



Fish Passage Center

Weekly Report #01 - 10

May 18, 2001

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SIGNIFICANT POINTS

- **A limited spill for the fish passage program began on May 16, 2001 at 1800 hours. Although this spill for fish passage is much below the Biological Opinion measures, it will provide some protection for downstream migrants attempting to pass the Dalles and Bonneville.**
- **Although passage indices have increased slightly in the past week, the seasonal passage indices at McNary Dam are lower than expected.**
- **The Biological Opinion minimum operating pool elevation requirement is not being met at Ice Harbor because the federal operators are avoiding spill.**

SUMMARY OF EVENTS:

Water Supply:

The cumulative precipitation for May 1-15 for Columbia above Coulee was 62% of average, for Snake River above Ice Harbor 53% of average and for Columbia above The Dalles 75% of average.

The May Midmonth Runoff Volume Forecast was issued. The projected runoff volumes remained the same for the Lower Granite and The Dalles, as in the May Final Runoff Volume Forecast. The Summary of the Runoff Volume Forecasts is given in the following Table:

Site	May Final		April Final		May Final	
	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg
<i>Mica (April-Sept.)</i>	9600	75	9800	77	9300	73
<i>Hungry Horse (Apr-Sep)</i>	1320	60	1300	60	1330	61
<i>Libby (April-Sept.)</i>	3700	55	3530	52	3740	55
<i>Grand Coulee (Jan-July)</i>	37900	60	37500	59	37800	60
<i>The Dalles (Jan-July)</i>	56600	53	56100	53	56500	53
<i>Brownlee (April-July)</i>	1890	33	1890	33	1950	34
<i>Dworshak (April-July)</i>	1440	53	1400	52	1440	53
<i>Lower Granite (Jan-July)</i>	14100	47	14100	47	14100	47
<i>Heise (ID) (April-July)</i>	1940	56	2030	59	2040	59
<i>Weiser (ID) (April-July)</i>	1720	31	1730	32	1780	33

Reservoir Operations: Reservoirs continue to be operated for power emergency needs and will not refill by the end of June as required by the 2000 Biological Opinion. Seasonal snowmelt was peaking during the previous week. A summary of the actual elevations and full pool elevations is shown in the following Table:

Reservoir	Actual Elev. as of May 17, 2001 [ft]	Maximum Reservoir pool [ft]
<i>Libby</i>	2394.89	2459
<i>Hungry Horse</i>	3507.97	3560
<i>Grand Coulee</i>	1247.70	1290
<i>Brownlee</i>	2077.0	2077
<i>Dworshak</i>	1556.69	1600

**as of May 16*

Libby reservoir continues at a minimum outflow of 4 kcfs. Inflows increased to the range of 10 kcfs to 20.6 kcfs for the period of May 11-17.

Hungry Horse was operated at a minimum outflow of 0.5 kcfs for the period of May 11-17. Required minimum flows of 3.5 kcfs at Columbia Falls are being met by increased local inflows. Inflows into the reservoir were fluctuating between 8.12 kcfs and 17.89 kcfs for the period of May 11-17.

Grand Coulee continued to be operated to meet system power peaking demands and to refill. The current outflows were in the range of 20.9 kcfs-55.9 kcfs for the period of May 11-17. For the same period, inflows were in the range of 88.5 kcfs-118.9 kcfs.

Brownlee reservoir was refilled to 2077 ft on May 16. The outflows at Hells Canyon Dam project were in the range of 8.56 kcfs to 15.91 kcfs for the period of May 11-17. The Brownlee inflows were in the range of 9.50 kcfs to 15.22 kcfs for the same period.

Dworshak continued to be operated on minimum outflow of 1.6 kcfs. Inflow was fluctuating from 9.9 kcfs on May 11 to 18.6 kcfs on May 17.

Upper Snake projects were slightly drafted due to irrigation demands, from 77% of capacity on May 10 to 76% of capacity on May 17. American Falls is at 84% of capacity, Palisades is at 54% of capacity and Jackson Lake is at 87 % of capacity. Delivery of 38 kaf of augmentation water commenced on May 11 and it will be finished by May 27. At the same time, major snowmelt occurred in the basin. Flow below Milner was gradually increased to 1.5 kcfs during the last week and it is planned to start gradually decreasing at rates of 100 cfs by May 27.

Flows: Flows increased in the system for the May 11-17 period due to the initiation of snowmelt. Flows below Bonneville increased from 111.9 kcfs to 175.4 kcfs for the period of May 11-17.

Flows at Priest Rapids fluctuated between 38.6 kcfs and 63.6 kcfs for the period of May 11-17.

The 1995 Biological Opinion spring flow target is 85 Kcfs at Lower Granite beginning April

10. Actual flows were in the range of 55.6 kcfs on May 12 to 91.3 kcfs on May 16. The average daily flow for the period of May 11-17 was 72.6 kcfs.

The 1995 Biological Opinion spring flow target at McNary is 220 kcfs, beginning April 20. The average daily flow for the period of May 11-17 was 123.3 kcfs, with fluctuations between 103.8 kcfs on May 13 to 147.1 kcfs on May 17.

Spill: A Lower Columbia River limited spill program was implemented beginning at 1800 hours on May 16, 2001. The total impact of the spill program is to be about 300 MW and includes spill at The Dalles and Bonneville dams. Spill at The Dalles equals approximately 30% of instantaneous flow and spill at Bonneville Dam is equal to 50 Kcfs per hour. The spill program is expected to last three weeks.

A unit outage occurred at Ice Harbor Dam on May 15th. The normal protocol is to spill the water in excess of hydraulic capacity until the unit is brought back on-line, however, in this instance the decision was made by the COE to fill the Ice Harbor pool above MOP until the unit was back in service. Coincident with this outage was an increase in Snake River flows that prevented the pool from returning to MOP without spilling at the project. Consequently, Ice Harbor remained in violation of MOP until 0300 hours on May 18th.

The FERC fish spill program continues at the Mid Columbia projects. Total dissolved gas readings at most monitors are reading in excess of 100%, but less than the waiver limits. Fish with bubbles in their lateral line have been sampled at both McNary and Rock Island dams.

Smolt Monitoring: Yearling chinook numbers continued to decrease this week at the traps on the lower Salmon (WTB), and Imnaha (IMN) rivers, while the collection at the Grande Ronde (GRN) trap increased during the beginning of the week and decreased at the end of the week. Steelhead numbers were making up most of this week's collection, increasing substantially at the Imnaha and Grande Ronde traps. The mainstem Snake River trap at Lewiston (LEW), which was ineffective in collecting yearling chinook this season, has been collecting near 250 fish/day this week. Yearling chinook passage indices at Lower Granite Dam again peaked when flows increased to near 90 Kcfs at 141,000 fish on May 15, while steelhead passage indices peaked near 388,000 on May 16. Counts of both yearling chinook and steelhead decreased after the initial increase. Passage indices of yearling chinook at Rock Island Dam decreased rapidly after flows decreased to just 34 Kcfs on May 12 and averaged only 62 fish per day after this date. At Rock Island dam steelhead passage indices continued at a level similar to the previous week. Daily yearling chinook collections at McNary Dam have fluctuated this week around 24,000 and 60,000 fish while steelhead fluctuated between 3,500 and 8,000 fish daily. John Day Dam collections of yearling chinook continued increasing steadily this week ending at 45,450, while steelhead collections remained steady. Subyearling chinook, yearling chinook, steelhead, and coho passage indices all followed an increasing trend. The greatest change in passage at Bonneville Dam was with coho, which reached a high of nearly 130,000 fish on May 17.

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 2,138 per day for the week with the daily peak count of 2,957 on May 12. The total count is now 360,863 through May 17 and compares with 167,920 in 2000 and 65,597 for the 10-year average. The 2001 count is about 2.1 times and 5.5 times greater than the respective 2000 and 10-year average. At The Dalles Dam, 273,932 adult salmon have been counted through May 17. The McNary Dam count through May 17 is 220,843, with 139,512 adult spring chinook (Ice Harbor Count) continuing up the Snake River and 45,117 counted at Priest Rapids Dam. Greater than 10,500 adult spring chinook have been counted at Prosser Dam (Yakama River) with several missing days to fill in with counts. Counts from Ice Harbor, Priest Rapids, and Prosser account for about 88% of the adult spring Chinook salmon that have passed McNary Dam (excluding Ringold Hatchery returns). Up the Mid-Columbia River, about 31,326 adult spring chinook have passed Rock Island Dam with 11,406 passing Rocky Reach Dam through May 15, respectively and Wells Dam counting 7,056 through May 16. At the upper Snake River project, more than 130,700 adult spring Chinook have been tallied to date. Jack chinook count at Bonneville Dam totaled 10,558 for the season with the counts ranging between about 550 early in the week to near 300 by the end of the week. The jack count (10,558) was 2.8 times greater than the 10-year average and about 60% the record 2000 jack spring Chinook count. On the bright side, the jack total in 1999 was 8,691 and that produced most of the 2000 adult spring Chinook run of 178,000 so the adult Chinook in 2002 is on track to at least keep the trend going for the adult fish in the Columbia River.

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 is 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 also completed 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 580,000 coho were released into the Clearwater River basin. Steelhead releases are on-going from many hatcheries but the bulk will be in river by the end of next week with only volitional releases remaining. About 9.83 million juvenile steelhead will be released in the Snake River basin for the 2001 migration season. A small number of earling sockeye salmon were released into Redfish Lake Creek during the spring 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. Release of yearling summer chinook has been completed for this season with subyearling summer chinook scheduled for release in June. About 4.3 million summer chinook are scheduled for release in the Mid-Columbia Reach. Hatchery steelhead releases continued this week with most juvenile steelhead scheduled for release by mid-May. Numbers scheduled for release will be almost normal (1.34 million) in this Reach. The Wenatchee, Entiat, Methow, Okanogan and main Columbia (Ringold Hatchery release) rivers will be planted with the “endangered” 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 estimated coho releases is slated to be 2.1 million for the season. Coho have been released into the Methow, Wenatchee, and Yakama rivers, with additional releases still to come from the Yakama River basin. Subyearling fall chinook releases will be primarily from the lower section of the Reach, i.e., Priest Rapids, Ringold, and Yakama Rivers. The estimated release of 12.2 million subyearling fall chinook is nearly equal to the year 2000 production and close to the previous seven years’ annual production.

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 have been released into the White Salmon River and another 160,000 into the upper Klickitat River. 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; the remaining fall chinook release groups will be subyearling fish liberated in late May or June. Normal production of subyearling fall chinook generally ranges between 8-10 million annually. All coho salmon have been released in the Umatilla River and Little White Salmon River basins with most coho in the Klickitat released 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.

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
05/04/01	61.5	0.0	61.1	0.0	65.5	5.6	64.9	0.0	67.2	14.1	85.7	36.9	67.8	41.3
05/05/01	46.1	0.0	49.3	0.0	54.6	4.9	55.4	0.0	59.5	12.5	79.2	34.1	68.2	41.7
05/06/01	39.9	0.0	39.3	0.0	39.2	3.9	35.5	0.0	38.1	9.1	80.9	34.7	68.8	42.2
05/07/01	57.8	0.0	59.0	0.0	62.7	6.5	62.8	0.0	66.4	13.8	66.7	28.6	65.6	40.4
05/08/01	59.0	0.0	60.7	0.0	62.0	7.2	61.1	0.0	64.1	13.6	78.5	33.8	61.1	37.4
05/09/01	62.3	0.0	65.7	0.0	71.6	8.1	73.9	0.0	78.6	15.7	67.5	29.1	56.5	34.4
05/10/01	70.0	0.0	72.7	0.0	71.4	7.2	71.3	0.0	75.8	15.2	64.7	28.1	54.7	33.6
05/11/01	55.9	0.0	55.9	0.0	58.7	5.2	58.2	0.0	63.9	12.5	75.3	32.4	65.8	40.0
05/12/01	22.7	0.0	26.3	0.0	29.5	2.9	28.6	0.0	33.8	5.6	60.3	26.0	51.5	31.5
05/13/01	20.9	0.0	25.8	0.0	32.0	2.9	32.1	0.0	39.0	7.8	42.8	18.4	38.6	23.4
05/14/01	43.5	0.0	45.8	0.0	52.1	4.7	51.3	0.0	59.6	11.6	57.9	24.9	41.8	25.4
05/15/01	30.8	0.0	31.9	0.0	37.1	3.4	35.4	0.0	43.0	7.2	52.2	22.5	53.0	32.4
05/16/01	28.0	0.0	23.2	0.0	35.5	3.4	37.3	0.0	45.2	9.1	56.3	24.2	42.5	25.9
05/17/01	39.6	0.0	39.4	0.0	43.6	4.0	43.1	0.0	50.5	10.8	61.5	26.4	54.4	33.0

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/04/01	1.7	0.0	11.1	14.0	50.0	0.0	52.3	0.0	55.0	0.0	53.9	0.0
05/05/01	1.7	0.0	9.8	9.1	50.2	0.0	52.3	0.0	55.0	0.0	53.9	0.0
05/06/01	1.6	0.0	9.4	8.5	45.5	0.0	44.9	0.0	46.7	0.0	45.5	0.0
05/07/01	1.7	0.0	10.5	12.9	43.2	0.0	44.9	0.0	46.9	0.0	48.0	0.0
05/08/01	1.6	0.0	10.0	11.4	49.1	0.0	48.7	0.0	50.1	0.0	47.6	0.0
05/09/01	1.7	0.0	9.4	9.9	49.4	0.0	50.3	0.0	51.5	0.0	55.5	0.0
05/10/01	1.6	0.0	9.9	11.5	53.3	0.0	54.3	0.0	57.5	0.0	56.3	0.0
05/11/01	1.6	0.0	9.6	10.9	55.8	0.0	57.9	0.0	60.8	0.0	60.1	0.0
05/12/01	1.6	0.0	9.8	8.6	55.6	0.0	56.1	0.0	57.8	0.0	56.2	0.0
05/13/01	1.6	0.0	9.5	8.6	61.9	0.0	61.1	0.0	62.0	0.0	59.4	0.0
05/14/01	1.6	0.0	11.0	11.0	70.9	0.0	72.6	0.0	77.4	0.0	77.4	0.0
05/15/01	1.6	0.0	13.4	12.2	84.7	0.0	80.0	0.0	81.4	0.0	74.9	0.0
05/16/01	1.6	0.0	15.2	15.9	91.3	0.0	91.5	0.0	94.6	0.0	91.8	0.0
05/17/01	1.5	0.0	---	---	88.3	0.0	89.8	0.0	93.5	0.0	90.9	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		
05/04/01	132.5	0.0	139.4	0.0	137.6	0.0	142.9	0.0	26.3	108.4
05/05/01	121.9	0.0	128.0	0.0	127.2	0.0	134.9	0.0	18.0	108.8
05/06/01	112.1	0.0	126.7	0.0	132.8	0.0	148.1	0.0	30.8	109.2
05/07/01	128.7	0.0	132.8	0.0	130.6	0.0	141.7	0.0	24.3	109.2
05/08/01	107.2	0.0	116.7	0.0	117.6	0.0	132.4	0.0	12.1	112.2
05/09/01	113.7	0.0	115.4	0.0	117.1	0.0	123.1	0.0	5.2	109.7
05/10/01	106.3	0.0	95.0	0.0	100.4	0.0	109.3	0.0	1.8	99.4
05/11/01	110.3	0.0	118.4	0.0	117.6	0.0	111.9	0.0	7.2	96.4
05/12/01	117.5	0.0	114.9	0.0	115.6	0.0	120.0	0.0	2.9	108.7
05/13/01	103.8	0.0	99.9	0.0	100.9	0.0	111.6	0.0	2.6	100.5
05/14/01	116.0	0.0	117.6	0.0	116.5	0.0	122.1	0.0	4.2	109.6
05/15/01	126.4	0.0	127.5	0.0	128.9	0.0	133.2	0.0	13.0	111.9
05/16/01	142.0	0.0	141.1	0.0	140.8	13.0	158.6	12.6	15.7	122.1
05/17/01	147.1	0.0	171.2	0.0	169.4	50.7	175.4	49.6	2.8	116.4

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													
	05/08/01	Yearling Chinook	26	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Steelhead	74	0	0	0.00%	0.00%	0	0	0	0	0	0
Little Goose Dam													
	05/16/01	Yearling Chinook	59	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/16/01	Steelhead	41	0	0	0.00%	0.00%	0	0	0	0	0	0
Lower Monumental Dam													
	05/14/01	Yearling Chinook	37	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/14/01	Steelhead	63	0	0	0.00%	0.00%	0	0	0	0	0	0
McNary Dam													
	05/10/01	Yearling Chinook	58	4	0	0.00%	0.00%	0	0	0	0	4	1
	05/10/01	Steelhead	42	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/14/01	Yearling Chinook	92	3	0	0.00%	0.00%	0	0	0	0	3	1
	05/14/01	Steelhead	8	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/17/01	Yearling Chinook	73	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/17/01	Steelhead	27	1	0	0.00%	0.00%	0	0	0	0	1	1
Bonneville Dam													
	05/08/01	Yearling Chinook	83	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/08/01	Steelhead	17	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/11/01	Yearling Chinook	41	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/11/01	Steelhead	1	0	0	0.00%	0.00%	0	0	0	0	0	0
Rock Island Dam													
	05/10/01	Yearling Chinook	50	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/10/01	Steelhead	50	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/14/01	Yearling Chinook	23	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/14/01	Steelhead	77	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/17/01	Yearling Chinook	27	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/17/01	Steelhead	73	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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
5/4	108	110	112	21	108	112	114	24	108	108	110	18	106	107	108	24	107	107	108	23
5/5	109	110	111	24	105	106	111	24	106	107	109	24	106	106	107	24	106	107	107	23
5/6	108	109	111	23	104	104	105	24	104	105	105	24	105	106	107	24	106	107	107	23
5/7	109	110	111	23	106	108	112	24	106	107	107	24	105	106	106	24	106	106	107	23
5/8	109	110	111	23	106	107	108	24	106	107	108	23	106	106	108	23	107	107	108	23
5/9	109	110	111	22	108	110	112	24	105	105	106	24	105	106	108	24	108	108	108	23
5/10	109	109	111	23	106	107	110	24	105	105	105	24	105	105	108	24	108	108	108	23
5/11	109	110	111	24	106	107	107	24	107	108	108	24	105	106	107	24	108	109	109	24
5/12	109	110	111	24	107	108	108	24	109	109	110	22	107	108	110	16	109	110	111	24
5/13	109	110	111	23	107	107	108	24	107	108	109	24	108	108	109	19	109	109	110	23
5/14	108	109	109	22	112	113	113	24	107	107	109	20	107	108	108	21	108	108	108	23
5/15	108	108	109	23	111	113	114	24	107	108	109	24	106	107	109	24	108	108	109	23
5/16	108	108	108	24	111	112	114	24	106	107	109	24	106	107	108	24	107	107	108	23
5/17	108	109	110	24	110	112	115	24	106	107	107	23	105	106	107	22	107	108	111	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	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
5/4	107	108	108	22	108	109	109	22	109	110	111	22	108	108	109	23	108	109	109	22
5/5	107	107	107	23	107	108	108	24	109	109	110	24	108	108	109	24	108	108	108	22
5/6	106	107	107	23	106	107	107	24	108	109	110	24	107	107	107	22	107	107	108	22
5/7	106	106	107	23	107	107	108	22	108	109	110	22	108	108	109	21	108	108	109	20
5/8	107	107	108	23	107	108	108	21	109	110	110	21	109	110	110	23	109	109	110	20
5/9	107	108	108	22	108	108	109	23	110	111	112	23	110	110	110	21	110	110	110	19
5/10	107	108	108	23	108	108	108	23	110	110	111	23	109	109	110	22	109	109	110	19
5/11	108	108	109	24	108	109	110	19	110	110	111	19	110	111	111	22	110	110	111	19
5/12	109	110	111	24	110	111	111	17	111	112	112	17	111	112	112	23	111	111	111	22
5/13	108	109	109	23	110	110	111	21	111	111	112	21	111	111	111	23	111	111	111	22
5/14	109	109	110	23	110	110	110	20	111	111	112	20	112	112	112	22	111	112	112	22
5/15	108	109	110	23	109	109	109	20	110	111	111	20	112	112	112	24	112	112	112	21
5/16	107	108	108	23	107	107	108	20	109	109	109	20	111	111	112	21	111	111	112	20
5/17	107	108	111	23	106	106	107	21	107	108	109	21	110	110	111	21	110	111	111	20

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High					
5/4	101	102	102	23	109	116	117	23	113	113	114	24	113	113	114	16	113	114	115	24
5/5	100	100	101	22	116	116	117	21	111	112	113	24	112	112	113	24	110	111	112	24
5/6	99	99	100	22	116	116	116	21	111	113	114	24	111	112	112	24	109	111	113	24
5/7	100	100	101	20	115	116	116	19	113	115	117	24	112	113	113	23	112	114	117	23
5/8	103	105	109	23	114	115	116	22	114	114	115	24	112	113	113	24	112	114	118	24
5/9	108	108	108	20	114	115	115	18	112	112	113	24	112	112	112	24	111	111	112	24
5/10	106	107	108	22	116	116	117	19	112	113	113	24	111	112	112	24	110	111	113	24
5/11	106	106	107	20	118	118	119	19	116	118	121	24	112	113	114	24	113	114	117	24
5/12	106	106	107	23	119	119	120	22	119	119	121	24	113	114	114	24	116	118	120	24
5/13	106	106	106	22	119	119	119	21	115	116	117	24	112	112	113	24	113	114	115	24
5/14	107	107	107	24	119	119	119	23	114	114	114	24	112	112	113	24	112	112	113	24
5/15	106	107	107	22	117	118	119	18	---	---	---	0	---	---	---	0	---	---	---	0
5/16	105	105	106	20	113	114	114	18	---	---	---	0	---	---	---	0	---	---	---	0
5/17	105	105	105	21	115	116	118	20	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/4	113	114	114	24	111	112	113	24	106	107	108	24	---	---	---	0	103	104	105	24
5/5	112	112	113	24	107	107	109	24	104	104	105	24	102	102	103	24	102	103	104	24
5/6	112	113	113	24	107	107	108	24	106	107	109	24	102	103	104	24	102	104	105	24
5/7	112	113	113	23	109	110	111	24	104	104	106	15	102	103	104	24	103	104	105	24
5/8	112	113	114	24	111	112	112	24	105	105	106	13	102	103	103	24	103	104	105	23
5/9	110	111	111	24	111	111	112	24	104	106	106	24	102	103	104	24	103	104	105	24
5/10	110	110	111	24	109	110	110	23	105	106	107	24	102	103	104	24	103	104	105	24
5/11	111	113	116	24	110	110	111	20	104	106	107	24	---	---	---	0	103	104	105	24
5/12	113	114	116	24	---	---	---	0	105	106	107	24	---	---	---	0	103	104	105	24
5/13	111	111	112	24	---	---	---	0	105	105	106	24	102	103	103	24	103	104	104	24
5/14	110	110	111	24	108	108	109	15	104	105	105	24	102	102	103	24	102	103	103	24
5/15	---	---	---	0	106	107	107	24	105	106	107	24	103	104	104	24	103	103	104	24
5/16	---	---	---	0	105	105	106	24	103	105	106	24	102	103	103	24	103	104	104	24
5/17	---	---	---	0	106	107	108	24	102	104	105	24	103	104	104	24	104	105	105	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/4	102	104	105	24	103	104	105	24	101	101	102	24	101	102	103	16	101	101	102	24
5/5	100	101	102	24	102	102	104	24	101	101	101	24	99	99	100	11	100	100	100	24
5/6	100	102	103	24	103	103	105	24	102	102	102	24	102	103	139	15	100	100	100	24
5/7	101	103	105	24	104	105	106	24	103	103	104	24	102	103	107	19	100	101	101	24
5/8	102	104	105	24	103	103	104	24	103	103	104	24	103	103	105	15	101	102	102	24
5/9	102	104	105	24	103	103	103	24	102	102	103	24	102	102	102	20	102	102	102	24
5/10	102	103	105	24	103	104	105	24	102	103	103	23	103	103	104	21	103	103	104	24
5/11	102	104	106	24	105	106	108	23	104	104	105	24	105	106	110	20	104	105	105	24
5/12	102	103	105	24	105	106	108	24	104	105	105	24	111	111	113	14	105	106	106	24
5/13	102	103	103	24	104	104	104	24	103	103	104	24	103	103	104	12	103	104	104	24
5/14	101	101	101	24	104	104	104	24	103	103	104	24	103	103	104	14	103	104	104	24
5/15	102	103	103	24	103	103	104	23	103	103	103	24	103	103	103	23	103	103	104	24
5/16	102	102	103	24	102	102	103	24	101	102	103	24	101	102	103	24	102	102	103	24
5/17	102	103	104	24	102	103	103	24	102	102	102	24	101	101	101	24	101	101	102	24

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

Date	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h		12 h		#	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	
5/4	102	103	104	24	102	103	103	24	103	104	105	24	103	104	104	24	108	111	115	24
5/5	101	101	102	24	101	102	102	24	102	102	102	24	103	103	103	24	104	105	106	24
5/6	101	102	103	24	100	101	102	24	102	102	103	24	102	103	104	24	107	108	110	24
5/7	102	102	105	24	101	101	102	24	103	105	106	24	103	103	104	24	109	111	119	24
5/8	101	102	103	24	101	101	102	24	103	104	105	24	103	104	104	24	111	114	118	24
5/9	101	102	102	24	101	102	102	24	103	104	104	24	103	104	105	24	109	111	116	24
5/10	102	102	103	24	102	102	103	24	103	103	104	24	103	104	105	24	112	115	117	24
5/11	103	104	106	24	103	104	105	24	103	104	105	24	103	104	105	24	113	115	119	24
5/12	105	106	107	24	104	105	105	24	104	105	107	24	104	105	106	24	112	115	118	24
5/13	105	106	106	24	104	105	105	24	103	103	104	24	104	105	105	24	111	113	114	24
5/14	105	106	106	22	105	105	105	24	103	103	103	24	104	104	105	24	110	111	112	24
5/15	104	105	105	24	104	104	105	24	103	104	104	24	105	105	106	24	109	110	112	24
5/16	103	103	104	24	103	103	103	24	103	103	103	24	104	105	105	24	105	106	107	24
5/17	102	103	103	24	102	102	102	24	102	102	103	24	104	104	104	24	107	109	110	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		24h		12h		
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr	
5/4	107	108	109	24	105	106	106	24	104	105	106	24	104	104	104	24	104	105	105	24	
5/5	105	105	106	24	104	104	105	24	102	102	103	23	102	102	103	24	103	103	103	23	
5/6	107	110	113	24	105	106	106	24	102	103	105	23	102	102	103	24	102	102	102	23	
5/7	110	110	112	24	107	107	108	24	105	106	109	23	103	103	103	24	103	103	103	23	
5/8	110	112	114	24	106	107	108	24	103	104	105	23	103	103	104	24	104	104	105	23	
5/9	108	109	114	24	107	107	108	24	104	104	104	22	104	104	105	24	104	104	104	23	
5/10	110	112	116	24	108	108	109	24	104	104	104	23	105	105	106	24	103	104	104	23	
5/11	115	117	118	24	109	110	111	24	106	109	112	24	104	105	105	24	105	106	107	24	
5/12	112	113	116	24	110	110	111	24	106	107	108	24	105	106	106	24	106	107	107	24	
5/13	110	110	111	24	109	109	109	24	104	105	105	23	104	105	105	24	104	104	105	23	
5/14	109	109	110	24	108	108	108	24	105	105	106	23	104	104	105	24	104	104	104	23	
5/15	108	108	110	24	107	108	108	24	105	106	107	23	105	105	105	24	104	104	105	23	
5/16	106	106	108	24	105	106	107	24	104	105	105	22	104	104	104	22	103	104	104	23	
5/17	104	105	105	24	105	105	105	24	104	104	105	23	103	104	104	24	103	103	104	23	

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst				Bonneville				Warrendale				Skamania				CamasWashugal				#
	24 h		12 h		24 h		12 h		24h		12h		24h		12h		24h		12h		
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	
5/4	104	105	105	23	105	105	106	24	105	106	106	24	104	105	105	24	106	107	108	24	
5/5	102	102	103	24	103	103	105	23	103	104	105	23	103	103	104	23	104	105	106	24	
5/6	102	102	104	24	103	104	104	23	104	105	106	23	103	104	104	23	105	106	107	24	
5/7	103	104	104	24	104	105	106	23	105	106	107	22	104	105	106	22	105	107	108	24	
5/8	103	104	105	24	105	105	105	23	106	106	107	23	105	105	106	23	106	108	109	24	
5/9	103	104	105	23	106	107	140	21	105	105	106	19	104	104	105	23	106	107	108	20	
5/10	104	104	105	24	104	104	105	22	104	105	106	23	104	105	105	23	105	107	108	24	
5/11	105	105	106	23	105	106	106	23	106	107	108	24	105	106	107	24	107	109	110	24	
5/12	106	107	107	24	106	107	107	23	107	107	108	24	106	107	107	24	108	109	110	24	
5/13	104	104	105	24	105	105	106	23	106	107	107	23	105	106	106	23	107	108	109	24	
5/14	103	103	104	24	104	105	105	23	104	105	105	22	104	105	105	23	105	106	108	24	
5/15	103	104	105	24	104	104	104	23	104	104	105	23	103	104	104	23	104	104	106	24	
5/16	104	105	109	24	102	103	104	23	103	104	109	23	103	103	105	23	103	104	105	24	
5/17	110	111	111	24	103	103	104	23	111	112	112	23	106	106	106	23	105	108	109	24	

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

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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	75,912	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Magic Valley	ST	SU	2001	224,338	05-04-01	05-07-01	Lemhi R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	194,303	04-14-01	05-05-01	Little Salmon R	Salmon River
IDFG	Niagara Springs	ST	SU	2001	889,995	04-14-01	05-05-01	Pahsimeroi H	Pahsimeroi River
IDFG Total					1,384,548				
Nez Perce Tribe	Hagerman	ST	SU	2001	86,441	05-02-01	05-07-01	Newsome Cr	S Fk Clearwater River
Nez Perce Tribe	Hagerman	ST	SU	2001	137,657	05-09-01	05-11-01	Yankee Fk (Salmon R)	Salmon 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					244,098				
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	Hagerman	ST	SU	2001	141,446	03-30-01	05-14-01	Sawtooth H	Salmon River
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					240,446				
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	05-01-01	05-21-01	Klickitat H	Klickitat 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					2,054,847				
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	260,319	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	162,500	05-08-01	05-08-01	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					2,475,269				
Grand Total					6,723,458				

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

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary									
From:	5/18/01				to	5/31/01			
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Magic Valley	ST	SU	2001	75,912	04-09-01	06-04-01	Squaw Cr Acclim Pd	Salmon River
IDFG	Oxbow-Idaho	CH0	FA	2001	107,000	05-25-01	06-01-01	Hells Canyon Dam	Snake River
IDFG Total					182,912				
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	400,000	05-23-01	06-01-01	Pittsburg Landing	Snake River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	500,000	05-23-01	06-22-01	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2001	500,000	05-23-01	06-22-01	Cpt John Acclim Pd	Snake River
Nez Perce Tribe Total					1,400,000				
ODFW	Big Canyon	ST	SU	2001	130,500	05-19-01	06-03-01	Big Canyon 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					239,250				
Umatilla Tribe	Umatilla	CH0	FA	2001	2,682,000	05-21-01	05-31-01	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe Total					2,682,000				
USFWS	Winthrop	ST	SU	2001	99,000	04-11-01	05-20-01	Winthrop H	Methow River
USFWS Total					99,000				
WDFW	Klickitat	CH0	FA	2001	1,600,000	05-21-01	05-25-01	Klickitat H	Klickitat River
WDFW	Klickitat	CH0	FA	2001	2,300,000	05-29-01	06-15-01	Klickitat H	Klickitat River
WDFW	Klickitat	CO	NO	2001	1,300,000	05-01-01	05-21-01	Klickitat H	Klickitat River
WDFW	Lyons Ferry	CH0	FA	2001	200,000	05-25-01	06-01-01	Lyons Ferry H	Snake River
WDFW Total					5,400,000				
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	94,800	05-31-01	05-31-01	Cle Elem Slough	Yakama River
Yakima Tribe	Easton Pond	CO	UN	2001	115,000	05-31-01	05-31-01	Easton Pd	Yakama River
Yakima Tribe	Lost Creek	CO	UN	2001	115,000	05-31-01	05-31-01	Lost Creek Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2001	15,000	05-25-01	05-25-01	Yakama R	Yakama River
Yakima Tribe	Prosser	CH0	FA	2001	162,000	05-25-01	05-25-01	Prosser Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2001	1,700,000	05-25-01	05-25-01	Prosser Acclim Pd	Yakama River
Yakima Tribe	Stiles Pond	CO	UN	2001	115,000	05-31-01	05-31-01	Naches R	Yakama River
Yakima Tribe Total					3,073,800				
Grand Total					13,076,962				

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

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/04/2001	189	84	111	9	32,550	12,116	7,590	41	16,173	3,660	55,805
05/05/2001 *	---	20	---	---	61,350	12,706	7,170	72	22,050	9,454	60,603
05/06/2001	---	68	---	---	69,450	13,803	7,860	65	18,156	9,020	54,725
05/07/2001 *	62	52	54	2	29,850	17,057	3,997	62	14,600	6,310	52,420
05/08/2001	67	16	39	2	18,450	16,986	6,438	77	19,103	7,690	48,663
05/09/2001	30	55	46	0	27,176	7,564	7,180	120	30,270	8,260	45,821
05/10/2001 *	116	144	126	0	66,000	21,772	17,963	192	20,851	12,608	36,908
05/11/2001 *	119	82	165	2	45,000	25,610	26,745	106	24,858	11,270	68,693
05/12/2001	---	57	---	---	46,500	16,948	24,531	119	32,804	18,650	28,459
05/13/2001	---	---	---	---	67,800	14,451	7,900	85	24,650	13,650	25,271
05/14/2001	33	36	430	0	48,450	15,083	8,017	63	24,156	15,930	23,189
05/15/2001 *	41	81	223	0	141,000	23,976	29,805	65	38,642	18,960	29,437
05/16/2001 *	19	10	108	1	111,919	62,123	22,630	50	59,705	23,670	24,837
05/17/2001 *	27	7	37	2	81,600	38,737	20,707	48	60,404	45,450	27,240
05/18/2001	---	---	---	---	---	---	---	---	---	27,016	---
Total:	703	712	1,339	18	847,095	298,932	198,533	1,165	406,422	231,598	582,071
# Days:	10	13	10	10	14	14	14	14	14	15	14
Average:	70	55	134	2	60,507	21,352	14,181	83	29,030	15,440	41,577
YTD	12,554	26,354	8,997	453	1,738,475	455,185	397,671	4,389	473,390	312,777	1,020,861

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)
05/04/2001	0	0	0	0	0	0	0	3	20	30	3,243
05/05/2001 *	---	0	---	---	0	0	0	10	300	8	2,857
05/06/2001	---	0	---	---	0	0	0	2	150	0	5,282
05/07/2001 *	0	0	0	2	150	0	0	2	250	20	3,953
05/08/2001	0	0	0	0	0	0	1	3	510	10	4,599
05/09/2001	0	0	0	1	0	0	1	3	360	0	3,072
05/10/2001 *	0	0	0	0	0	0	101	4	250	1	2,141
05/11/2001 *	0	0	0	1	0	0	1	7	650	10	4,148
05/12/2001	---	0	---	---	0	0	0	6	500	90	5,495
05/13/2001	---	---	---	---	0	0	0	8	500	350	6,613
05/14/2001	0	0	0	0	0	0	0	13	500	0	7,401
05/15/2001 *	0	0	0	2	0	0	3	6	850	45	8,054
05/16/2001 *	0	0	0	7	0	0	1	6	976	0	9,832
05/17/2001 *	0	0	0	3	0	0	102	17	1,302	45	15,813
05/18/2001	---	---	---	---	---	---	---	---	---	194	---
Total:	0	0	0	16	150	0	210	90	7,118	803	82,503
# Days:	10	13	10	10	14	14	14	14	14	15	14
Average:	0	0	0	2	11	0	15	6	508	54	5,893
YTD	1	1	0	19	170	0	240	365	9,168	1,059	595,325

*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	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/04/2001	0	0	0	0	0	300	0	16	580	30	10,956
05/05/2001 *	---	0	---	---	0	900	0	7	450	48	16,091
05/06/2001	---	0	---	---	300	150	0	5	350	0	10,564
05/07/2001 *	0	0	0	1	0	100	0	8	800	60	16,839
05/08/2001	0	0	0	0	0	100	12	16	330	40	28,634
05/09/2001	0	0	0	0	0	0	0	29	390	20	12,799
05/10/2001 *	0	0	0	0	0	150	0	69	100	40	9,447
05/11/2001 *	0	0	0	0	0	0	0	143	100	90	14,519
05/12/2001	---	0	---	---	300	0	0	167	250	840	19,483
05/13/2001	---	---	---	---	1,050	51	0	287	150	650	25,179
05/14/2001	0	0	0	0	450	0	0	171	100	620	17,022
05/15/2001 *	0	0	0	0	750	50	0	611	150	330	58,989
05/16/2001 *	0	0	0	0	600	50	0	893	376	2,310	93,209
05/17/2001 *	0	0	0	1	1,350	107	0	637	100	2,355	129,956
05/18/2001	---	---	---	---	---	---	---	---	---	1,520	---
Total:	0	0	0	2	4,800	1,958	12	3,059	4,226	8,953	463,687
# Days:	10	13	10	10	14	14	14	14	14	15	14
Average:	0	0	0	0	343	140	1	219	302	597	33,121
YTD	0	0	0	5	5,000	2,150	72	3,111	5,895	9,747	485,461

COMBINED STEELHEAD

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/04/2001	105	359	114	183	152,400	17,306	6,360	107	9,268	5,010	13,010
05/05/2001 *	---	108	---	---	210,300	22,703	3,060	125	7,950	4,468	16,692
05/06/2001	---	421	---	---	195,150	12,950	5,190	110	5,705	4,730	8,656
05/07/2001 *	108	248	131	264	112,500	12,904	7,213	77	6,300	4,770	8,346
05/08/2001	151	359	108	290	60,450	14,166	7,729	83	6,020	3,410	7,863
05/09/2001	107	604	34	352	77,924	15,003	5,658	197	6,120	2,180	8,192
05/10/2001 *	169	2,132	79	198	115,200	25,253	7,826	312	4,300	1,314	6,802
05/11/2001 *	160	1,536	79	95	114,600	16,533	14,348	256	4,042	2,120	9,517
05/12/2001	---	1,621	---	---	64,050	19,719	9,250	219	3,501	12,170	8,976
05/13/2001	---	---	---	---	60,300	19,077	13,600	213	4,150	5,700	8,684
05/14/2001	90	3,204	262	1	83,400	14,921	10,999	144	3,601	2,800	13,321
05/15/2001 *	106	6,327	343	225	225,600	9,674	9,542	208	5,008	2,325	16,680
05/16/2001 *	64	1,363	148	102	387,981	42,041	15,164	335	7,875	3,390	19,494
05/17/2001 *	110	673	60	273	240,750	27,516	10,781	209	5,001	5,895	21,792
05/18/2001	---	---	---	---	---	---	---	---	---	2,872	---
Total:	1,170	18,955	1,358	1,983	2,100,605	269,766	126,720	2,595	78,841	63,154	168,025
# Days:	10	13	10	10	14	14	14	14	14	15	14
Average:	117	1,458	136	198	150,043	19,269	9,051	185	5,632	4,210	12,002
YTD	4,024	29,446	4,300	4,256	3,990,597	403,339	161,797	3,154	174,333	128,544	207,147

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)
05/04/2001	0	0	0	0	0	800	0	1	140	30	0
05/05/2001 *	---	0	---	---	0	200	30	4	150	8	0
05/06/2001	---	0	---	---	0	1,500	30	0	250	0	0
05/07/2001 *	0	0	0	0	0	550	1	0	250	0	0
05/08/2001	0	0	0	0	0	300	6	0	480	0	0
05/09/2001	0	0	0	0	0	50	0	0	300	20	0
05/10/2001 *	0	0	0	0	0	50	5	9	150	1	0
05/11/2001 *	3	0	0	0	0	0	102	10	150	0	0
05/12/2001	---	0	---	---	0	0	1	4	750	50	0
05/13/2001	---	---	---	---	0	0	0	2	300	0	77
05/14/2001	1	0	0	0	150	0	0	2	350	20	0
05/15/2001 *	0	0	0	0	0	50	3	10	400	30	0
05/16/2001 *	0	0	0	0	150	100	0	3	525	0	114
05/17/2001 *	2	0	0	0	300	100	100	3	200	45	0
05/18/2001	---	---	---	---	---	---	---	---	---	20	---
Total:	6	0	0	0	600	3,700	278	48	4,395	224	191
# Days:	10	13	10	10	14	14	14	14	14	15	14
Average:	1	0	0	0	43	264	20	3	314	15	14
YTD	6	0	0	0	1,090	8,096	378	142	4,891	437	545

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 05/17

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	360,863	10,558	167,920	18,146	65,597	3,807	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	273,932	7,037	92,380	11,486	36,140	2,307	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	229,637	3,892	75,195	8,847	28,183	1,736	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	220,843	3,439	53,338	7,006	23,533	1,382	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	139,519	1,538	28,961	5,281	11,507	790	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	143,755	735	25,008	5,449	9,659	762	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	135,379	1,337	23,325	4,788	8,296	665	0	0	0	0	0	0	0	0	0	0	0	0	0
LWG	130,776	857	21,823	4,169	7,055	517	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	45,117	269	15,753	361	6,651	63	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	31,326	270	8,494	172	3,106	26	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH	11,406	50	2,513	39	597	6	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL	7,056	76	785	24	210	6	0	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2001		2000		10-Yr Avg.		10-Yr			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	4,132	2,715	3,169	1,044
TDA	0	0	0	0	0	0	0	0	0	1,000	594	1,208	335
JDA	0	1	0	0	0	0	0	0	0	2,265	3,130	2,824	880
MCN	0	0	0	0	0	0	0	0	0	1,560	688	1,843	711
IHR	0	0	0	0	0	0	0	0	0	1,344	852	2,140	525
LMN	0	0	0	0	0	0	1	0	0	1,705	888	2,134	868
LGS	0	0	0	0	0	0	0	0	0	1,967	916	1,193	1,007
LWG	0	0	0	0	0	0	0	0	0	5,675	2,457	4,819	1,625
PRD	0	0	0	0	0	0	7	1	1	21	7	34	**
RIS	0	0	1	0	0	0	0	6	1	62	21	59	NA
RRH	0	0	0	0	0	0	0	0	0	115	74	56	NA
WEL	0	0	0	0	0	0	0	0	0	14	17	14	14

LGR is through 5/16. RIS, RRH are through 5/15 and the numbers (wild steelhead not available) are from Chelan CO P
PRD is through 5/16 and the numbers are from Grant CO PUD.

WEL is through 5/16 - the numbers up to 5/9 are from the COE and from 5/10 to 5/16 are directly from Wells Dam.

LGR numbers for 5/12 and 5/15 are incorrect on the COE's site: the corrected numbers come directly from LGR.

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

Wild steelhead numbers are included in the total.

**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

		05/05/01 TO 05/18/01					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	150	847,095	4,800	600	2,100,605	2,953,250
	Sum of NumberBarged	150	765,991	3,822	374	1,848,047	2,618,384
	Sum of NumberBypassed	0	78,111	976	221	252,053	331,361
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	0	2,993	2	5	505	3,505
LGS	Sum of NumberCollected		298,932	1,958	3,700	269,766	574,356
	Sum of NumberBarged		297,654	1,945	3,694	269,141	572,434
	Sum of NumberBypassed		0	0	0	0	0
	Sum of Numbertrucked		0	0	0	0	0
	Sum of TotalProjectMortalities		1,279	13	6	625	1,923
LMN	Sum of NumberCollected	210	198,533	12	278	126,720	325,753
	Sum of NumberBarged	209	189,044	12	276	126,178	315,719
	Sum of NumberBypassed	0	9,183	0	0	141	9,324
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1	306	0	2	401	710
MCN	Sum of NumberCollected	7,118	406,422	4,226	4,395	78,841	501,002
	Sum of NumberBarged	2,876	154,461	2,038	1,544	33,484	194,403
	Sum of NumberBypassed	4,204	251,185	2,184	2,845	45,243	305,661
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	38	776	4	6	114	938
Total Sum of NumberCollected		7,478	1,750,982	10,996	8,973	2,575,932	4,354,361
Total Sum of NumberBarged		3,235	1,407,150	7,817	5,888	2,276,850	3,700,940
Total Sum of NumberBypassed		4,204	338,479	3,160	3,066	297,437	646,346
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		39	5,354	19	19	1,645	7,076

YTD Transportation Summary

TO: 05/18/01

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	170	1,738,475	5,000	1,090	3,990,597	5,735,332
	Sum of NumberBarged	170	1,649,299	3,992	692	3,729,177	5,383,330
	Sum of NumberBypassed	0	78,727	976	221	257,412	337,336
	Sum of NumberTrucked	0	6,433	30	167	3,386	10,016
	Sum of TotalProjectMortalities	0	4,016	2	10	622	4,650
LGS	Sum of NumberCollected		456,385	2,159	8,097	403,700	870,341
	Sum of NumberBarged		453,847	2,145	8,054	402,697	866,743
	Sum of NumberBypassed		0	0	0	0	0
	Sum of NumberTrucked		898	0	28	336	1,262
	Sum of TotalProjectMortalities		1,641	14	15	667	2,337
LMN	Sum of NumberCollected	240	397,671	72	378	161,797	560,158
	Sum of NumberBarged	239	381,796	72	375	160,834	543,316
	Sum of NumberBypassed	0	9,516	0	0	208	9,724
	Sum of NumberTrucked	0	5,519	0	0	319	5,838
	Sum of TotalProjectMortalities	1	840	0	3	436	1,280
MCN	Sum of NumberCollected	9,172	473,435	5,897	4,891	174,378	667,773
	Sum of NumberBarged	3,174	169,753	2,574	1,763	47,186	224,450
	Sum of NumberBypassed	5,950	302,751	3,314	3,121	126,995	442,131
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	48	931	9	7	197	1,192
Total Sum of NumberCollected		9,582	3,065,966	13,128	14,456	4,730,472	7,833,604
Total Sum of NumberBarged		3,583	2,654,695	8,783	10,884	4,339,894	7,017,839
Total Sum of NumberBypassed		5,950	390,994	4,290	3,342	384,615	789,191
Total Sum of NumberTrucked		0	12,850	30	195	4,041	17,116
Total Sum of TotalProjectMortalities		49	7,428	25	35	1,922	9,459