



Fish Passage Center

Weekly Report #01 - 8

May 4, 2001

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SIGNIFICANT POINTS

- **Downstream migration flows at Lower Granite Dam averaged 57.3 kcfs this past week, well below the minimum migration requirement of 85 kcfs identified in the Biological Opinion and 127.3 kcfs at McNary, well below the 220 kcfs, identified in the Biological Opinion.**
- **Minor streamflow increases due to rain and some snowmelt resulted in temporary increases in passage indices.**

SUMMARY OF EVENTS:

Reservoir Operations: Reservoirs continued to be operated for power emergency needs and are far below required end of month flood control elevations. In view of present conditions, is highly unlikely that reservoirs will be refilled by the end of June as required by the 2000 Biological Opinion. A summary of the actual elevations and required flood control elevations at the end of April is shown in the following Table:

Reservoir	Actual Elev. as of May 3, 2001 [ft]	Required End of April* Flood Control Elev. [ft]	Maximum Reservoir pool [ft]
<i>Libby</i>	2387.94	2448.0	2459
<i>Hungry Horse</i>	3493.71	3558.2	3560
<i>Grand Coulee</i>	1225.00	1283.3	1290
<i>Brownlee</i>	2076.27**	2077.0	2077
<i>Dworshak</i>	1536.94	1597.4	1600

*based on April Final Runoff Volume Forecast
 **as of May 2

Libby reservoir continued at minimum outflow of 4 kcfs. Inflows were temporarily increased to 13.5 kcfs on May 1 from 6.5 kcfs on April 27 due to initiation of snowmelt. Currently, as of May 3, flows receded to 6.5 kcfs.

Hungry Horse was operating at minimum outflow of 0.5 kcfs for the period of April 27-May 3. Required minimum flows of 3.5 kcfs at Columbia Falls are being met by increased local inflows. Inflows into the reservoir were fluctuating between 4.1 kcfs and 9.07 kcfs for the period of April 27-May 3.

Grand Coulee was operated to meet system power peaking demands and to refill. The current outflows were in the range of 34.1 kcfs-62.5 kcfs for the period of April 27-May 3. For the same period, inflows were in the range of 63.8 kcfs-100.3 kcfs.

Brownlee reservoir elevations are fluctuating between 2074.36 ft and 2076.27 ft. The outflows at Hells Canyon Dam project were in the range of 7.4 kcfs to 12.9 kcfs for the period of April 27-May 3. The *Brownlee* inflows were in the range of 10.68 kcfs to 11.74 kcfs for the same period.

Dworshak was operated on minimum outflow of 1.6 kcfs-1.7 kcfs. Inflow was increasing from 12 kcfs on April 27 to 17.7 kcfs on May 1. Currently, as of May 3, the inflows are still high at 11.1 kcfs due to continuation of snowmelt.

Upper Snake projects were slightly drafted due to irrigation demands, from 81% of capacity on April 26 to 80% of capacity on May 3. American Falls is at 96% of capacity, Palisades is at 55% of capacity and Jackson Lake is at 79 % of capacity. Flow below Milner is only 229 cfs.

Flows: Warmer weather and initiation of snowmelt resulted in a temporary increase in outflows

in the system during the April 27-May 3 period. Flows below Bonneville fluctuated between 107.5 kcfs and 161.9 kcfs for the period of April 27-May 3, depending upon power generation demands.

Flows at Priest Rapids for power generation continues to be higher than minimum required flows of 65 kcfs for protection of redds at Vernita Bar. The daily flows fluctuated between 66.2 kcfs and 73.5 kcfs for the period of April 27-May 3.

The 1995 Biological Opinion spring flow target at Lower Granite is 85 Kcfs beginning April 10. Current flows were in the range of 46 kcfs on April 27 to 68.1 kcfs on May 1. The average daily flow for the period of April 27-May 3 was 57.3 kcfs.

The 1995 Biological Opinion beginning spring flow target at McNary is 220 kcfs beginning April 20. The average daily flow for the period of April 27-May 3 was 127.3 kcfs, with fluctuations between 120.1 kcfs on April 27 to 140 kcfs on May 2.

Spill: There was no spill in the federal power system this past week. The FERC fish spill program continues at the Mid Columbia projects. Total dissolved gas readings at most monitors are reading in excess of 100%. Some of the recent increased levels of TDGS may be attributed to the Mid Columbia fish spill program, but in general the present readings are in excess of the concentrations anticipated based on the spill occurring only in the Mid Columbia River. One yearling chinook was detected with a fin bubble at Rock Island Dam, while fish with bubbles in their lateral line have been sampled at both McNary and Rock Island dams.

Smolt Monitoring: Compared to last week, trap collections of yearling chinook this reporting period (April 27-May 3) increased by 33% on the lower Salmon River (WTB) and increased 2.5 times on the lower Grande Ronde River (GRN). Trap collection on the lower Imnaha River (IMN) reduced even further this week and indicates that the majority of yearling chinook has passed this trap site. Steelhead collections increased at the Imnaha, Grande Ronde, and Salmon River traps this week, with the Lewiston trap reporting a peak catch of 1,253 juvenile steelhead on 5/1. Yearling chinook and steelhead will continue to be PIT tagged and released from the traps on the lower Salmon, Imnaha, and Grande Ronde and Snake rivers as during a normal year. Yearling chinook collections at Lower Granite Dam increased from about 20,000 fish this week to a peak day of 155,400 on 5/1. Steelhead collection at Lower Granite Dam increased from a high of 50,000 the previous week to nearly 350,000 for 3 days this sampling week. After a large surge of yearling chinook were collected the previous week, this week decreased to about 60 per day for the chinook passage indices at Rock Island Dam. Yearling chinook collection at McNary Dam increased throughout the week to about 10,000 fish per day for the final two days while juvenile steelhead decreased from 11,000 early in the week to about 6,500 average through the remainder of the week. Collection of yearling chinook and steelhead were much higher this sampling week than other passage indices to date at John Day and Bonneville dams. Subyearling chinook averaged about 9,000 per day through the week at Bonneville Dam with most of these fish presumed from the Spring Creek Hatchery release of tule fall chinook two weeks earlier. The passage indices for juvenile coho salmon increased at McNary and Bonneville dams indicating they are starting to move into and through the lower Columbia River. The indices at Bonneville Dam peaked at 8,890 on May 3 for the week and should continue to rise over the next three weeks.

Hatchery Releases – See the Hatchery Release Summary for the previous two-week and next two week projected releases for the Columbia River Basin above Bonneville Dam.

Snake River – Release of yearling chinook into the Imnaha River, Grande Ronde River, Tucannon River, Clearwater River, and Salmon River basins have been completed for this 2001 migration season. Approximately 4.16 million spring and summer chinook were released this year and include a small number released last fall. Hatchery release of yearling fall chinook is complete for the season, with approximately 450,000 yearling fall chinook released directly from Lyons Ferry Hatchery and 343,000 released from the Acclimation Ponds at Captain Johns, Pittsburg Landing (Snake River) and Big Canyon (Clearwater River). About 560,000 coho were released into Lapwai Creek and Potlatch River in March; one additional release of about 20,000 coho is scheduled for late next week into the Clearwater River basin. Steelhead releases are on-going from many of the hatcheries with close to 80% of the 2001 migration fish in the river basins including Imnaha River, Grande Ronde River, Salmon River, Clearwater River, Tucannon River, and the Snake River. About 9.87 million juvenile steelhead will be released in the Snake River basin for the 2001 migration season.

Mid-Columbia [above McNary Dam] – Volitional releases of spring chinook from the Acclimation Ponds in the Yakama River began mid-March and will continue through May. Approximately 3.3 million yearling spring chinook will be released in the Mid-Columbia River Zone for the 2001 migration season. About 241,000 sockeye salmon were released into Lake Wenatchee from net pens and into Lake Osoyoos (direct releases) during the fall prior to their migration this April through May. Yearling summer chinook from Wells Hatchery have been released in the Similkameen River (Okanogan River basin and Methow River basin), with the Wenatchee and mainstem Columbia River finishing release of fish. About 4.3 million yearling summer chinook are scheduled for release in the Mid-Columbia Reach. Hatchery steelhead releases began this week with most juvenile steel

head scheduled for release by the first week of May. The numbers scheduled for release will be almost normal (1.34 million). The Wenatchee, Entiat, Methow, Okanogan and main Columbia (Ringold Hatchery release) rivers will be planted with the “threatened” status steelhead from WDFW and USFWS hatcheries. Steelhead from Lyons Ferry Hatchery will be released into the Walla Walla River basin, but are not considered part of the listed steelhead. The scheduled release of yearling coho will be an estimated 2.1 million for the season; a record high for the Mid-Columbia River Zone. Coho will be released into the Methow, Wenatchee and Yakama River basins.

Lower Columbia [McNary Dam to above Bonneville Dam]– Yearling spring chinook from State, Federal, and Tribal facilities are completed for the year. Spring chinook have been released in the Umatilla, Klickitat, Deschutes, Hood, Wind, and Little White Salmon rivers to date. The estimated total of hatchery spring Chinook is 5.9 million in this River Zone; about 500,000 subyearling spring chinook were released this week into the White Salmon River. There will also be a release of subyearling spring chinook in the Klickitat River in late May or early June. About 10.6 million subyearling tule fall chinook were released from Spring Creek National Fish Hatchery this season. Yearling releases of “bright” fall chinook were made in March and April in the Umatilla River; all other fall chinook released will be subyearling fish that will be planted in late May or June. All coho salmon have been released in the Umatilla River, Klickitat River, and Little White Salmon River basins for the 2001 migration. About 6.6 million coho salmon will be released in this Reach for the 2001 season. Steelhead have been released in the Umatilla River with the Little White Salmon, Klickitat, and Hood River basins receiving steelhead in late April through early to mid May.

Adult Fish Passage – Fish counting started April 1 at most COE projects; currently all COE projects are counting adult fish passing mainstem Columbia and Snake River dams. The PUD projects on the Mid-Columbia River began counting on April 15 at Priest Rapids, Rock Island, and Rocky Reach dams with Wells Dam initiating counting on May 1. The Fish Passage Center Weekly Report will list in a Table; the adult fish counts for the week with the previous year (2000) and the 10-year averages through the same ending date so the reader can compare passage throughout the year for the individual species.

At Bonneville Dam, adult spring chinook salmon counts averaged about 4,360 per day for the week with the daily peak count of 7,869 on April 27. The total count since March 15 is now 318,245 through May 3. This year's count through May 3 compares with 137,967 in 2000 and 50,863 for the 10-year average. The 2001 count is about 2.3 times and 6.3 times greater than the respective 2000 and 10-year average. At The Dalles Dam, 236,568 adult salmon were counted through May 3, about 74.3% of the Bonneville Dam count. The McNary Dam count through May 3 is 179,048, with 114,138 adult spring chinook (Ice Harbor Count) continuing up the Snake River and 32,657 counted at Priest Rapids Dam. Approximately 3,421 adult spring chinook have been counted at Prosser Dam located on the Yakama River (through April 28). Up the Mid-Columbia River, about 11,600 adult spring chinook have passed Rock Island Dam with 2,856 passing Rocky Reach Dam through May 1. At Lower Granite Dam, more than 93,500 adult spring chinook have been tallied past the counting windows. The bulk of fish passing the project are hatchery origin fish with the majority having an adipose clip to distinguish the hatchery from the wild fish. Jack chinook counts remained fairly consistent through the week at Bonneville Dam with the counts ranging between 149 and 326. Although well below the record-breaking 2000 jack count, the number of jack chinook (2,803) remained about double the 10-year average.

Lower Granite Adult Chinook Injury Summary

	Sample	Number	Percent
Gillnet	302	22	7.1
Marine Mammal Descaled	302	53	17.2
Marine Mammal Flesh Wound	302	29	9.4
Headburns	302	3	1.0

Steelhead passage ranged between 30 and 70/day through the week at Bonneville Dam with the total through May 3 of 3,049. At Lower Granite Dam, steelhead counts have decreased to about 20 per day during the week with 5,580 counted since March 1. Most steelhead passing the project are those that have over-wintered in the Snake or Columbia rivers.

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
04/20/01	68.2	0.0	67.3	0.0	69.5	5.4	69.3	0.0	71.4	2.5	81.4	0.0	68.6	0.0
04/21/01	40.9	0.0	44.2	0.0	43.5	4.2	41.8	0.0	43.7	9.6	65.2	0.0	68.2	0.0
04/22/01	43.1	0.0	42.8	0.0	43.7	3.7	43.2	0.0	44.6	8.7	66.3	0.0	68.1	0.0
04/23/01	69.9	0.0	69.2	0.0	71.3	5.7	68.0	0.0	69.1	13.8	61.0	0.0	67.9	0.0
04/24/01	69.3	0.0	71.3	0.0	73.7	5.7	73.8	0.0	77.4	15.4	68.9	0.0	73.7	0.0
04/25/01	63.2	0.0	64.5	0.0	64.9	5.3	65.7	0.0	68.3	14.1	71.5	5.2	67.4	0.0
04/26/01	66.4	0.0	68.7	0.0	68.7	6.6	68.1	0.0	71.4	14.2	78.8	34.0	67.7	6.6
04/27/01	52.8	0.0	56.7	0.0	61.6	5.0	56.5	0.0	63.2	13.5	75.4	32.8	66.4	40.6
04/28/01	34.1	0.0	38.7	0.0	40.7	3.1	40.0	0.0	44.5	9.7	74.0	32.0	66.2	40.4
04/29/01	43.5	0.0	42.4	0.0	43.1	3.6	43.2	0.0	47.9	9.1	72.8	31.2	66.7	40.4
04/30/01	62.5	0.0	60.4	0.0	64.5	5.0	64.8	0.0	70.2	14.4	77.1	33.3	67.9	41.0
05/01/01	55.4	0.0	58.0	0.0	61.6	5.0	61.4	0.0	65.7	12.8	84.9	36.6	73.5	44.6
05/02/01	52.5	0.0	55.7	0.0	62.0	5.2	60.1	0.0	64.2	13.5	81.9	35.6	71.2	43.3
05/03/01	60.9	0.0	62.3	0.0	61.4	5.0	60.7	0.0	64.4	12.8	67.5	29.2	68.8	42.0

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
04/20/01	1.5	0.0	12.1	13.2	33.7	0.0	33.7	0.0	34.5	0.0	32.9	0.0
04/21/01	1.7	0.0	12.2	12.1	36.2	0.0	37.7	0.0	40.3	0.0	39.5	0.0
04/22/01	1.8	0.0	12.7	14.6	32.5	0.0	33.4	0.0	34.9	0.0	35.1	0.0
04/23/01	1.8	0.0	12.2	12.4	34.1	0.0	35.1	0.0	36.4	0.0	35.3	0.0
04/24/01	1.7	0.0	12.0	12.4	31.7	0.0	31.7	0.0	33.0	0.0	32.6	0.0
04/25/01	1.7	0.0	11.5	14.2	35.0	0.0	36.7	0.0	38.7	0.0	40.3	0.0
04/26/01	1.7	0.0	11.0	13.2	42.3	0.0	42.4	0.0	43.6	0.0	41.8	0.0
04/27/01	1.7	0.0	10.7	12.4	46.0	0.0	47.8	0.0	50.2	0.0	49.9	0.0
04/28/01	1.7	0.0	10.7	7.5	57.9	0.0	58.9	0.0	61.7	0.0	59.3	0.0
04/29/01	1.6	0.0	11.5	7.4	58.7	0.0	58.9	0.0	59.7	0.0	60.3	0.0
04/30/01	1.6	0.0	11.7	12.9	54.8	0.0	56.8	0.0	59.5	0.0	58.5	0.0
05/01/01	1.6	0.0	11.3	10.4	68.1	0.0	68.6	0.0	71.5	0.0	69.9	0.0
05/02/01	1.6	0.0	10.9	9.2	59.4	0.0	60.6	0.0	64.1	0.0	62.2	0.0
05/03/01	1.6	0.0	---	---	56.2	0.0	57.5	0.0	61.5	0.0	65.0	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		
04/20/01	103.1	0.0	111.0	0.0	113.1	0.0	123.9	0.0	9.1	106.6
04/21/01	99.2	0.0	89.2	0.0	95.0	0.0	109.3	0.0	4.2	96.9
04/22/01	80.9	0.0	86.1	0.0	87.9	0.0	93.5	0.0	0.5	84.8
04/23/01	101.3	0.0	99.7	0.0	100.6	0.0	102.2	0.0	0.6	93.5
04/24/01	106.3	0.0	109.9	0.0	111.7	0.0	120.4	0.0	9.6	102.6
04/25/01	111.8	0.0	119.9	0.0	117.1	0.0	122.5	0.0	9.3	105.0
04/26/01	109.7	0.0	114.8	0.0	119.1	0.0	125.4	0.0	8.5	108.7
04/27/01	112.9	0.0	125.0	0.0	126.6	0.0	131.6	0.0	17.1	106.2
04/28/01	113.3	0.0	94.4	0.0	92.3	0.0	107.5	0.0	4.2	95.1
04/29/01	132.5	0.0	133.5	0.0	136.2	0.0	141.7	0.0	21.9	111.6
04/30/01	130.5	0.0	137.6	0.0	137.2	0.0	146.5	0.0	26.3	112.7
05/01/01	135.7	0.0	143.9	0.0	146.5	0.0	160.6	0.0	38.9	113.9
05/02/01	140.0	0.0	159.9	0.0	157.2	0.0	161.9	0.0	31.8	122.0
05/03/01	125.9	0.0	138.5	0.0	139.8	0.0	152.4	0.0	26.9	117.4

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank				Fish with L. Line GBT	
								Rank 1	Rank 2	Rank 3	Rank 4	Num Fish	Avg. Rank
Lower Granite Dam													
	04/24/01	Yearling Chinook	49	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/24/01	Steelhead	51	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Yearling Chinook	12	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Steelhead	88	0	0	0.00%	0.00%	0	0	0	0	0	0
Little Goose Dam													
	04/25/01	Yearling Chinook	71	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/25/01	Steelhead	15	0	0	0.00%	0.00%	0	0	0	0	0	0
Lower Monumental Dam													
	04/23/01	Yearling Chinook	88	2	0	0.00%	0.00%	0	0	0	0	2	1
	04/23/01	Steelhead	12	0	0	0.00%	0.00%	0	0	0	0	0	0
McNary Dam													
	04/23/01	Yearling Chinook	37	4	0	0.00%	0.00%	0	0	0	0	4	1
	04/23/01	Steelhead	63	7	0	0.00%	0.00%	0	0	0	0	7	1.1
	04/26/01	Yearling Chinook	8	2	0	0.00%	0.00%	0	0	0	0	2	1
	04/26/01	Steelhead	20	3	0	0.00%	0.00%	0	0	0	0	3	1
	04/30/01	Yearling Chinook	23	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/30/01	Steelhead	77	4	0	0.00%	0.00%	0	0	0	0	4	1
Bonneville Dam													
	04/24/01	Yearling Chinook	6	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/24/01	Steelhead	3	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/27/01	Yearling Chinook	97	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/27/01	Steelhead	3	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Yearling Chinook	93	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/01/01	Steelhead	6	0	0	0.00%	0.00%	0	0	0	0	0	0
Rock Island Dam													
	04/23/01	Yearling Chinook	92	15	1	1.08%	0.00%	1	0	0	0	14	1
	04/23/01	Steelhead	8	1	0	0.00%	0.00%	0	0	0	0	1	1
	04/26/01	Yearling Chinook	98	5	0	0.00%	0.00%	0	0	0	0	5	1
	04/26/01	Steelhead	2	0	0	0.00%	0.00%	0	0	0	0	0	0
	04/30/01	Yearling Chinook	30	1	0	0.00%	0.00%	0	0	0	0	1	1
	04/30/01	Steelhead	18	0	0	0.00%	0.00%	0	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 Upper Columbia River Sites

Date	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph			#				
	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/20	96	96	97	24	105	105	106	24	108	108	109	24	106	106	107	24	108	108	108	23
4/21	95	96	96	19	104	105	105	24	107	107	108	24	106	107	108	24	107	107	108	23
4/22	95	95	96	17	104	105	105	24	106	107	107	24	106	106	107	24	106	107	107	23
4/23	95	95	96	13	104	104	105	24	106	106	107	24	104	105	105	24	106	106	107	23
4/24	95	95	96	12	104	105	106	24	107	107	108	23	105	106	107	24	106	107	107	23
4/25	96	97	97	22	105	106	107	24	107	108	109	15	106	106	107	24	107	108	109	23
4/26	100	102	105	22	105	106	106	24	107	107	108	12	106	107	108	24	109	109	109	23
4/27	105	106	107	23	106	107	108	24	110	110	110	1	107	108	108	24	109	109	109	23
4/28	105	105	106	22	105	106	106	24	109	109	110	11	107	107	109	20	108	109	109	23
4/29	104	105	106	23	105	105	106	24	108	108	109	24	106	106	108	23	108	108	109	23
4/30	104	105	105	22	107	110	114	24	106	107	108	24	105	106	107	24	108	108	108	23
5/1	104	105	105	22	109	111	112	24	105	105	106	24	104	105	106	24	107	107	107	23
5/2	104	104	105	21	105	107	110	24	104	104	105	24	103	104	105	24	106	106	107	23
5/3	104	105	106	22	106	110	113	24	105	106	107	24	104	105	106	23	106	107	108	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr			#				
	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/20	107	108	109	23	108	108	108	23	109	110	111	23	109	109	109	24	109	110	110	24
4/21	107	108	108	23	107	108	108	22	109	109	110	22	108	108	109	24	109	109	109	24
4/22	106	106	107	23	107	107	108	22	108	109	109	22	108	108	108	24	108	108	109	24
4/23	105	106	107	23	107	107	107	23	108	108	109	23	108	108	108	23	108	108	108	23
4/24	106	107	107	23	107	107	108	22	108	109	109	22	108	108	108	22	108	108	108	20
4/25	107	107	108	23	108	109	110	22	109	109	110	22	108	109	110	14	109	109	110	14
4/26	108	109	109	23	109	109	110	17	110	110	111	17	110	110	111	22	110	111	111	22
4/27	108	109	110	23	110	110	111	21	110	111	112	21	111	111	111	23	111	112	112	22
4/28	107	108	109	23	109	110	110	23	110	110	111	23	111	111	111	22	111	111	112	22
4/29	107	108	109	23	108	108	108	24	109	109	110	24	110	110	111	22	110	111	111	20
4/30	107	108	109	23	107	108	108	23	108	109	110	23	110	110	110	21	110	110	110	20
5/1	106	107	108	23	106	106	106	24	107	108	111	24	108	108	109	23	108	109	109	20
5/2	105	106	107	23	105	106	106	21	107	108	108	21	107	107	107	23	107	107	107	22
5/3	106	107	109	23	106	107	108	22	108	109	109	22	107	107	107	23	107	108	108	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids			#				
	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h	24 h		12 h					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
4/20	106	106	107	24	109	110	115	24	---	---	---	0	---	---	---	0	---	---	---	0
4/21	105	106	106	24	115	115	116	24	---	---	---	0	---	---	---	0	---	---	---	0
4/22	105	105	105	24	113	114	115	24	---	---	---	0	---	---	---	0	---	---	---	0
4/23	104	105	105	23	114	115	117	23	---	---	---	0	---	---	---	0	---	---	---	0
4/24	104	104	105	23	115	116	116	20	---	---	---	0	---	---	---	0	---	---	---	0
4/25	104	104	105	15	117	117	118	14	---	---	---	0	---	---	---	0	---	---	---	0
4/26	105	105	106	22	116	117	118	22	---	---	---	0	---	---	---	0	---	---	---	0
4/27	107	107	108	22	118	119	119	22	---	---	---	0	---	---	---	0	---	---	---	0
4/28	107	107	108	22	118	119	120	22	---	---	---	0	---	---	---	0	---	---	---	0
4/29	106	106	107	23	116	117	117	23	114	114	115	24	111	111	111	24	110	111	112	24
4/30	106	106	107	21	116	116	117	18	113	114	114	23	111	111	112	23	110	111	111	23
5/1	103	104	105	22	114	115	116	21	---	---	---	0	---	---	---	0	---	---	---	0
5/2	101	101	102	23	114	114	115	22	---	---	---	0	---	---	---	0	---	---	---	0
5/3	101	101	101	23	109	114	114	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	Priest R. Dnst			Pasco			Dworshak			Clrwrtr-Peck			Anatone			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		hr	Avg	Avg		High	hr	Avg		Avg	High	hr		Avg	Avg	High	hr
4/20	---	---	---	0	107	107	108	24	106	107	108	24	102	102	103	24	102	103	104	24
4/21	---	---	---	0	106	107	107	24	105	106	107	24	102	103	104	24	102	103	104	24
4/22	---	---	---	0	105	106	107	24	102	103	103	24	101	103	103	24	102	103	104	24
4/23	---	---	---	0	105	105	106	24	102	103	104	24	101	102	103	24	102	103	104	24
4/24	---	---	---	0	106	107	108	24	104	105	107	24	103	104	105	24	103	105	106	24
4/25	---	---	---	0	108	109	109	24	105	107	108	24	103	104	105	24	103	105	106	24
4/26	---	---	---	0	109	110	110	24	106	107	108	24	102	102	103	24	103	104	105	24
4/27	---	---	---	0	109	110	111	24	106	108	109	24	102	103	104	24	102	103	104	24
4/28	---	---	---	0	107	108	109	17	105	105	106	23	101	101	102	23	101	101	102	24
4/29	112	113	113	24	105	106	107	24	105	106	107	24	102	102	103	24	101	102	102	23
4/30	112	113	113	23	105	106	106	24	108	111	132	24	102	102	102	24	102	102	102	24
5/1	---	---	---	0	104	105	106	24	120	134	134	24	101	102	103	24	102	102	103	24
5/2	---	---	---	0	106	107	108	24	105	107	107	24	102	102	103	24	102	103	103	24
5/3	---	---	---	0	109	110	110	24	107	108	109	24	102	104	105	24	103	104	105	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwrtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		hr	Avg	Avg		High	hr	Avg		Avg	High	hr		Avg	Avg	High	hr
4/20	102	103	104	24	105	105	105	24	103	103	103	24	103	103	104	24	101	101	101	24
4/21	102	105	106	24	103	103	104	24	102	102	103	24	102	103	105	24	101	101	101	24
4/22	102	104	105	24	101	102	103	24	101	101	101	24	101	101	102	24	100	100	100	24
4/23	102	103	104	24	101	102	105	24	100	100	100	24	101	101	101	24	100	100	100	24
4/24	103	106	108	24	103	104	105	24	101	101	102	24	103	104	106	24	101	101	102	24
4/25	104	106	108	24	105	107	108	24	101	102	102	24	109	111	116	24	103	104	104	24
4/26	102	104	105	24	105	106	107	24	103	103	103	24	108	111	114	24	104	104	105	24
4/27	102	103	104	24	107	108	109	23	103	104	104	24	107	109	112	24	104	105	106	24
4/28	101	101	101	23	104	104	106	24	103	104	104	24	103	104	105	16	103	103	104	24
4/29	101	102	103	23	102	102	102	24	102	102	102	22	103	103	103	1	102	102	102	24
4/30	101	101	101	24	101	101	102	24	101	101	102	24	102	102	103	6	102	102	102	24
5/1	100	101	101	24	99	99	100	24	99	99	100	24	101	101	102	24	101	101	101	24
5/2	100	101	101	24	99	99	99	24	99	99	99	24	100	100	101	23	99	100	100	24
5/3	101	103	104	24	100	102	103	24	99	100	100	23	100	100	103	12	99	100	100	24

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

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h		12 h	#	24 h		12 h	#	24 h		12 h	#	24 h		12 h					
	Avg	Avg	High		hr	Avg	Avg		High	hr	Avg		Avg	High	hr		Avg	Avg	High	hr
4/20	104	104	106	24	101	101	102	5	103	104	106	24	103	104	105	24	109	111	113	24
4/21	103	103	104	24	---	---	---	0	102	102	103	24	103	104	104	24	109	110	112	24
4/22	102	102	102	24	---	---	---	0	100	101	101	24	102	102	103	24	107	108	110	24
4/23	101	101	101	24	---	---	---	0	100	101	101	24	102	102	102	24	106	107	108	24
4/24	102	102	104	24	---	---	---	0	102	103	104	24	102	103	104	24	108	110	116	24
4/25	104	105	107	24	103	103	104	18	105	107	109	24	103	104	105	24	112	114	117	24
4/26	105	107	108	24	103	103	104	24	103	104	105	24	104	104	105	24	111	114	118	24
4/27	105	106	107	24	104	104	105	24	104	106	107	24	104	105	106	24	113	116	119	24
4/28	105	105	107	24	104	104	105	24	103	104	104	24	104	105	105	24	110	110	111	18
4/29	104	104	104	24	103	104	104	24	102	102	102	24	103	104	104	24	108	109	111	24
4/30	103	103	103	24	103	103	103	24	102	102	102	24	103	103	103	24	107	108	109	24
5/1	101	101	101	24	101	101	101	24	100	100	101	24	102	102	102	24	103	104	104	24
5/2	100	100	101	24	100	101	101	24	100	100	101	21	101	102	102	21	104	107	111	24
5/3	101	102	104	24	101	101	102	24	101	103	105	24	102	102	103	24	107	111	116	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	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	High	Avg	High		Avg	High	Avg	High		Avg	High	Avg	High		Avg	High			
4/20	111	112	113	24	107	108	108	24	103	103	103	23	104	104	105	24	103	103	104	23
4/21	109	110	111	24	107	107	108	24	103	103	104	23	103	104	105	24	102	103	103	23
4/22	106	107	107	24	105	105	106	24	102	102	102	23	103	104	105	24	102	102	103	23
4/23	105	105	105	24	104	105	105	24	102	102	102	23	103	104	105	24	102	102	103	23
4/24	107	108	109	24	105	106	106	24	103	104	105	23	103	104	104	22	103	104	104	23
4/25	111	113	115	24	107	107	108	24	108	111	113	23	106	106	107	24	105	105	106	23
4/26	109	110	112	24	107	107	107	24	108	110	112	23	106	106	107	24	106	106	107	23
4/27	111	112	113	24	108	109	111	24	107	107	107	23	106	106	106	24	106	107	107	23
4/28	108	109	109	18	107	108	108	18	106	106	106	23	106	106	107	24	105	105	106	23
4/29	108	109	109	24	107	108	108	24	105	106	106	23	105	105	105	24	104	104	105	23
4/30	107	108	109	24	106	107	107	24	104	105	105	23	105	105	105	24	104	104	105	23
5/1	104	104	105	24	103	104	104	24	103	103	103	23	103	103	104	23	102	102	103	23
5/2	103	104	108	24	102	103	103	24	102	103	103	23	102	102	103	24	101	102	102	23
5/3	106	107	112	24	103	104	104	24	104	105	106	23	103	103	103	24	103	103	103	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst				Bonneville				Warrendale				Skamania				Camas/Washugal			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	High	Avg	High		Avg	High	Avg	High		Avg	High	Avg	High		Avg	High			
4/20	103	103	104	24	105	105	105	23	105	105	106	23	105	105	105	23	106	106	107	24
4/21	102	102	103	24	104	104	104	23	104	105	106	23	104	104	104	23	105	106	106	24
4/22	101	102	103	24	103	103	104	23	103	104	104	23	103	103	103	23	104	104	105	24
4/23	101	102	103	24	102	102	103	23	103	103	104	22	102	103	103	23	103	104	105	24
4/24	102	103	103	24	103	103	104	23	104	104	105	22	103	104	104	23	104	106	107	24
4/25	104	106	107	24	105	106	107	22	105	107	107	23	105	106	107	23	106	107	108	24
4/26	106	106	107	24	106	107	107	23	107	108	109	23	106	107	107	23	108	109	110	24
4/27	106	107	107	24	107	107	107	23	107	107	108	23	106	106	107	23	107	108	109	24
4/28	104	105	105	24	105	106	107	23	105	106	106	23	105	105	106	23	106	106	107	24
4/29	104	104	104	24	104	104	105	23	105	105	105	22	104	104	104	23	104	105	105	24
4/30	103	104	104	24	104	104	104	23	104	104	104	23	103	104	104	23	103	103	104	24
5/1	102	102	102	24	102	102	103	23	103	103	103	23	102	102	102	23	102	103	104	24
5/2	102	102	103	24	102	102	103	23	103	103	104	23	102	102	103	23	103	105	105	24
5/3	103	104	104	23	103	104	104	23	104	105	106	23	103	104	104	23	104	106	107	24

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 4/20/01 to 5/3/01

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Clearwater	ST	SU	2001	97,540	04-20-01	04-26-01	Clear Cr	Clearwater Rvr M F
IDFG	Clearwater	ST	SU	2001	97,766	04-23-01	04-27-01	Redhouse (SFk ClearH20 R)	S Fk Clearwater River
IDFG	Clearwater	ST	SU	2001	245,547	04-25-01	04-26-01	Crooked R Acclim Pd	S Fk Clearwater River
IDFG	Clearwater	ST	SU	2001	249,270	04-20-01	04-26-01	Red River Acclim Pd	S Fk Clearwater River
IDFG	Magic Valley	ST	SU	2001	50,000	04-16-01	05-11-01	E Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2001	67,950	04-26-01	04-26-01	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2001	75,000	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	76,182	04-23-01	04-24-01	N Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2001	100,000	04-16-01	05-11-01	Yankee Fk (Salmon R)	Salmon River
IDFG	Magic Valley	ST	SU	2001	119,640	04-13-01	04-24-01	Salmon R Idaho	Salmon River
IDFG	Magic Valley	ST	SU	2001	145,280	04-17-01	04-25-01	McNabb/Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2001	156,562	04-18-01	04-24-01	Shoup Br (Salmon R)	Salmon River
IDFG	Magic Valley	ST	SU	2001	185,000	04-19-01	05-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	240,000	04-16-01	05-11-01	Lemhi R	Salmon River
IDFG	Magic Valley	ST	SU	2001	430,210	04-10-01	04-27-01	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	165,000	05-03-01	06-02-01	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	830,000	04-15-01	05-02-01	Pahsimeroi H	Pahsimeroi River
IDFG	Pahsimeroi	CH1	SP	2001	85,962	04-15-01	04-26-01	Pahsimeroi H	Pahsimeroi River
IDFG	Pahsimeroi	CH1	SP	2001	197,148	04-15-01	04-26-01	Pahsimeroi H	Pahsimeroi River
IDFG	Rapid River	CH1	SP	2001	736,601	03-15-01	04-24-01	Rapid River H	Little Salmon River
IDFG	Sawtooth	SO	UN	2001	14,000	05-01-01	05-01-01	Redfish Lake Cr	Salmon River
IDFG	Sawtooth	ST	SU	2001	566,386	04-27-01	04-27-01	Sawtooth H	Salmon River
IDFG Total					4,931,044				
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	American R	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe Total					200,000				
ODFW	Big Canyon	ST	SU	2001	87,000	04-08-01	04-22-01	Big Canyon Acclim.Pd	Grande Ronde River
ODFW	Irrigon	ST	SU	2001	800	05-03-01	05-07-01	Deer Cr	Grande Ronde River
ODFW Total					87,800				
Umatilla Tribe	Bonneville	CH1	FA	2001	240,000	04-10-01	04-20-01	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe	Cascade	CO	UN	2001	750,000	04-10-01	04-20-01	Pendelton Acclim Pd	Umatilla River
Umatilla Tribe	L White Salmon	CH1	SP	2001	183,378	04-10-01	04-20-01	Imeques Acclim Pd	Umatilla River
Umatilla Tribe	Umatilla	ST	SU	2001	53,000	04-23-01	04-30-01	Minthorn Acclim Pd	Umatilla River
Umatilla Tribe Total					1,226,378				
USFWS	Carson	CH1	SP	2001	1,609,000	04-19-01	04-21-01	Carson H	Wind River
USFWS	Dworshak	ST	SU	2001	300,000	04-16-01	04-20-01	Kooskia H	Clearwater Rvr M F
USFWS	Dworshak	ST	SU	2001	600,000	04-16-01	04-20-01	Redhouse (SFk ClearH20 R)	S Fk Clearwater River
USFWS	Dworshak	ST	SU	2001	1,300,000	04-23-01	04-27-01	Dworshak H	Clearwater Rvr M F
USFWS	Hagerman	ST	SU	2001	250,000	04-27-01	04-27-01	Sawtooth H	Salmon River
USFWS	Spring Creek	CH0	SP	2001	500,000	05-02-01	05-02-01	White Salmon R	White Salmon River
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					4,658,000				

HATCHERY RELEASE SUMMARY LAST TWO WEEKS (CON'T)

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Warm Spgs Tribe	Oak Springs	ST	SU	2001	20,000	04-26-01	04-26-01	Blackberry Acclim Pd	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2001	12,950	04-30-01	04-30-01	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2001	13,000	04-30-01	04-30-01	E Fk Irrig Dist Sand Trap	Hood River
Warm Spgs Tribe	Round Butte	CH1	SP	2001	31,400	04-09-01	04-24-01	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Round Butte	CH1	SP	2001	40,000	04-09-01	04-23-01	Jones Creek Acclim Pd	Hood River
Warm Spgs Tribe	Round Butte	CH1	SP	2001	57,800	04-09-01	04-23-01	Blackberry Acclim Pd	Hood River
Warm Spgs Tribe Total					175,150				
WDFW	East Bank	CH1	SU	2001	1,009,000	04-23-01	04-25-01	Dryden Acclim Pd	Wenatchee River
WDFW	East Bank	ST	SU	2001	33,475	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	45,500	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	48,058	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	57,814	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	Klickitat	CO	NO	2001	1,300,000	04-30-01	05-11-01	Klickitat H	Klickitat River
WDFW	Lyons Ferry	ST	SU	2001	40,000	04-02-01	04-30-01	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2001	60,000	04-16-01	04-27-01	Lyons Ferry H	Snake River
WDFW	Lyons Ferry	ST	SU	2001	60,000	04-16-01	04-30-01	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2001	100,000	03-26-01	04-30-01	Dayton Acclim Pd	Touchet River
WDFW	Lyons Ferry	ST	SU	2001	125,000	04-16-01	04-30-01	Walla Walla R	Walla Walla River
WDFW	Lyons Ferry	ST	SU	2001	135,000	04-16-01	04-30-01	Tucannon R	Tucannon River
WDFW	Lyons Ferry	ST	SU	2001	200,000	03-26-01	04-30-01	Cottonwood Acclim Pd	Grande Ronde River
WDFW	Methow	CH1	SP	2001	66,500	04-17-01	05-07-01	Twisp R	Methow River
WDFW	Methow	CH1	SP	2001	180,000	04-17-01	04-20-01	Methow H	Methow River
WDFW	Skamania	ST	SU	2001	20,000	05-01-01	05-10-01	Little White Salmon R	Little White Salmon River
WDFW	Skamania	ST	SU	2001	100,000	05-01-01	05-10-01	Klickitat R	Klickitat River
WDFW	Skamania	ST	WI	2001	20,000	05-01-01	05-10-01	White Salmon R	White Salmon River
WDFW	Turtle Rock	CH1	SU	2001	294,020	04-25-01	04-25-01	Turtle Rock H	Mid-Columbia River
WDFW	Wells	CH1	SU	2001	424,787	04-19-01	04-27-01	Carlton Acclim Pd	Methow River
WDFW	Wells	CH1	SU	2001	430,000	04-23-01	05-07-01	Wells H	Mid-Columbia River
WDFW	Wells	CH1	SU	2001	632,151	04-11-01	04-20-01	Similkameen Acclim Pd	Okanogan River
WDFW	Wells	ST	SU	2001	116,000	04-23-01	04-27-01	Chewuch R	Methow River
WDFW	Wells	ST	SU	2001	117,000	04-23-01	04-27-01	Methow R	Methow River
WDFW Total					5,614,305				
Yakima Tribe	Cascade	CO	UN	2001	853,000	04-24-01	05-05-01	Icicle Cr	Wenatchee River
Yakima Tribe	Cle Elum	CH1	SP	2001	232,700	03-15-01	05-31-01	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	257,700	03-15-01	05-31-01	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	266,600	03-15-01	05-31-01	Easton Pd	Yakama River
Yakima Tribe	Eagle Creek	CO	UN	2001	250,000	04-25-01	05-15-01	Winthrop H	Methow River
Yakima Tribe	Prosser	CH0	FA	2001	162,000	04-25-01	04-25-01	Prosser Acclim Pd	Yakama River
Yakima Tribe	Winthrop	CO	UN	2001	146,500	04-25-01	04-25-01	Methow R	Methow River
Yakima Tribe Total					2,168,500				
Grand Total					19,061,177				

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

Hatchery Release Summary Next Two Weeks

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5/04/01

Hatchery Release Summary

From: 5/4/01 to 5/17/01

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Magic Valley	ST	SU	2001	50,000	04-16-01	05-11-01	E Fk Salmon R	Salmon River
IDFG	Magic Valley	ST	SU	2001	75,000	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	100,000	04-16-01	05-11-01	Yankee Fk (Salmon R)	Salmon River
IDFG	Magic Valley	ST	SU	2001	185,000	04-19-01	05-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	240,000	04-16-01	05-11-01	Lemhi R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	165,000	05-03-01	06-02-01	Little Salmon R	Salmon River
IDFG	Sawtooth	SO	UN	2001	48,051	05-04-01	05-04-01	Redfish Lake Cr	Salmon River
IDFG Total					863,051				
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	American R	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2001	100,000	05-02-01	05-10-01	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe	Kooskia	CO	UN	2001	20,000	05-10-01	05-11-01	Kooskia H	Clearwater Rvr M F
Nez Perce Tribe Total					220,000				
ODFW	Irrigon	ST	SU	2001	800	05-03-01	05-07-01	Deer Cr	Grande Ronde River
ODFW	Li Sheep	ST	SU	2001	80,000	05-10-01	05-11-01	L Sheep Acclim Pd	Imnaha River
ODFW	Wallowa	ST	SU	2001	108,750	05-05-01	05-15-01	Wallowa Acclim Pd	Grande Ronde River
ODFW	Wallowa	ST	SU	2001	108,750	05-13-01	05-27-01	Wallowa Acclim Pd	Grande Ronde River
ODFW Total					298,300				
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					99,000				
Warm Spgs Tribe	Oak Springs	ST	WI	2001	12,950	05-14-01	05-14-01	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2001	13,000	05-14-01	05-14-01	E Fk Irrig Dist Sand Trap	Hood River
Warm Spgs Tribe Total					25,950				
WDFW	East Bank	ST	SU	2001	33,475	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	45,500	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	48,058	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	East Bank	ST	SU	2001	57,814	04-23-01	05-11-01	Chiwawa H	Wenatchee River
WDFW	Klickitat	CO	NO	2001	1,300,000	04-30-01	05-11-01	Klickitat H	Klickitat River
WDFW	Methow	CH1	SP	2001	66,500	04-17-01	05-07-01	Twisp R	Methow River
WDFW	Skamania	ST	SU	2001	20,000	05-01-01	05-10-01	Little White Salmon R	Little White Salmon River
WDFW	Skamania	ST	SU	2001	100,000	05-01-01	05-10-01	Klickitat R	Klickitat River
WDFW	Skamania	ST	WI	2001	20,000	05-01-01	05-10-01	White Salmon R	White Salmon River
WDFW	Wells	CH1	SU	2001	430,000	04-23-01	05-07-01	Wells H	Mid-Columbia River
WDFW Total					2,121,347				
Yakima Tribe	Cascade	CO	UN	2001	853,000	04-24-01	05-05-01	Icicle Cr	Wenatchee River
Yakima Tribe	Cle Elum	CH1	SP	2001	232,700	03-15-01	05-31-01	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	257,700	03-15-01	05-31-01	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2001	266,600	03-15-01	05-31-01	Easton Pd	Yakama River
Yakima Tribe	Cle Elum	CO	UN	2001	97,450	05-07-01	05-07-01	Cle Elem Slough	Yakama River
Yakima Tribe	Eagle Creek	CO	UN	2001	250,000	04-25-01	05-15-01	Winthrop H	Methow River
Yakima Tribe	Easton Pond	CO	UN	2001	115,000	05-07-01	05-07-01	Easton Pd	Yakama River
Yakima Tribe	Klickitat	CH0	SP	2001	160,000	05-07-01	05-09-01	Upper Klickitat R	Klickitat River
Yakima Tribe	Lost Creek	CO	UN	2001	115,000	05-07-01	05-07-01	Lost Creek Acclim Pd	Yakama River
Yakima Tribe	Stiles Pond	CO	UN	2001	115,000	05-07-01	05-07-01	Naches R	Yakama River
Yakima Tribe Total					2,462,450				
Grand Total					6,090,098				

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/20/2001	756	1,484	51	2	11,640	1,009	3,450	867	1,982	692	5,700
04/21/2001 *	---	1,943	---	---	16,020	1,206	9,945	278	1,422	1,056	15,991
04/22/2001	---	906	---	---	22,850	1,236	6,930	247	1,476	940	23,262
04/23/2001	379	496	240	8	19,750	948	8,128	173	1,512	1,260	18,740
04/24/2001	314	182	234	1	22,200	3,756	6,060	85	3,247	1,528	16,887
04/25/2001	260	106	191	2	27,799	2,642	5,580	186	3,124	1,395	27,251
04/26/2001	584	320	276	0	25,800	3,549	9,300	295	3,814	1,760	27,145
04/27/2001 *	414	523	704	271	75,750	6,493	11,880	200	2,980	1,480	27,945
04/28/2001 *	---	22	---	13	52,350	8,989	17,070	70	2,960	3,336	24,143
04/29/2001 *	---	92	---	32	132,600	25,452	16,770	57	3,885	6,496	24,831
04/30/2001 *	1,421	32	757	40	137,550	34,333	13,195	51	6,180	11,865	38,804
05/01/2001	688	138	639	46	155,400	25,941	9,200	62	5,203	23,640	39,730
05/02/2001	369	114	235	5	85,062	23,348	8,100	58	9,705	9,275	46,811
05/03/2001	392	127	224	9	47,400	13,379	5,650	60	10,200	7,740	57,688
05/04/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	5,577	6,485	3,551	429	832,171	152,281	131,258	2,689	57,690	72,463	394,928
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	558	463	355	36	59,441	10,877	9,376	192	4,121	5,176	28,209
YTD	11,851	25,293	7,658	435	891,380	157,256	199,138	3,224	66,997	81,179	438,790

COMBINED SUBYEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/20/2001	0	0	0	0	0	0	0	6	282	0	91,601
04/21/2001 *	---	0	---	---	0	0	0	9	132	0	87,556
04/22/2001	---	0	---	---	0	0	0	5	24	4	33,006
04/23/2001	0	0	0	1	0	0	0	10	12	0	17,894
04/24/2001	0	0	0	0	0	0	0	7	6	0	13,148
04/25/2001	0	0	0	0	0	0	0	1	20	0	15,853
04/26/2001	0	0	0	0	0	0	0	3	0	16	13,376
04/27/2001 *	0	0	0	0	0	0	0	8	90	10	10,946
04/28/2001 *	---	0	---	0	0	0	30	1	40	6	9,857
04/29/2001 *	---	0	---	0	0	0	0	5	165	10	5,088
04/30/2001 *	0	0	0	0	0	0	0	12	30	30	9,170
05/01/2001	0	0	0	0	0	0	0	9	260	30	9,807
05/02/2001	0	0	0	0	0	0	0	21	40	150	6,305
05/03/2001	0	0	0	0	0	0	0	13	40	0	7,809
05/04/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	1	0	0	30	110	1,141	256	331,416
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	0	0	2	8	82	18	23,673
YTD	1	1	0	3	20	0	30	275	2,053	256	512,822

*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

COMBINED COHO

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/20/2001	0	0	0	0	0	0	0	0	18	36	0
04/21/2001 *	---	0	---	---	0	0	0	0	6	8	131
04/22/2001	---	0	---	---	0	0	0	0	18	16	365
04/23/2001	0	0	0	0	0	0	0	0	18	4	363
04/24/2001	0	0	0	0	0	0	0	0	18	32	362
04/25/2001	0	0	0	0	0	0	0	0	40	140	262
04/26/2001	0	0	0	0	0	0	0	11	241	104	393
04/27/2001 *	0	0	0	0	0	0	0	5	120	30	258
04/28/2001 *	---	0	---	0	0	0	60	7	20	36	714
04/29/2001 *	---	0	---	0	0	0	0	3	45	46	360
04/30/2001 *	0	0	0	0	0	0	0	2	135	60	1,576
05/01/2001	0	0	0	1	0	0	0	9	200	150	2,219
05/02/2001	0	0	0	0	0	0	0	6	300	0	4,586
05/03/2001	0	0	0	0	150	201	0	9	340	60	8,980
05/04/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	1	150	201	60	52	1,519	722	20,569
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	11	14	4	4	109	52	1,469
YTD	0	0	0	3	200	200	60	52	1,670	794	21,774

COMBINED STEELHEAD

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/20/2001	143	845	22	3	5,100	240	615	14	1,484	396	398
04/21/2001 *	---	1,028	---	---	11,400	261	1,455	11	2,280	776	1,049
04/22/2001	---	769	---	---	19,000	384	660	19	2,071	488	853
04/23/2001	36	405	120	20	13,050	492	1,662	15	2,556	872	1,088
04/24/2001	50	198	538	3	26,050	584	810	22	9,699	1,088	844
04/25/2001	30	127	177	9	37,451	530	720	31	12,526	3,325	1,048
04/26/2001	95	442	140	4	52,900	1,200	920	14	11,235	2,776	393
04/27/2001 *	349	1,617	250	14	91,050	2,030	1,040	31	11,008	1,640	2,447
04/28/2001 *	---	192	---	30	141,900	5,361	2,040	41	5,661	810	1,429
04/29/2001 *	---	1,180	---	391	221,700	14,050	2,220	60	4,365	1,850	2,878
04/30/2001 *	426	124	438	78	347,550	29,712	1,965	42	4,879	3,930	5,820
05/01/2001	505	859	632	1,253	309,450	22,415	6,200	60	6,537	24,600	4,120
05/02/2001	313	902	248	189	346,138	32,740	6,800	74	6,401	12,215	4,586
05/03/2001	258	570	215	111	243,150	21,752	6,300	68	7,260	7,560	7,418
05/04/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	2,205	9,258	2,780	2,105	1,865,889	131,751	33,407	502	87,962	62,326	34,371
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	221	661	278	175	133,278	9,411	2,386	36	6,283	4,452	2,455
YTD	2,854	10,288	2,941	2,273	1,889,992	133,862	35,077	559	95,500	65,390	39,122

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
04/20/2001	0	0	0	0	20	0	0	5	18	4	0
04/21/2001 *	---	0	---	---	40	0	0	4	6	0	0
04/22/2001	---	0	---	---	0	56	0	0	6	0	0
04/23/2001	0	0	0	0	0	36	0	4	0	4	0
04/24/2001	0	0	0	0	0	16	0	6	24	0	0
04/25/2001	0	0	0	0	0	80	0	3	0	0	0
04/26/2001	0	0	0	0	0	60	20	9	0	0	0
04/27/2001 *	0	0	0	0	0	100	20	0	0	0	0
04/28/2001 *	---	0	---	0	0	20	0	3	20	0	0
04/29/2001 *	---	0	---	0	0	300	0	3	15	0	0
04/30/2001 *	0	0	0	0	0	100	0	11	15	15	0
05/01/2001	0	0	0	0	0	600	0	13	20	0	0
05/02/2001	0	0	0	0	0	0	0	16	80	150	0
05/03/2001	0	0	0	0	0	2,900	50	4	200	0	293
05/04/2001	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	60	4,268	90	81	404	173	293
# Days:	10	14	10	12	14	14	14	14	14	14	14
Average:	0	0	0	0	4	305	6	6	29	12	21
YTD	0	0	0	0	490	4,396	100	94	496	213	354

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

BO1 (Index) = Bonneville Dam First Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 1 Flow / (Powerhouse 1 & 2 Flow + Spill)}

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

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

Cumulative Adult Passage at Mainstem Dams Through 05/03

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.		2001		2000		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	318,245	2,803	137,967	8,591	50,863	1,460	0	0	0	0	0	0	0	0	0	0	0	0
TDA	236,568	1,526	70,868	4,307	25,066	667	0	0	0	0	0	0	0	0	0	0	0	0
JDA	195,206	1,053	55,118	2,857	17,348	453	0	0	0	0	0	0	0	0	0	0	0	0
MCN	179,048	900	32,534	1,931	12,228	301	0	0	0	0	0	0	0	0	0	0	0	0
IHR	114,138	619	17,788	1,259	5,421	155	0	0	0	0	0	0	0	0	0	0	0	0
LMN	111,399	160	14,124	1,057	4,138	128	0	0	0	0	0	0	0	0	0	0	0	0
LGS	101,151	513	11,705	823	3,042	104	0	0	0	0	0	0	0	0	0	0	0	0
LWG	93,533	169	8,798	594	2,281	65	0	0	0	0	0	0	0	0	0	0	0	0
PRD	32,657	14	6,036	2	2,113	3	0	0	0	0	0	0	0	0	0	0	0	0
RIS	11,600	42	1,178	12	436	1	0	0	0	0	0	0	0	0	0	0	0	0
RRH	2,856	6	155	3	52	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			
	2001		2000		10-Yr Avg.		10-Yr Avg.			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2001	2000	Avg.	2001	2000	Avg.	2001
BON	0	0	0	0	0	0	0	0	0	3,049	2,004	2,257	890
TDA	0	0	0	0	0	0	0	0	0	753	507	1,014	303
JDA	0	0	0	0	0	0	0	0	0	2,354	2,696	2,519	765
MCN	0	0	0	0	0	0	0	0	0	1,411	609	1,661	671
IHR	0	0	0	0	0	0	0	0	0	1,309	822	2,059	517
LMN	0	0	0	0	0	0	0	0	0	1,649	938	2,061	829
LGS	0	0	0	0	0	0	0	0	0	1,883	845	1,087	954
LWG	0	0	0	0	0	0	0	0	0	5,580	2,412	4,719	1,554
PRD	0	0	0	0	0	0	0	0	0	14	2	18	**
RIS	0	0	0	0	0	0	0	0	0	49	17	36	*
RRH	0	0	0	0	0	0	0	0	0	87	60	38	*
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0

WEL has not yet reported their counts. PRD is through 5/2 and is from Grant CO PUD's website.

RIS/RRH is through 5/1 and is from Chelan CO PUD's website. LGR is missing counts for 5/2.

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

Wild steelhead numbers are included in the total.

* Chelan & Grant CO PUD's do not have a wild steelhead breakout on their website.

**PRD is not reporting Wild Steelhead numbers.

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

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

Two Week Transportation Summary

		04/21/01 TO 05/04/01					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected		832,171	150	60	1,865,889	2,698,270
	Sum of NumberBarged		843,599	150	80	1,864,080	2,707,909
	Sum of NumberBypassed		1,347	0	0	5,284	6,631
	Sum of Numbertrucked		0	0	0	0	0
	Sum of TotalProjectMortalities		888	0	0	109	997
LGS	Sum of NumberCollected		152,281	201	4,268	131,751	288,501
	Sum of NumberBarged		152,385	200	4,274	131,990	288,849
	Sum of NumberBypassed		0	0	0	0	0
	Sum of Numbertrucked		0	0	0	0	0
	Sum of TotalProjectMortalities		333	1	6	39	379
LMN	Sum of NumberCollected	30	131,258	60	90	33,407	164,845
	Sum of NumberBarged	30	133,885	60	89	33,556	167,620
	Sum of NumberBypassed	0	143	0	0	57	200
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	0	342	0	1	33	376
MCN	Sum of NumberCollected	1,141	57,690	1,519	404	87,962	148,716
	Sum of NumberBarged	298	15,292	536	219	13,702	30,047
	Sum of NumberBypassed	838	42,269	978	184	74,197	118,466
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	5	129	5	1	63	203
Total Sum of NumberCollected		1,171	1,173,400	1,930	4,822	2,119,009	3,300,332
Total Sum of NumberBarged		328	1,145,161	946	4,662	2,043,328	3,194,425
Total Sum of NumberBypassed		838	43,759	978	184	79,538	125,297
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		5	1,692	6	8	244	1,955

YTD Transportation Summary

TO: 05/04/01

Site	Data	Species					Grand Total
		CH0	CH1	CO	SO	ST	
LGR	Sum of NumberCollected	20	891,380	200	490	1,889,992	2,782,082
	Sum of NumberBarged	20	882,200	170	318	1,880,652	2,763,360
	Sum of NumberBypassed	0	1,724	0	0	5,837	7,561
	Sum of NumberTrucked	0	6,433	30	167	3,386	10,016
	Sum of TotalProjectMortalities	0	1,023	0	5	117	1,145
LGS	Sum of NumberCollected		157,453	201	4,397	133,934	295,985
	Sum of NumberBarged		156,189	200	4,360	133,556	294,305
	Sum of NumberBypassed		0	0	0	0	0
	Sum of NumberTrucked		899	0	28	336	1,263
	Sum of TotalProjectMortalities		362	1	9	42	414
LMN	Sum of NumberCollected	30	199,138	60	100	35,077	234,405
	Sum of NumberBarged	30	192,752	60	99	34,656	227,597
	Sum of NumberBypassed	0	333	0	0	67	400
	Sum of NumberTrucked	0	5,519	0	0	319	5,838
	Sum of TotalProjectMortalities	0	534	0	1	35	570
MCN	Sum of NumberCollected	2,054	67,013	1,671	496	95,537	166,771
	Sum of NumberBarged	298	15,292	536	219	13,702	30,047
	Sum of NumberBypassed	1,746	51,566	1,130	276	81,752	136,470
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	10	155	5	1	83	254
Total Sum of NumberCollected		2,104	1,314,984	2,132	5,483	2,154,540	3,479,243
Total Sum of NumberBarged		348	1,246,433	966	4,996	2,062,566	3,315,309
Total Sum of NumberBypassed		1,746	53,623	1,130	276	87,656	144,431
Total Sum of NumberTrucked		0	12,851	30	195	4,041	17,117
Total Sum of TotalProjectMortalities		10	2,074	6	16	277	2,383