rate of refill in the reservoir. Inflows to Libby are currently 39.5 Kcfs (6-5-03); over the last week Libby has filled 10.6 feet.

The Hungry Horse Reservoir is currently at an elevation of 3546.0 feet, and has refilled 7.0 feet in the last week. Inflows to Hungry Horse are currently 11.1 feet and receding.

The Dworshak Reservoir is currently at an elevation of 1587.7 feet and has been releasing approximately 1.5 kcfs of water. Inflows to Dworshak have ranged between 14.3 and 24.2 Kcfs over the last week and has refilled 11.7 feet. The Grand Coulee Reservoir ended June 5th at an elevation of 1279.3 feet and has refilled 9.4 feet in the last week.

The Brownlee Reservoir was at an elevation of 2076.0 on June 4th, 2003, 1.0 foot from its full pool elevation. Outflows at Brownlee have ranged between 19.1 and 35.3 Kcfs over the last week.

The USBR reservoir systems along the Boise, Payette, and Upper Snake Basins are currently 89% (up 11% from last week), 96% (up 12% from last week), and 65% of capacity (up 3% from last week).

**Spill:** No spill occurred at Dworshak Dam over the past week. The actual volume of spill occurring system-wide was very high during the first part of the period when flows peaked, but have decreased over the past few days in accordance with the receding flows in the Snake River. Lower Granite, Little Goose, Lower Monumental and Ice Harbor dams over the past week averaged spill of 42%, 31%, 29% and 54% of average daily flow, respectively.

Spill over the past week at McNary, John Day, The Dalles and Bonneville dams over the past week averaged 44%, 24%, 37%, and 49% of average daily flow, respectively.

Total dissolved gas levels have increased considerably from last week and are exceeding the gas waiver limits at most projects as peak flows occurred in the system. Fish are responding to the higher gas levels in the system as evidenced by the sampling that occurred at Little Goose Dam where 5% of the fish sampled had signs of GBT and at Lower Monumental Dam where 10% of the fish sampled exhibited signs.

**Smolt Monitoring:** Along with the rapidly decreasing flows in the Snake River, the spring migrant numbers have declined rapidly as well. In the Lower Columbia numbers of coho and sockeye smolts remain relatively high while subyearling chinook indices have begun to surpass those of steelhead and yearling chinook. Sampling at Snake River tributary traps has been limited over the past few weeks, as the White Bird Trap was pulled due to high flows in late May and is done for the season. The Lewiston Trap was inoperable due to high debris load in the Snake River and it too is done for the season. The Grande Ronde Trap, which has been collecting fewer than 50 fish per day over the past week, due to high flows, will finish this week. The Imnaha Trap continues to capture small numbers of steelhead and yearling chinook.

At Lower Granite Dam the flows declined rapidly from a daily average of 208 kcfs on May 31 to 119 kcfs on June 5. The numbers of spring migrants decreased rapidly as the hydrograph descended. The daily average index for yearling chinook decreased to 5,200 this past week compared to 32,000 last week. The average daily index for steelhead dropped 29,000 compared to 119,000 last week. The index for coho averaged 3,700 this past week, down from 8,000 last week. Sockeye indices, were the only spring migrants to increase this week, averaging 1,400 this week, compared to 480 per day average last week. Increasing numbers of subyearling chinook were also captured this past week with the daily average index rising to 32,000 compared to 3,000 the previous week. Little Goose and Lower Monumental dams both continued to have relatively large, albeit reduced numbers of yearling chinook, and steelhead at the projects. At Little Goose the index for yearling chinook averaged 32,600 this week compared to 33,700 last week, while at Lower Monumental the index averaged 6,900 this week compared to 10,300 last. The index for steelhead at Little Goose averaged approximately 39,000 compared to 145,000 last week and at Lower Monumental the index was at 35,000 compared to 107,000 last week.

The bypass at Rock Island continues to cause some mortality in fish due to undetermined problems despite repairs that have been done to the seals and guides in slide gates that feed water into the bypass. The site reports a relative decrease in steelhead, coho and yearling chinook this past week, while sockeye numbers increased slightly. A relatively large increase in the subyearling chinook indices occurred last week with the daily average at 166 compared to 17 per day the previous week.

In the Lower Columbia, at McNary, where sampling is carried out every other day, in conjunction with NMFS transportation study that began April 20, the passage index for yearling chinook decreased again this week to 24,000 compared to 50,000 last week. Steelhead indices decreased from 20,000 last week to 12,400 this week. The daily average index for subyearling chinook increased from 12,000 per day last week to 80,000

this week. Sockeye indices were up to 10,400 this week compared to 7,900 the previous week. Coho indices were also up this week at 11,600 compared to 5,400 the previous week. At John Day Dam the average daily index for yearling chinook were high but decreased to 51,000 this week compared to 61,000 last week. Steelhead indices continued to increase this week, with an average of 31,000 versus 13,000 last week. Coho indices increased also averaging 14,200 this week compared to 7,200 last week. Sockeye numbers decreased to an average of 12,300 per day compared to 17,500 per day last week. Subyearling chinook indices increased steadily from 137 on May 24 to nearly 67,000 on June 3. The average index this week for subyearlings at John Day was 33,700 well above the average of 2,900 last week.

At Bonneville Dam, the average daily index for yearling chinook was at 43,000 this week compared to 78,000 last week. The steelhead index averaged 57,600 this week compared to 31,000 last week. The indices for coho were down this week with an average index of 34,000 compared to 44,500 per day last week. Subyearling chinook daily indices averaged 26,000 per day this week compared to 10,000 per day last week. Sockeye indices continued to decrease rapidly over the past week with the weekly average index this week 12,000 compared to 24,400 last week.

**Hatchery Releases** - The preliminary hatchery total of juvenile salmonids released above Bonneville Dam for the 2003 migration season will approximate 86.6 million from Columbia River Basin hatcheries. About 12.8 million juvenile salmonids were released or releases were initiated during the past two weeks, with an additional 19.1 million fish scheduled for release in the upcoming two weeks.

**Snake River** - About 27.6 million smolts will be released in the Snake River Basin from State, Federal, and Tribal hatcheries and acclimation ponds for the 2003 migration year. All yearling spring, summer, and fall chinook have been released from hatcheries, acclimation facilities, or directly released river systems in Idaho, SE Washington, and NE Oregon.

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

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

Subyearling fall chinook have been released during the past three weeks both in the Snake River (Hells Canyon and Acclimation Ponds) and also are on going in the Clearwater River. Subyearling fall chinook will be released through most of June.

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

Yearling summer chinook released from Wells and Eastbank Complex hatcheries and including the research release groups are all in-river. Yearling summer chinook were released into the Methow, Wenatchee, and mainstem Mid-Columbia rivers for the 2003 migration. Subyearling fall and summer chinook releases were initiated in mid-late May in the Yakima River and are just beginning (volitional release) from Ringold Hatchery. Priest Rapids will begin release of their "sub" fall chinook mid-week (June 12 or near that date). The Turtle Rock summer "subs" will likely be the latest group out (early July schedule). Subyearling summer/fall chinook comprise the highest percentage and numbers of juvenile salmon released in the Mid-Columbia River (about 14.5 million scheduled).

About 209,000 sockeye were released last fall into Lake Wenatchee; there will be no sockeye releases made into the Okanogan R basin in 2003. About 1.9 million yearling coho were released in the Yakama River basin, the Wenatchee River basin and the Methow River basin this migration season.

Release of approximately 1.3 million juvenile steelhead was completed by the end of May. Steelhead were released in the Okanogan, Methow, Entiat, Wenatchee, and mainstem Mid-Columbia Rivers for the 2003 migration.

**Lower Columbia River** - The Lower Columbia River Zone will release about 36.9 million salmon and steelhead for the 2003 migration. Presently all yearling fish have been released to date.

Release of yearling spring chinook from State, Tribal and Federal hatcheries is completed for the year. Yearling spring chinook were released in the Klickitat, Umatilla, Deschutes, Hood, Wind, and Little White Salmon rivers with yearling fall chinook released in the Umatilla River basin. Yearling coho salmon have been released in the Klickitat, Little White Salmon, and Umatilla rivers to date. Klickitat Hatchery completed their volitional release of about 1.0 million yearling coho the end of May.

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

Subyearling fall chinook were released into the Umatilla River in May with other release groups scheduled for the Klickitat and Little White Salmon rivers in June.

**Adult Fish Passage** - May 31 was the final day for counting of spring chinook at Bonneville Dam. June 1 began the switchover to summer chinook at the project. Unofficial tally of adult spring chinook at Bonneville was 192,012 for 2003; this total was about 71.4% of the 2002 count, and 157.2% of the 10-year average count. This year's spring chinook was comprised of a much larger percentage of 5-year old fish than in recent years. Scale sampling data from the Bonneville project have not been updated, but this year's run will likely show that at least 50% of the adult salmon were 5-year old fish. Certainly this factor boosted numbers of fish far above the predicted total expected for the 2003 migration.

Of the 192,000 adult chinook past Bonneville, 131,290 were counted above The Dalles for the spring migration (68.4% of the Bonneville count). Upstream at McNary Dam, 92,814 adult spring chinook were tallied with close to 71,000 counted into the Snake River and 16,500 counted past Priest Rapids Dam. The count of adult spring chinook at Prosser Dam in the lower Yakama River was near 4,000. These three counting sites account for about 99% of the spring chinook past McNary Dam. Of the fish counted at Rock Island Dam, the majority will likely enter the Wenatchee River and tributaries as only 4,200 of the 15,700 (RI count) have moved past Rocky Reach Dam. Those fish past Rocky Reach will enter the Entiat, Methow, and Okanogan rivers and tributaries. In the Snake River, fish counts have risen during the past few days after high flows in the Snake River caused the chinook to take some refuge until the flows moderated. As an example, at Lower Granite Dam, fish passage reduced to less than 100 per day from May 31 to June 2, and then rose to 500, 1,300, and 1,000 from June 3 to June 5, respectively after the higher flows began to recede. Also at Bonneville Dam, the final count of Jack spring chinook salmon (14,467) was greater than double the year 2002 and 10-year average count. Expectations for future adult spring chinook returning in 2004 are still upbeat, at least for now.

Adult summer chinook passage at Bonneville Dam had counts ranging between 1,879 and 2,128 for the week ending June 5. The cumulative count was 9,765 about 81% and 280% of the respective year 2002 and 10-year average count at Bonneville. Based on PIT tag data from Bonneville Dam, the majority of the summer fish passing the project are fish destined for the Salmon, Imnaha, and Grande Ronde River basins. PIT tagged summer chinook from the Mid-Columbia have been increasing through the week. Normally, the early portion of the summer run chinook is destined for the Snake River basin with Mid-Columbia summer chinook prevalent from mid-June through July.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/23/03	131.0	0.0	144.0	0.0	147.7	9.6	146.2	36.5	150.6	27.4	173.9	62.7	182.6	70.2
05/24/03	99.8	0.2	103.7	0.0	115.8	8.1	116.2	35.6	122.0	25.5	125.2	45.5	121.6	68.3
05/25/03	78.4	0.2	78.5	0.0	88.2	6.6	90.0	30.9	100.4	23.8	93.0	33.4	89.6	55.3
05/26/03	83.9	0.2	79.4	0.0	95.8	7.0	97.8	30.6	108.8	23.5	118.2	42.6	117.1	73.3
05/27/03	101.3	0.2	106.9	0.0	124.8	7.9	123.9	38.3	130.2	31.9	134.9	47.3	136.2	69.6
05/28/03	143.0	0.2	126.8	5.5	139.5	12.0	133.6	26.0	141.5	32.7	139.4	28.7	143.0	63.9
05/29/03	121.7	0.2	134.4	0.0	157.7	14.6	159.6	33.7	170.3	27.7	179.6	46.4	181.3	87.0
05/30/03	96.6	0.2	99.4	0.0	127.4	9.0	130.9	21.0	143.9	30.0	153.7	15.8	163.5	88.4
05/31/03	87.6	0.2	89.2	0.0	109.9	7.8	111.7	19.1	122.6	26.9	129.9	29.0	127.2	81.3
06/01/03	63.8	0.1	63.6	0.0	85.9	6.4	87.0	12.4	99.6	19.1	107.4	34.6	107.1	68.6
06/02/03	101.2	0.1	100.1	0.0	118.6	7.6	119.6	22.1	128.9	31.9	130.2	41.8	129.2	68.6
06/03/03	105.2	0.1	107.5	0.0	123.8	7.8	121.2	20.7	130.2	30.0	144.1	45.8	153.7	62.6
06/04/03	111.3	0.2	107.6	0.0	128.8	8.0	126.0	18.4	134.8	28.3	136.4	42.9	141.0	61.3
06/05/03	121.9	0.2	120.9	0.0	135.7	8.4	132.8	14.5	141.6	24.6	148.1	44.6	150.9	85.9

**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
05/23/03	10.0	0.0	17.0	21.1	79.7	20.5	78.4	18.0	75.6	29.1	81.3	57.6
05/24/03	9.8	0.0	18.2	20.1	95.7	20.5	94.3	17.0	91.2	26.0	97.5	54.8
05/25/03	7.3	0.0	20.3	18.1	122.7	30.6	120.8	19.8	118.1	23.5	122.6	60.7
05/26/03	1.5	0.0	21.1	16.3	146.7	53.8	141.2	25.5	139.7	25.5	142.4	67.0
05/27/03	1.5	0.0	23.7	23.1	155.2	61.4	153.8	36.7	153.0	30.5	158.7	91.8
05/28/03	1.6	0.0	23.2	25.0	156.8	63.0	151.9	38.7	150.9	32.5	154.5	84.0
05/29/03	1.6	0.0	26.0	27.5	172.1	77.9	169.7	53.6	166.6	47.8	170.3	86.9
05/30/03	1.5	0.0	27.3	28.6	186.2	91.9	181.2	65.1	180.9	59.2	182.0	92.1
05/31/03	1.5	0.0	28.0	42.4	208.2	114.3	206.4	90.8	203.4	83.2	202.6	113.2
06/01/03	1.5	0.0	28.6	26.9	190.8	96.5	187.7	73.5	189.2	70.0	195.1	106.2
06/02/03	1.5	0.0	25.2	32.6	165.9	72.2	165.9	52.6	164.6	43.8	169.2	84.6
06/03/03	1.6	0.0	24.6	26.0	149.1	55.6	144.8	37.3	140.7	29.7	146.4	73.3
06/04/03	1.7	0.0	21.8	21.8	133.0	43.2	133.5	28.9	134.6	27.8	140.1	82.4
06/05/03	1.7	0.0	---	---	118.1	30.1	116.0	18.1	113.5	26.0	117.6	67.1

**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		
05/23/03	249.2	85.8	249.8	63.1	246.7	93.0	268.4	96.3	59.2	106.2
05/24/03	259.7	90.1	247.2	60.5	251.4	99.3	272.4	137.7	23.0	105.1
05/25/03	221.2	65.8	230.0	50.7	232.2	98.2	251.3	134.5	10.8	99.3
05/26/03	248.3	76.8	247.5	56.7	240.5	98.5	276.6	94.9	61.6	113.4
05/27/03	291.9	117.8	317.4	66.2	310.8	113.8	310.8	102.1	83.2	119.2
05/28/03	298.8	124.9	310.0	70.6	322.9	112.7	338.9	130.5	86.5	115.0
05/29/03	329.0	153.0	269.2	55.8	270.0	96.4	282.0	103.3	61.3	110.7
05/30/03	352.5	176.3	349.1	87.4	343.1	126.6	343.4	139.6	84.1	113.0
05/31/03	352.4	176.8	356.9	86.5	354.2	137.8	350.5	140.6	94.8	108.4
06/01/03	320.2	144.9	321.9	70.8	321.0	124.0	352.9	130.7	98.8	116.7
06/02/03	289.6	115.4	295.5	73.9	298.1	105.8	325.3	107.8	93.1	117.8
06/03/03	294.5	121.4	288.5	67.7	291.2	107.5	316.4	144.7	46.3	118.6
06/04/03	296.7	125.9	304.8	73.3	286.6	101.7	302.6	142.7	36.6	116.6

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank				Fish with L. Line GBT	
								Rank 1	Rank 2	Rank 3	Rank 4	Num Fish	Avg. Rank
<b>Lower Granite Dam</b>													
	05/06/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	05/27/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	06/03/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
<b>Little Goose Dam</b>													
	05/28/03	Chinook + Steelhead	100	7	7	7.00%	0.00%	7	0	0	0		
	06/04/03	Chinook + Steelhead	100	5	5	5.00%	0.00%	5	0	0	0		
<b>Lower Monumental Dam</b>													
	06/02/03	Chinook + Steelhead	100	10	10	10.00%	0.00%	10	0	0	0		
<b>McNary Dam</b>													
	06/01/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	06/05/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
<b>Bonneville Dam</b>													
	05/29/03	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0		
	06/02/03	Chinook + Steelhead	101	0	0	0.00%	0.00%	0	0	0	0		
	06/05/03	Chinook + Steelhead	103	0	0	0.00%	0.00%	0	0	0	0		
<b>Rock Island Dam</b>													
	05/29/03	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0		
	06/05/03	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0		

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
5/23	99	99	99	24	114	119	121	24	108	109	110	21	107	108	109	24	107	107	108	23
5/24	99	99	99	24	116	120	122	24	111	111	112	24	109	110	111	24	108	109	109	23
5/25	99	99	100	24	113	115	120	24	111	111	112	24	109	110	111	24	108	108	109	23
5/26	98	99	99	24	118	121	123	24	110	111	112	24	109	109	112	24	108	108	108	23
5/27	98	98	99	24	119	122	122	24	109	110	111	24	108	109	112	24	108	109	109	23
5/28	98	99	99	24	122	122	123	24	110	111	113	24	109	109	111	24	109	110	110	23
5/29	99	99	100	24	122	124	125	24	110	110	110	24	109	109	110	24	110	110	111	23
5/30	115	120	121	24	112	113	114	24	106	107	107	23	106	106	107	23	113	115	118	23
5/31	114	120	120	23	110	113	115	23	107	107	107	23	111	115	132	23	109	110	111	19
6/1	104	104	105	23	109	110	113	19	116	116	117	24	113	114	115	24	110	111	112	22
6/2	114	119	120	24	104	105	105	24	116	118	119	24	109	110	112	24	115	116	116	24
6/3	99	99	100	24	124	125	125	24	110	110	111	24	109	110	112	24	109	110	110	23
6/4	98	99	99	24	124	125	126	24	110	111	115	24	109	110	111	24	110	110	111	22
6/5	98	99	99	24	125	126	126	24	110	111	111	24	109	110	111	24	110	110	111	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
5/23	106	107	107	23	107	107	107	2	109	109	109	2	109	110	110	23	111	113	113	23
5/24	108	108	108	23	---	---	---	0	---	---	---	0	111	111	111	24	113	114	114	22
5/25	108	108	108	23	---	---	---	0	---	---	---	0	110	110	110	23	113	113	114	21
5/26	107	107	108	23	---	---	---	0	---	---	---	0	109	109	110	24	112	112	114	24
5/27	107	107	108	23	108	108	112	14	109	109	109	14	108	109	109	24	112	112	113	24
5/28	110	112	118	23	108	109	110	24	110	111	116	24	109	110	110	24	111	112	114	23
5/29	109	109	110	23	109	110	110	24	113	114	125	24	110	110	111	22	111	112	114	20
5/30	105	105	106	23	---	---	---	0	110	111	112	24	112	117	117	24	103	104	105	24
5/31	107	107	108	21	---	---	---	0	113	114	115	24	113	116	117	24	103	104	105	24
6/1	108	108	108	23	112	116	117	24	118	120	121	24	109	109	109	24	113	115	119	24
6/2	112	113	114	24	106	106	107	24	117	120	123	24	---	---	---	0	111	113	114	23
6/3	108	109	109	23	108	109	109	19	110	110	111	19	109	109	110	24	111	111	111	24
6/4	109	109	110	22	108	108	109	10	109	109	110	10	109	110	110	24	110	111	111	24
6/5	109	110	110	23	110	110	111	17	112	112	112	17	110	111	111	23	111	111	112	22

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg		
5/23	112	112	113	22	118	120	125	22	113	114	115	24	118	119	119	24	118	119	120	24
5/24	114	114	115	23	119	120	124	22	115	116	118	24	119	119	119	24	120	121	124	24
5/25	112	113	113	22	118	119	120	22	114	114	115	24	118	118	119	24	116	117	117	24
5/26	111	112	112	24	118	120	124	23	114	114	115	24	116	116	117	24	114	115	117	24
5/27	111	112	113	24	119	121	122	24	115	117	119	24	116	116	116	9	114	116	119	24
5/28	112	113	113	22	119	121	124	21	115	116	118	24	---	---	---	0	116	117	118	24
5/29	111	111	112	22	118	119	122	21	13	14	15	24	12	12	12	6	13	13	15	24
5/30	110	112	115	24	118	120	121	24	116	116	118	24	116	116	117	14	116	117	118	24
5/31	111	114	115	24	119	120	121	24	114	115	116	24	115	116	117	24	112	113	115	24
6/1	113	117	119	24	106	106	107	24	112	113	114	24	116	116	116	24	112	113	114	24
6/2	109	110	112	23	109	111	112	24	---	---	---	0	---	---	---	0	---	---	---	0
6/3	110	111	111	24	116	117	119	24	112	113	116	24	116	117	117	24	116	117	122	24
6/4	110	111	111	24	116	116	117	23	112	114	116	24	116	116	116	24	115	116	117	24
6/5	111	111	112	23	115	117	118	23	---	---	---	0	---	---	---	0	---	---	---	0



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

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

Date	<u>Priest R. Dnst</u>			<u>Pasco</u>			<u>Dworshak</u>			<u>Clrwtr-Peck</u>			<u>Anatone</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
5/23	118	118	120	24	116	118	119	24	99	99	100	17	102	103	104	24	104	105	106	24
5/24	117	118	119	24	116	117	117	24	100	100	100	24	103	104	105	24	105	106	107	24
5/25	114	115	117	24	114	114	115	24	99	99	100	24	103	104	104	24	105	105	105	24
5/26	116	117	117	24	112	112	113	24	107	109	109	24	104	105	106	24	107	107	108	23
5/27	116	116	117	24	114	115	115	24	108	109	110	24	105	106	107	24	108	109	109	24
5/28	115	116	116	24	115	116	116	24	106	108	108	24	105	106	106	24	109	109	109	24
5/29	12	12	12	24	114	115	116	24	105	105	106	24	105	107	107	24	109	110	110	24
5/30	118	119	119	24	107	112	118	23	114	115	115	23	113	113	114	24	110	113	116	23
5/31	116	116	117	24	111	118	119	24	114	115	116	23	108	108	108	23	110	111	112	20
6/1	114	115	116	24	110	110	112	23	114	115	116	24	108	109	109	24	111	111	112	23
6/2	---	---	---	0	103	105	106	24	104	105	106	24	111	111	112	23	109	112	114	24
6/3	114	115	115	24	113	114	114	24	---	---	---	0	104	105	105	24	109	109	110	24
6/4	114	115	115	24	114	115	115	24	105	105	106	9	103	104	105	24	108	108	109	24
6/5	---	---	---	0	114	115	115	24	105	106	108	13	103	104	105	24	107	108	108	24

### 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>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
5/23	102	104	106	24	106	107	108	24	110	111	112	24	109	110	113	24	111	115	116	24
5/24	102	104	105	24	106	107	108	24	110	110	111	24	112	114	114	24	113	115	116	24
5/25	101	102	102	24	105	105	105	24	114	117	121	24	111	112	113	24	113	114	115	24
5/26	102	103	104	24	103	104	104	24	122	123	124	24	108	108	110	24	112	115	115	24
5/27	103	104	105	24	104	105	107	24	125	127	128	24	112	115	116	24	116	118	119	24
5/28	104	104	104	24	107	108	108	24	126	128	128	24	118	119	120	24	118	119	120	24
5/29	103	104	105	24	108	108	109	24	126	128	130	24	120	121	121	24	120	123	124	24
5/30	107	107	108	23	107	108	108	24	107	108	110	24	107	108	127	24	113	114	115	24
5/31	107	108	109	23	107	107	108	24	108	109	109	24	106	107	107	24	113	114	115	24
6/1	109	109	109	24	101	102	103	24	116	117	118	24	115	116	117	24	107	107	109	24
6/2	108	109	110	24	112	114	115	24	107	108	110	23	114	114	115	24	105	106	107	24
6/3	102	102	102	10	108	109	109	24	121	124	130	24	123	124	125	24	120	122	123	23
6/4	---	---	---	0	108	109	110	24	117	118	123	24	120	120	121	24	116	117	118	24
6/5	103	103	105	9	108	109	110	24	114	117	118	22	117	118	119	23	116	117	117	24

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

Date	<u>Lower Mon.</u>			<u>L. Mon. Tlwr</u>			<u>Ice Harbor</u>			<u>Ice Harbor Tlwr</u>			<u>McNary-Oregon</u>			#				
	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High	#	<u>24 h</u>	<u>12 h</u>	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
5/23	114	115	118	24	119	120	121	24	117	118	119	24	114	116	118	24	115	116	118	24
5/24	115	116	117	24	119	120	121	24	118	118	118	24	115	116	118	24	115	116	119	24
5/25	112	113	114	24	118	118	119	24	115	116	117	24	116	117	117	24	116	117	119	24
5/26	112	113	114	24	118	119	120	24	112	113	114	24	117	118	120	24	114	115	116	24
5/27	111	112	113	24	120	122	123	24	112	113	114	24	119	120	121	24	112	113	115	24
5/28	115	117	118	24	122	124	125	24	114	114	114	24	119	119	120	24	113	113	114	24
5/29	118	120	121	24	124	127	130	24	115	117	118	24	120	121	123	24	116	117	118	24
5/30	98	98	99	24	114	115	117	23	104	104	105	24	112	115	116	24	112	117	118	24
5/31	98	99	99	24	116	117	118	24	104	104	104	24	116	117	118	24	112	117	119	24
6/1	117	120	121	24	99	99	99	17	115	116	117	23	107	108	112	23	99	99	99	24
6/2	111	117	119	24	101	102	103	24	107	107	108	24	105	106	107	24	109	112	114	24
6/3	123	124	124	24	121	121	122	23	122	122	122	24	118	119	120	23	118	119	121	24
6/4	122	123	126	24	119	120	120	24	120	121	121	24	118	119	120	24	117	118	119	24
6/5	120	121	123	24	119	120	120	24	120	120	120	24	116	117	119	24	117	118	119	24

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

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

Date	<u>McNary-Wash</u>				<u>McNary Tlwr</u>				<u>John Day</u>				<u>John Day Tlwr</u>				<u>The Dalles</u>			
	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	<u>24h</u>		<u>12h</u>		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/23	116	117	118	24	117	119	120	21	114	116	118	23	115	118	120	24	113	116	118	23
5/24	116	117	119	24	118	120	120	24	116	116	116	23	117	118	119	24	116	117	118	23
5/25	116	117	117	24	117	119	120	24	115	116	116	23	116	117	118	24	113	113	114	23
5/26	114	115	116	24	116	119	120	24	114	115	116	23	116	118	119	24	113	114	115	23
5/27	113	114	116	24	118	119	120	24	113	114	115	23	116	119	121	24	114	115	116	23
5/28	114	114	115	24	119	119	120	24	113	113	113	15	116	119	121	24	114	115	116	23
5/29	115	116	117	24	121	123	123	24	113	113	117	15	114	117	118	24	113	115	117	23
5/30	102	103	103	23	104	104	105	24	116	117	118	24	115	120	121	24	110	111	113	24
5/31	104	105	107	24	103	104	105	24	116	117	118	24	116	120	121	24	113	116	121	24
6/1	117	117	119	24	112	114	115	24	107	107	107	23	116	120	121	24	112	113	115	24
6/2	119	120	121	24	117	119	119	24	107	107	107	24	97	97	97	24	109	110	110	24
6/3	116	117	118	24	119	120	120	22	114	116	117	23	114	115	118	24	113	115	117	23
6/4	116	117	118	24	119	119	120	9	116	117	119	23	114	116	117	24	114	115	116	23
6/5	116	118	119	24	118	118	120	10	117	118	119	23	114	115	117	24	115	116	117	23

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

Date	<u>The Dalles Dnst</u>				<u>Bonneville</u>				<u>Warrendale</u>				<u>CamasWashugal</u>			
	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg
5/23	117	119	120	24	114	114	115	23	115	116	117	23	114	115	117	24
5/24	119	119	120	24	116	117	117	23	118	119	119	23	114	115	116	24
5/25	117	118	119	24	114	115	115	23	117	118	118	23	114	114	115	24
5/26	118	118	118	24	113	114	114	22	114	115	117	23	113	113	114	24
5/27	118	119	121	24	114	115	117	23	115	116	117	23	112	114	115	24
5/28	118	119	119	24	117	117	117	23	118	118	122	23	114	116	117	24
5/29	118	119	121	24	116	117	118	23	119	123	129	23	118	121	126	24
5/30	117	117	117	24	107	107	108	23	114	115	115	21	113	114	115	24
5/31	119	119	120	23	118	119	125	20	114	115	116	21	106	106	106	23
6/1	119	119	120	23	118	119	123	23	102	104	105	24	106	107	107	24
6/2	105	105	106	22	113	114	115	24	109	110	110	23	105	105	105	22
6/3	118	120	121	24	114	115	117	23	117	117	118	23	114	116	117	24
6/4	119	120	120	24	116	117	118	23	118	118	119	23	116	117	118	24
6/5	119	120	121	24	116	117	118	23	116	117	118	23	116	116	117	24

## HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary									
From:	5/23/03	to	6/5/03						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003		05-27-03	05-31-03	Lapwai Creek	Clearwater R.
					250,000				
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003		05-27-03	06-07-03	Cherry Lane Hatchery	Clearwater R.
					250,000				
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	400,000	05-19-03	05-30-03	Pittsburg Landing Acclim P	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-28-03	05-28-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003		05-28-03	06-06-03	Big Canyon (Clearwater R)	Clearwater R.
					500,000				
<b>Nez Perce Tribe Total</b>					<b>1,900,000</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery C	ST	SU	2003		05-08-03	05-23-03	Big Canyon Acclim.Pd (G R)	Grande Ronde
					130,500				
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>130,500</b>				
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2003	4,000,000	06-03-03	06-30-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CO	NO	2003	998,900	05-19-03	05-26-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2003	200,000	05-30-03	06-06-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Priest Rapids H	CH0	FA	2003	3,500,000	06-03-03	06-30-03	Ringold Springs Hatchery	Mid-Columbia
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH1	SU	2003		04-13-03	05-23-03	Above Rocky Reach Dam	Mid-Columbia
					120,000				
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2003	127,969	04-07-03	05-30-03	Bel. Priest Rapids Dam	Mid-Columbia
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2003	105,323	05-01-03	05-30-03	Twisp Acclim Pond	Methow River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>9,052,192</b>				
Yakama Tribe	Little White Salmon	CH0	FA	2003	1,700,000	05-19-03	06-02-03	Prosser Acclim Pond	Yakama River
<b>Yakama Tribe Total</b>					<b>1,700,000</b>				
<b>Grand Total</b>					<b>12,782,692</b>				

## HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary									
From:	6/6/03	to	6/19/03						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Cherry Lane Hatchery	CH0	FA	2003	250,000	05-27-03	06-07-03	Cherry Lane Hatchery	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	300,000	06-16-03	06-30-03	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2003	500,000	05-28-03	06-06-03	Big Canyon (Clearwater R)	Clearwater River M F
<b>Nez Perce Tribe Total</b>					<b>1,050,000</b>				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2003	2,000,000	06-19-03	06-19-03	Little White Salmon H	Little White Salmon R
<b>U.S. Fish and Wildlife Service Total</b>					<b>2,000,000</b>				
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH0	SU	2003	426,747	06-16-03	07-07-03	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CH0	FA	2003	4,000,000	06-03-03	06-30-03	Klickitat Hatchery	Klickitat River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2003	100,000	06-06-03	06-06-03	Cpt John Acclim Pond	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2003	200,000	05-30-03	06-06-03	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2003	3,500,000	06-03-03	06-30-03	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2003	6,700,000	06-12-03	06-25-03	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2003	658,745	06-16-03	07-07-03	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2003	463,000	06-10-03	06-20-03	Wells Hatchery	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>16,048,492</b>				
<b>Grand Total</b>					<b>19,098,492</b>				

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

## Two-Week Summary of Passage Indices

<b>COMBINED YEARLING CHINOOK</b>												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/23/2003	*	2	57	13	27	17,844	16,530	3,069	257	69,170	101,847	71,428
05/24/2003	*	---	15	---	---	15,858	19,560	3,861	240	0	69,186	67,191
05/25/2003	*	---	---	---	---	22,672	51,223	10,926	153	71,836	50,160	108,442
05/26/2003	*	---	---	52	444	50,132	40,818	12,465	122	---	39,779	104,980
05/27/2003	*	---	1	23	459	61,900	38,388	15,574	97	44,371	39,939	63,400
05/28/2003	*	---	4	19	---	36,244	33,291	13,848	109	---	61,519	65,747
05/29/2003	*	---	0	23	---	22,127	35,941	12,456	163	66,623	66,571	64,171
05/30/2003	*	---	---	35	---	14,996	25,586	3,865	143	---	59,411	61,890
05/31/2003	*	---	---	---	---	6,428	16,712	10,309	117	37,035	33,029	40,801
06/01/2003	*	---	---	---	---	5,028	47,607	13,422	93	---	64,724	25,756
06/02/2003	*	---	---	24	---	3,806	67,914	6,647	99	17,990	80,113	43,713
06/03/2003	*	---	0	21	---	2,978	23,487	11,223	82	---	67,700	42,321
06/04/2003		---	6	24	---	1,375	22,023	1,609	66	17,133	34,748	49,139
06/05/2003	*	---	8	26	---	1,921	25,172	1,449	178	---	16,651	37,464
<b>Total:</b>		<b>2</b>	<b>91</b>	<b>260</b>	<b>930</b>	<b>263,309</b>	<b>464,252</b>	<b>120,723</b>	<b>1,919</b>	<b>324,158</b>	<b>785,377</b>	<b>846,443</b>
<b># Days:</b>		<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>2</b>	<b>11</b>	<b>26</b>	<b>310</b>	<b>18,808</b>	<b>33,161</b>	<b>8,623</b>	<b>137</b>	<b>40,520</b>	<b>56,098</b>	<b>60,460</b>
<b>YTD</b>		<b>32,064</b>	<b>33,792</b>	<b>11,096</b>	<b>2,417</b>	<b>3,580,757</b>	<b>2,317,304</b>	<b>775,375</b>	<b>14,436</b>	<b>1,578,699</b>	<b>2,017,546</b>	<b>3,846,267</b>

<b>COMBINED SUBYEARLING CHINOOK</b>												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/23/2003	*	0	0	10	36	207	3	27	11	8,478	0	5,291
05/24/2003	*	---	0	---	---	0	1	0	8	0	137	7,217
05/25/2003	*	---	---	---	---	0	0	78	8	6,840	932	6,379
05/26/2003	*	---	---	1	44	5,127	0	231	16	---	1,555	10,090
05/27/2003	*	---	0	2	20	4,336	0	0	15	17,036	2,189	11,142
05/28/2003	*	---	0	2	---	2,480	267	0	32	---	6,592	16,533
05/29/2003	*	---	1	1	---	9,305	0	105	31	27,760	8,801	15,054
05/30/2003	*	---	---	0	---	8,204	0	122	309	---	7,191	20,630
05/31/2003	*	---	---	---	---	75,285	7,078	1,103	278	81,262	6,367	15,794
06/01/2003	*	---	---	---	---	55,637	48	3,322	112	---	21,691	20,137
06/02/2003	*	---	---	3	---	33,494	1,017	5,290	83	70,304	45,968	20,519
06/03/2003	*	---	0	10	---	21,720	60,809	6,851	52	---	66,598	21,161
06/04/2003		---	0	7	---	15,280	44,593	14,669	155	87,618	54,116	33,816
06/05/2003	*	---	2	3	---	14,335	20,861	18,758	172	---	33,826	46,954
<b>Total:</b>		<b>0</b>	<b>3</b>	<b>39</b>	<b>100</b>	<b>245,410</b>	<b>134,677</b>	<b>50,556</b>	<b>1,282</b>	<b>299,298</b>	<b>255,963</b>	<b>250,717</b>
<b># Days:</b>		<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>4</b>	<b>33</b>	<b>17,529</b>	<b>9,620</b>	<b>3,611</b>	<b>92</b>	<b>37,412</b>	<b>18,283</b>	<b>17,908</b>
<b>YTD</b>		<b>1</b>	<b>63</b>	<b>70</b>	<b>355</b>	<b>250,951</b>	<b>135,603</b>	<b>51,191</b>	<b>2,771</b>	<b>345,645</b>	<b>256,935</b>	<b>2,030,891</b>

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

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

## Two-Week Summary of Passage Indices

COMBINED COHO												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/23/2003	*	0	0	0	1	1,867	3,000	53	973	1,968	2,097	26,455
05/24/2003	*	---	0	---	---	2,016	1,212	518	875	0	4,604	23,144
05/25/2003	*	---	---	---	---	3,986	8,576	1,575	845	4,197	4,829	45,673
05/26/2003	*	---	---	0	5	9,685	9,018	3,336	1,853	---	5,054	61,258
05/27/2003	*	---	0	0	0	18,787	13,041	3,623	2,903	2,666	6,566	58,615
05/28/2003	*	---	0	0	---	15,875	10,648	2,595	2,573	---	15,766	48,062
05/29/2003	*	---	0	0	---	3,519	12,393	4,862	1,942	17,176	12,571	48,327
05/30/2003	*	---	---	0	---	5,094	9,940	860	1,372	---	20,927	73,312
05/31/2003	*	---	---	---	---	3,978	5,812	2,124	1,160	10,958	14,258	28,517
06/01/2003	*	---	---	---	---	5,697	7,343	2,116	1,522	---	21,603	23,882
06/02/2003	*	---	---	0	---	3,996	7,223	838	1,592	14,174	16,022	28,992
06/03/2003	*	---	0	0	---	3,854	3,422	1,202	1,290	---	9,883	44,106
06/04/2003		---	0	0	---	1,222	2,691	418	1,677	9,847	8,419	22,456
06/05/2003	*	---	0	0	---	2,365	2,545	517	2,461	---	8,785	17,982
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>81,941</b>	<b>96,864</b>	<b>24,637</b>	<b>23,038</b>	<b>60,986</b>	<b>151,384</b>	<b>550,781</b>
<b># Days:</b>		<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5,853</b>	<b>6,919</b>	<b>1,760</b>	<b>1,646</b>	<b>7,623</b>	<b>10,813</b>	<b>39,342</b>
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>113,683</b>	<b>107,366</b>	<b>33,340</b>	<b>25,878</b>	<b>66,332</b>	<b>217,195</b>	<b>1,815,910</b>

COMBINED STEELHEAD												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/23/2003	*	11	934	21	33	46,685	18,318	14,768	289	6,672	10,440	21,164
05/24/2003	*	---	1,066	---	---	58,594	42,404	32,305	233	0	6,184	28,618
05/25/2003	*	---	---	---	---	70,758	112,230	69,246	271	29,090	6,186	30,874
05/26/2003	*	---	---	131	509	147,832	242,044	159,305	939	---	8,358	57,415
05/27/2003	*	---	13	36	181	230,259	186,474	210,808	1,014	30,272	10,641	34,621
05/28/2003	*	---	19	15	---	191,639	217,679	133,222	873	---	17,899	21,531
05/29/2003	*	---	1	21	---	87,256	198,762	130,855	1,385	35,923	33,439	24,559
05/30/2003	*	---	---	78	---	42,722	115,036	126,870	1,006	---	113,360	96,152
05/31/2003	*	---	---	---	---	58,149	33,226	55,281	609	9,175	22,878	108,360
06/01/2003	*	---	---	---	---	37,205	46,734	30,357	352	---	18,946	53,854
06/02/2003	*	---	---	14	---	32,732	39,659	16,929	238	18,339	14,510	38,361
06/03/2003	*	---	15	5	---	18,392	25,776	8,474	193	---	12,206	37,987
06/04/2003		---	40	7	---	7,029	6,721	6,233	205	9,684	17,280	29,853
06/05/2003	*	---	54	5	---	9,124	6,494	3,803	187	---	16,782	38,962
<b>Total:</b>		<b>11</b>	<b>2,142</b>	<b>333</b>	<b>723</b>	<b>1,038,376</b>	<b>1,291,557</b>	<b>998,456</b>	<b>7,794</b>	<b>139,155</b>	<b>309,109</b>	<b>622,311</b>
<b># Days:</b>		<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>11</b>	<b>268</b>	<b>33</b>	<b>241</b>	<b>74,170</b>	<b>92,254</b>	<b>71,318</b>	<b>557</b>	<b>17,394</b>	<b>22,079</b>	<b>44,451</b>
<b>YTD</b>		<b>2,347</b>	<b>48,012</b>	<b>2,516</b>	<b>5,601</b>	<b>3,283,155</b>	<b>2,560,707</b>	<b>1,849,727</b>	<b>14,388</b>	<b>235,810</b>	<b>519,618</b>	<b>1,222,337</b>

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

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

\* See sampling comments

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

## Two-Week Summary of Passage Indices

<b>COMBINED SOCKEYE</b>												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/23/2003	*	0	0	0	0	0	0	6	14,384	22,504	33,333	
05/24/2003	*	---	0	---	---	0	130	5	0	19,719	35,089	
05/25/2003	*	---	---	---	---	249	0	58	7	7,004	23,027	33,171
05/26/2003	*	---	---	0	7	142	0	280	34	---	11,468	25,945
05/27/2003	*	---	0	0	0	481	246	24	103	6,960	15,169	20,027
05/28/2003	*	---	0	0	---	1,241	0	0	77	---	14,216	14,226
05/29/2003	*	---	0	0	---	1,259	539	221	72	10,930	17,224	9,111
05/30/2003	*	---	---	0	---	2,830	0	7	62	---	11,984	6,999
05/31/2003	*	---	---	---	---	1,837	968	519	32	15,831	11,472	11,845
06/01/2003	*	---	---	---	---	1,341	1,838	551	44	---	15,192	7,493
06/02/2003	*	---	---	0	---	1,142	1,569	516	39	7,896	20,949	10,704
06/03/2003	*	---	0	0	---	876	570	153	65	---	12,536	21,415
06/04/2003		---	0	0	---	1,222	0	481	38	7,626	8,797	15,059
06/05/2003	*	---	0	0	---	665	0	181	68	---	5,507	10,740
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>13,285</b>	<b>5,860</b>	<b>2,991</b>	<b>652</b>	<b>70,631</b>	<b>209,764</b>	<b>255,157</b>
<b># Days:</b>		<b>1</b>	<b>8</b>	<b>10</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>949</b>	<b>419</b>	<b>214</b>	<b>47</b>	<b>8,829</b>	<b>14,983</b>	<b>18,226</b>
<b>YTD</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>15,044</b>	<b>7,164</b>	<b>3,295</b>	<b>9,690</b>	<b>800,424</b>	<b>688,207</b>	<b>1,143,580</b>

\* 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: 06/05**

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	192,012	14,467	268,813	6,477	122,177	6,086	9,765	1,055	12,068	463	3,484	334	0	0	0	0	0	0
TDA	131,290	11,535	181,176	3,870	80,975	4,136	3,210	261	3,041	122	1,107	106	0	0	0	0	0	0
JDA	101,520	10,198	139,887	2,403	67,822	3,122	0	0	0	0	0	0	0	0	0	0	0	0
MCN	92,814	10,653	125,953	3,674	61,208	3,047	0	0	0	0	0	0	0	0	0	0	0	0
IHR	70,962	6,676	79,690	1,590	36,938	1,759	0	0	0	0	0	0	0	0	0	0	0	0
LMN	60,988	5,823	68,431	1,193	35,084	1,671	0	0	0	0	0	0	0	0	0	0	0	0
LGS	58,148	5,526	65,423	1,181	33,249	1,712	0	0	0	0	0	0	0	0	0	0	0	0
LWG	55,877	6,035	60,722	1,419	31,099	1,590	0	0	0	0	0	0	0	0	0	0	0	0
PRD	16,508	569	33,202	178	14,619	273	0	0	0	0	0	0	0	0	0	0	0	0
RIS	15,658	640	22,304	760	10,479	435	0	0	0	0	0	0	0	0	0	0	0	0
RRH	4,229	355	8,880	94	3,623	86	0	0	0	0	0	0	0	0	0	0	0	0
WEL	1,602	95	5,566	13	1,932	78	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2003		2002		10-Yr Avg.		10-Yr Avg.			10-Yr Avg.			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2003	2002	Avg.	2003	2002	Avg.	2003
BON	0	0	0	0	0	0	65	9	179	4,863	7,529	5,227	1,220
TDA	0	0	0	0	0	0	33	2	78	1,185	2,909	1,593	530
JDA	0	0	0	0	0	0	48	7	48	1,674	8,422	3,813	839
MCN	0	0	0	0	0	0	14	1	14	1,515	4,993	2,280	838
IHR	0	0	0	0	0	0	0	0	0	1,624	4,657	2,349	794
LMN	0	0	0	0	0	0	0	0	0	1,915	5,079	2,410	1,158
LGS	0	0	0	0	0	0	0	0	0	2,112	6,176	1,851	1,319
LWG	0	0	0	0	0	0	2	0	0	15,798	12,475	5,522	3,714
PRD	0	0	0	0	0	0	1	0	19	9	38	7	0
RIS	0	0	1	0	0	0	9	1	0	34	74	38	27
RRH	0	0	9	0	0	0	0	2	0	47	174	55	35
WEL	0	0	0	0	0	0	0	0	0	21	68	12	13

RIS, RRH,WEL are through 06/04. PRD is through 06/03. IHR is missing 5/16.

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

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

These numbers were collected from the COE's Running Sums text files, except where otherwise noted.

Wild steelhead numbers are included in the total.

Historic counts (pre-1996) were obtained from CRITFC and compiled by the FPC.

Historic counts 1997 to present were obtained from the Corps of Engineers.

Page last updated on: 6/6/03

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

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

## Two Week Transportation Summary

		05/24/03 TO 06/06/03					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	128,971	170,521	49,990	7,428	653,507	1,010,417
	Sum of NumberBarged	125,556	156,376	49,533	7,334	637,032	975,831
	Sum of NumberBypassed	0	12,602	0	0	15,343	27,945
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	3,415	1,543	457	94	1,132	6,641
<b>LGS</b>	Sum of NumberCollected	97,594	337,135	71,031	3,705	984,014	1,493,479
	Sum of NumberBarged	96,211	333,445	70,845	3,690	981,746	1,485,937
	Sum of NumberBypassed	0	4	0	0	1	5
	Sum of Numbertrucked	0	1,726	0	0	0	1,726
	Sum of TotalProjectMortalities	1,383	1,960	186	15	2,267	5,811
<b>LMN</b>	Sum of NumberCollected	38,252	88,766	18,431	2,116	754,912	902,477
	Sum of NumberBarged	38,214	84,357	17,745	2,112	678,685	821,113
	Sum of NumberBypassed	0	4,067	681	0	75,544	80,292
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	38	343	6	4	684	1,075
<b>MCN</b>	Sum of NumberCollected	167,521	198,495	34,708	41,633	84,633	526,990
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	167,412	198,311	34,699	41,564	84,529	526,515
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	109	184	9	69	104	475
Total Sum of NumberCollected		432,338	794,917	174,160	54,882	2,477,066	3,933,363
Total Sum of NumberBarged		259,981	574,178	138,123	13,136	2,297,463	3,282,881
Total Sum of NumberBypassed		167,412	214,984	35,380	41,564	175,417	634,757
Total Sum of Numbertrucked		0	1,726	0	0	0	1,726
Total Sum of TotalProjectMortalities		4,945	4,030	658	182	4,187	14,002



**YTD Transportation Summary**

**TO: 06/06/03**

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	133,071	2,562,108	73,622	8,713	2,277,521	5,055,035
	Sum of NumberBarged	128,831	2,457,242	73,115	8,527	2,208,673	4,876,388
	Sum of NumberBypassed	0	44,873	0	0	51,791	96,664
	Sum of NumberTrucked	816	54,208	40	78	15,402	70,544
	Sum of TotalProjectMortalities	3,424	5,785	467	108	1,656	11,440
<b>LGS</b>	Sum of NumberCollected	98,252	1,704,908	78,825	4,638	1,919,377	3,806,000
	Sum of NumberBarged	96,860	1,651,093	78,623	4,619	1,915,858	3,747,053
	Sum of NumberBypassed	0	22	0	0	3	25
	Sum of NumberTrucked	5	52,601	0	0	850	53,456
	Sum of TotalProjectMortalities	1,387	3,131	202	19	2,666	7,405
<b>LMN</b>	Sum of NumberCollected	38,667	455,498	23,200	2,316	1,217,393	1,737,074
	Sum of NumberBarged	38,569	432,542	22,507	2,272	1,138,708	1,634,598
	Sum of NumberBypassed	0	6,853	681	0	75,840	83,374
	Sum of NumberTrucked	60	15,149	0	40	1,637	16,886
	Sum of TotalProjectMortalities	38	955	13	4	1,209	2,219
<b>MCN</b>	Sum of NumberCollected	201,246	1,010,025	38,214	515,656	148,385	1,913,526
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	201,099	1,009,244	38,205	515,387	148,169	1,912,104
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	147	688	9	273	173	1,290
Total Sum of NumberCollected		471,236	5,732,539	213,861	531,323	5,562,676	12,511,635
Total Sum of NumberBarged		264,260	4,540,877	174,245	15,418	5,263,239	10,258,039
Total Sum of NumberBypassed		201,099	1,060,992	38,886	515,387	275,803	2,092,167
Total Sum of NumberTrucked		881	121,958	40	118	17,889	140,886
Total Sum of TotalProjectMortalities		4,996	10,559	691	404	5,704	22,354