



Fish Passage Center

Weekly Report #01 - 3

March 30, 2001

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SUMMARY OF EVENTS:

Water Supply: Precipitation increased in some subbasins last week, although in most subbasins it was scarce. The highest precipitation for the period of March 1-27, 119% of average, was recorded in Central Washington and the lowest, of 51% of average, was in the Upper Snake.

The Columbia above Grand Coulee received 73% of average precipitation, the Snake River above Ice Harbor received 59%, and the Columbia above The Dalles received 69% of average for the March 1-27 period. The cumulative precipitation for October through March for the Columbia above Grand Coulee was 58% of average, for the Columbia above The Dalles, 59% of average, and for the Snake River above Ice Harbor, 70% of average.

The April Early Runoff Volume Forecast was issued. Forecast Runoff Volumes have continued to decrease since the January report. Monthly decreases were in the range of 2% to 10%. The largest cumulative decreases were recorded at Brownlee, which went from 61% of average in January to 34% of average in Early April, and Libby which decreased from 73% of average in January to 49% of average in Early April. The largest decreases from March Final to April Early are projected for Lower Granite, which decreased 7%, from 55% to 48% and for Mid Snake and Upper Snake projects, which dropped 6%-8%. The Summary of the Runoff Volume Forecasts is given in the following Table:

Site	February Final		March Final		April Early	
	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg
<i>Mica (April-Sept.)</i>	9990	78	9620	76	9940	78
<i>Hungry Horse (Apr-Sep)</i>	1320	60	1320	60	1270	58
<i>Libby (April-Sep.)</i>	4180	62	3570	53	3350	49
<i>Grand Coulee (Jan-July)</i>	41200	65	37600	59	37100	59
<i>The Dalles (January-July)</i>	66400	63	58600	55	55700	53
<i>Brownlee (April-July)</i>	2850	49	2390	41	1950	34
<i>Dworshak (April-July)</i>	1800	67	1550	57	1400	52
<i>Lower Granite (Jan-July)</i>	18800	63	16300	55	14400	48
<i>Heise (ID) (April-July)</i>	2230	65	2170	63	1950	57
<i>Weiser (ID) (April-July)</i>	2620	48	2230	41	1790	33

Reservoir Operations: Reservoirs are being operated for power generation needs and are far below required end of month flood control elevations. Under the current conditions of low water supply it 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 March is shown in the following Table:

Reservoir	Actual Elev. as of March 29, 2001 [ft]	Required End of March Flood Control Elev. [ft]	Maximum Reservoir pool [ft]
<i>Libby</i>	2387.78	2448.0	2459
<i>Hungry Horse</i>	3491.71	3555.2	3560
<i>Grand Coulee</i>	1222.70	1283.3	1290
<i>Brownlee</i>	2075.28*	2077.0	2077
<i>Dworshak</i>	1510.93	1581.8	1600

* as of March 28

Libby reservoir was operating at a minimum outflow of 4 kcfs through March 27, when outflow was increased to 4.5 kcfs to return water stored in Canadian projects in agreement with Canadian authorities. Inflows were in the range of 2.3 kcfs-3.1 kcfs for the period of March 23-29.

Hungry Horse is operating on minimum outflow of 2.40-2.50 kcfs to meet the required minimum of 3.5 kcfs at Columbia Falls. Inflows were in the range of 0.34 to 1.68 kcfs for the period of March 23-29.

Grand Coulee is operated to support required flows below Vernita bar of 65 kcfs and some minimum protection for chum emergence needs below Bonneville Dam. The most current outflows were in the range of 41.2 kcfs-76.2 kcfs for the period of March 23-29. For the same period, inflows were in the range of 56.8 kcfs-80.8 kcfs.

Brownlee is operating up to required flood control elevations. The outflows at Hells Canyon Dam project were in the range of 8.9 kcfs to 17.81 kcfs for the period of March 23-28. The Brownlee inflows were in the range of 13.08 kcfs to 15.92 kcfs for the same period.

Dworshak is operating on minimum outflow of 1.5 kcfs. Inflow has been increased during the previous week due to local snowmelt and it was fluctuating between 4.3 kcfs and 6.7 kcfs for the period of March 23-29.

Upper Snake projects continue with refill since fall. Currently, as of March 29, the system is at 76% of capacity; American Falls is at 98% of capacity, Palisades is at 47% of capacity and Jackson Lake is at 76 % of capacity.

Flows: Flows below Bonneville were fluctuating between 100.3 kcfs and 148.5 kcfs for the period of March 23-29, depending upon power generation demands.

Flows at Priest Rapids have been maintained at 65 kcfs for the fall/winter period for protection of redds at Vernita Bar. Redd counts on November 19, 2000 determined the minimum required protection flows for the 2000-2001 season.

Spill: There was no spill reported for Snake, Mid-Columbia or Lower Columbia projects over the past week.

Smolt Monitoring: Trap collections of yearling chinook on the lower Salmon (WTB) and Imnaha (IMN) rivers continued to increase during this reporting period (March 23-29). Based on adipose fin clips, the yearling chinook consisted of about 95% hatchery fish at the Salmon River trap and about one-third hatchery fish at the Imnaha River trap during this reporting period. A few yearling chinook and steelhead arrived at Lower Granite Dam since monitoring began this week. PIT tag detections at Lower Granite Dam showed 16 "hold-over" fall chinook tagged and released between 5/29 and 7/13 last year in the following vicinities: one at Pittsburgh Landing AP, five at Captain John Rapids AP, eight at Big Canyon AP, and two at the Snake River trap. Additional PIT tag detections included two steelhead tagged in the Clearwater River drainage between 8/7 and 10/5 and one steelhead tagged this spring (3/21) at the Imnaha River trap. Smolt passage at Bonneville Dam continued to be mostly a mix of yearling and subyearling chinook.

Adult Fish Passage – Fish counts will be starting April 1 at most COE projects with exception of Bonneville Dam (March 15) and Lower Granite Dam (March 1). The PUD projects on the Mid-Columbia River will begin on or near April 15 at Priest Rapids, Rock Island, and Rocky Reach dams with Wells Dam starting May 1. The FPC Weekly Report will list in a Table; the adult fish counts for the week with the previous year (2000) and the 10-year average through the same ending date so the reader can compare passage throughout the year for the individual species.

At Bonneville Dam, approximately 700 adult spring Chinook salmon were counted per day during the past week bringing the total count since March 15 to 5,625. This year's count compares with 728 in 2000 and 352 for the 10-year average. This season's count through March 28 is about 7.7 times and 16 times greater than the respective 2000 and 10-year average. Normally, low river

flows, such as this year, result in the adult fish run-timing being earlier than in a high flow year. Therefore, this adult spring run may be early. The 2001 forecast for Snake River fish was 206,700 (to the mouth of the Columbia River). It was reported that an adult spring Chinook was trapped at the Lower Granite adult fish facility this week so fish are moving upriver into the Snake River. Steelhead passage remained about 50/day through the week at Bonneville Dam with the total through March 28 of 743. At Bonneville Dam, steelhead remain mostly lower river, winter steelhead with some upriver summer fish moving upstream to spawning sites as well. At Lower Granite Dam, 2,812 steelhead have been counted since March 1. Most steelhead passing the project are those that have over-wintered in the Snake or Columbia rivers.

Hatchery Releases – See the Hatchery Release Summary for the Previous 2-wk and next 2-wk Projected Releases for the Columbia River Basin above Bonneville Dam.

Snake River – For the week, volitional or direct stream hatchery releases of yearling spring Chinook began or are on-going from the Salmon River (Rapid River Hatchery), Imnaha River and Clearwater River basins. About 30% of the Rapid River Chinook have emigrated from the ponds and are in-river based on the PIT tag detection equipment set up on the exit from the ponds. Dworshak and Kooskia NFHs released spring Chinook on 3/28 and 3/27, respectively into the Clearwater R basin. Summer Chinook from McCall Hatchery were trucked and released into the S. Fk Salmon River throughout the week (3/26-29). The summer Chinook program was nearer normal production levels than the hatchery spring Chinook program that will be approximately one third normal level. About 560,000 coho were released into Lapwai Creek and Potlatch River the previous week. Initial steelhead releases began with fish trucks hauling loads from Niagara Springs Hatchery to below Hells Canyon. Other volitional releases of steelhead were started as well during the week.

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. Most hatcheries will be releasing yearling spring chinook during mid to late April either volitionally or directly from the raceways to the streams. Sockeye in the Mid-Columbia are normally released into Lake Wenatchee from net pens and into Lake Osoyoos (direct releases) during the fall prior to their migration in April through May. Yearling summer Chinook from Wells and Eastbank complex hatcheries will be released mainly in April. Hatchery steelhead will be released in April and May.

Lower Columbia [McNary Dam to above Bonneville Dam]– Yearling spring chinook have been released in the Umatilla, Klickitat, and Hood Rivers to date with other juvenile spring Chinook hatchery releases scheduled for April. The initial release of subyearling fall chinook (5.3 million) was completed from Spring Creek National Fish Hatchery on March 8th with the 2nd release of 5.3 million scheduled for mid-April. Yearling releases of “bright” fall chinook began March 12 in the Umatilla River with other releases scheduled for April. Coho salmon have been released in the Umatilla River basin with 2.8 million scheduled for the Klickitat River in the upcoming 2 weeks.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/16/01	73.8	0.0	74.8	0.0	75.9	0.0	76.2	0.0	77.8	0.0	78.7	0.0	82.7	0.0
03/17/01	49.8	0.0	54.2	0.0	50.7	0.0	47.1	0.0	51.0	0.0	68.1	0.0	72.5	0.0
03/18/01	44.2	0.0	43.1	0.0	43.7	0.0	41.9	0.0	41.0	0.0	57.5	0.0	70.1	0.0
03/19/01	71.7	0.0	74.5	0.0	79.3	0.0	83.5	0.0	86.5	0.0	79.3	0.0	70.7	0.0
03/20/01	77.9	0.0	79.9	0.0	77.7	0.0	77.2	0.0	77.0	0.0	73.8	0.0	75.4	0.0
03/21/01	76.7	0.0	81.5	0.0	82.8	0.0	85.8	0.0	91.0	0.0	80.1	0.0	82.6	0.0
03/22/01	61.5	0.0	61.6	0.0	60.8	0.0	57.8	0.0	60.2	0.0	79.1	0.0	82.7	0.0
03/23/01	69.2	0.0	67.4	0.0	65.4	0.0	53.8	0.0	53.8	0.0	68.6	0.0	74.3	0.0
03/24/01	49.6	0.0	49.2	0.0	53.1	0.0	53.7	0.0	58.3	0.0	69.6	0.0	70.6	0.0
03/25/01	41.2	0.0	41.2	0.0	39.9	0.0	36.9	0.0	37.3	0.0	57.1	0.0	70.2	0.0
03/26/01	65.5	0.0	70.0	0.0	73.0	0.0	74.2	0.0	71.7	0.0	69.6	0.0	70.4	0.0
03/27/01	76.2	0.0	78.7	0.0	77.7	0.0	77.8	0.0	81.8	0.0	71.7	0.0	70.5	0.0
03/28/01	68.1	0.0	70.9	0.0	71.2	0.0	76.4	0.0	70.8	0.0	67.5	0.0	71.7	0.0
03/29/01	68.4	0.0	63.0	0.0	61.5	0.0	---	---	---	---	68.6	0.0	69.5	0.0

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
03/16/01	1.5	0.0	13.3	14.4	32.3	0.0	33.2	0.0	34.7	0.0	34.9	0.0
03/17/01	1.5	0.0	13.2	12.2	26.3	0.0	27.3	0.0	29.3	0.0	29.8	0.0
03/18/01	1.5	0.0	12.1	8.9	23.1	0.0	24.3	0.0	24.2	0.0	23.3	0.0
03/19/01	1.4	0.0	12.9	12.9	24.7	0.0	26.8	0.0	30.7	0.0	32.9	0.0
03/20/01	1.5	0.0	12.5	16.7	34.9	0.0	38.2	0.0	37.3	0.0	36.2	0.0
03/21/01	1.5	0.0	13.9	15.8	36.1	0.0	34.0	0.0	35.0	0.0	33.3	0.0
03/22/01	1.5	0.0	13.5	11.4	35.5	0.0	37.6	0.0	40.0	0.0	41.1	0.0
03/23/01	1.5	0.0	13.8	13.0	27.1	0.0	29.3	0.0	29.8	0.0	29.8	0.0
03/24/01	1.5	0.0	13.2	8.9	28.8	0.0	30.4	0.0	31.6	0.0	32.2	0.0
03/25/01	1.5	0.0	13.1	8.9	27.4	0.0	27.9	0.0	28.4	0.0	26.7	0.0
03/26/01	1.5	0.0	15.2	15.5	38.6	0.0	37.8	0.0	38.9	0.0	40.2	0.0
03/27/01	1.5	0.0	15.9	17.4	44.2	0.0	48.5	0.0	52.9	0.0	50.2	0.0
03/28/01	1.5	0.0	13.2	17.8	41.5	0.0	43.2	0.0	43.7	0.0	43.1	0.0
03/29/01	1.5	0.0	---	---	39.3	0.0	43.0	0.0	45.7	0.0	47.9	0.0

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
03/16/01	120.5	0.0	133.1	0.0	134.8	0.0	135.7	0.0	21.0	105.7
03/17/01	117.9	0.0	113.8	0.0	110.9	0.0	123.5	0.0	12.3	101.9
03/18/01	92.4	0.0	98.0	0.0	103.3	0.0	116.3	0.0	6.5	100.5
03/19/01	102.6	0.0	106.9	0.0	105.8	0.0	134.8	0.0	22.3	103.2
03/20/01	113.0	0.0	117.9	0.0	118.1	0.0	133.1	0.0	17.2	106.7
03/21/01	108.8	0.0	123.4	0.0	125.9	0.0	124.6	0.0	10.7	104.7
03/22/01	136.0	0.0	137.8	0.0	138.6	0.0	140.1	0.0	23.3	107.6
03/23/01	119.3	0.0	134.2	0.0	137.6	0.0	148.5	0.0	26.3	113.0
03/24/01	94.5	0.0	89.6	0.0	89.2	0.0	100.4	0.0	3.0	88.2
03/25/01	92.0	0.0	88.9	0.0	89.6	0.0	100.3	0.0	0.8	90.3
03/26/01	106.5	0.0	117.2	0.0	117.8	0.0	122.7	0.0	15.4	98.1
03/27/01	123.2	0.0	133.7	0.0	134.5	0.0	137.9	0.0	30.8	97.9
03/28/01	115.5	0.0	109.6	0.0	112.5	0.0	124.7	0.0	18.7	96.8
03/29/01	116.0	0.0	128.2	0.0	126.1	0.0	138.1	0.0	26.5	102.4

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph							
	24 h	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					
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	102	103	103	24	102	102	103	24	103	103	105	24	103	103	103	24
3/18	---	---	---	0	102	103	103	24	102	103	103	24	103	104	105	24	103	103	104	24
3/19	---	---	---	0	103	103	103	24	102	103	103	23	103	103	104	23	103	103	104	24
3/20	---	---	---	0	103	104	104	24	102	102	103	23	102	103	104	23	103	103	104	23
3/21	---	---	---	0	103	104	104	24	102	103	103	23	103	103	104	23	103	104	104	24
3/22	---	---	---	0	103	104	105	24	103	103	104	23	103	104	106	23	104	105	105	24
3/23	---	---	---	0	103	104	104	24	103	103	104	23	103	104	105	23	104	104	104	24
3/24	---	---	---	0	103	104	105	24	104	105	106	23	104	105	105	23	104	105	105	24
3/25	---	---	---	0	103	103	104	24	104	104	105	23	104	105	106	23	105	105	105	24
3/26	---	---	---	0	103	104	104	24	103	104	104	23	103	104	106	23	104	104	104	23
3/27	---	---	---	0	103	104	105	24	103	104	104	23	103	103	104	23	104	105	105	24
3/28	---	---	---	0	103	104	104	20	103	104	104	23	103	104	105	23	104	105	105	24
3/29	---	---	---	0	103	104	104	24	104	104	104	23	103	104	105	23	105	105	105	24

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					
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	104	105	105	18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	104	105	106	23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/21	105	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	106	107	108	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	105	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	106	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	106	107	108	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	106	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/27	106	107	107	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/28	106	106	107	22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/29	106	107	108	24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids							
	24 h	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					
3/16	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/19	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/21	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/22	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/23	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/24	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/25	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/26	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/27	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/28	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/29	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0

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. Dnstr			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			
3/16	---	---	---	0	103	103	104	24	106	106	107	24	---	---	---	0	---	---	---	0
3/17	---	---	---	0	103	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	104	104	105	24	108	108	110	24	---	---	---	0	---	---	---	0
3/19	---	---	---	0	104	104	104	4	108	109	111	20	---	---	---	0	---	---	---	0
3/20	---	---	---	0	---	---	---	0	107	108	110	18	---	---	---	0	---	---	---	0
3/21	---	---	---	0	---	---	---	0	104	105	107	24	102	102	104	12	103	103	104	6
3/22	---	---	---	0	---	---	---	0	105	107	108	24	102	103	104	24	103	104	106	22
3/23	---	---	---	0	---	---	---	0	106	107	108	24	102	103	105	24	103	104	105	24
3/24	---	---	---	0	---	---	---	0	106	107	108	24	102	103	104	24	103	104	105	24
3/25	---	---	---	0	---	---	---	0	106	106	107	24	101	101	102	24	102	102	103	24
3/26	---	---	---	0	103	103	104	11	104	105	107	24	101	101	102	24	101	102	103	24
3/27	---	---	---	0	103	104	105	24	105	106	107	24	102	103	103	24	102	103	104	23
3/28	---	---	---	0	103	104	104	24	106	106	107	24	102	102	103	24	102	103	104	24
3/29	---	---	---	0	103	104	104	23	106	107	109	24	102	102	103	24	102	103	104	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			
3/16	---	---	---	0	102	103	103	24	103	103	104	24	---	---	---	0	---	---	---	0
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
3/18	---	---	---	0	102	103	103	24	102	103	103	24	---	---	---	0	---	---	---	0
3/19	---	---	---	0	102	102	103	24	102	102	103	24	---	---	---	0	---	---	---	0
3/20	---	---	---	0	103	103	104	18	102	102	102	18	106	106	107	7	104	104	104	6
3/21	102	102	104	8	103	103	105	24	102	102	103	23	106	106	107	24	104	105	105	24
3/22	102	104	106	24	104	104	106	23	103	103	103	24	106	107	108	24	105	105	106	24
3/23	102	105	106	24	104	105	106	24	104	104	104	24	105	106	107	24	105	105	105	24
3/24	103	105	106	24	104	104	105	24	104	104	105	24	106	108	109	24	105	105	106	24
3/25	101	102	103	24	103	104	104	24	103	103	104	24	105	105	106	24	104	104	105	24
3/26	101	102	103	24	102	102	102	24	102	102	103	24	103	104	104	24	103	103	103	24
3/27	101	103	104	24	103	104	104	24	102	103	103	24	103	104	105	24	103	103	104	24
3/28	102	103	104	24	103	103	103	24	103	103	104	24	104	104	104	24	103	103	103	24
3/29	102	103	104	24	102	103	103	24	102	103	103	24	103	104	104	24	103	103	103	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			
3/16	---	---	---	0	---	---	---	0	103	104	104	24	103	103	104	24	104	104	104	24
3/17	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	104	104	106	24
3/18	---	---	---	0	---	---	---	0	104	104	105	24	103	104	104	24	104	105	107	24
3/19	---	---	---	0	---	---	---	0	104	104	104	21	104	104	105	24	104	104	105	11
3/20	---	---	---	0	103	103	105	9	104	105	105	16	104	104	105	18	106	107	109	14
3/21	104	105	106	18	103	104	105	24	105	106	108	24	104	105	106	24	105	106	108	24
3/22	105	105	106	24	104	104	105	24	106	107	109	24	105	105	106	24	106	107	109	24
3/23	105	106	108	23	104	105	106	24	105	105	106	24	105	105	106	24	106	107	108	24
3/24	107	108	109	24	105	106	107	24	105	106	107	24	105	106	106	24	107	109	111	24
3/25	106	106	108	24	105	105	106	24	104	105	106	24	104	105	106	24	107	107	108	24
3/26	105	105	105	24	104	105	105	24	103	103	103	24	103	104	104	24	105	106	106	24
3/27	105	105	106	24	104	105	105	24	103	104	104	24	104	105	105	24	106	106	107	24
3/28	104	105	105	24	104	104	105	24	103	104	104	24	104	105	105	24	105	106	106	24
3/29	103	103	104	24	103	103	103	24	103	103	104	24	104	105	105	24	105	105	106	23

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				
3/16	103	103	104	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/17	103	103	104	24	103	103	103	24	---	---	---	0	---	---	---	0	---	---	---	0
3/18	104	104	105	24	103	104	104	24	---	---	---	0	---	---	---	0	---	---	---	0
3/19	103	104	104	23	103	103	104	12	---	---	---	0	---	---	---	0	---	---	---	0
3/20	104	104	106	17	104	104	105	14	---	---	---	0	---	---	---	0	---	---	---	0
3/21	106	107	109	24	105	105	106	24	---	---	---	0	---	---	---	0	---	---	---	0
3/22	107	107	108	24	106	106	107	24	---	---	---	0	---	---	---	0	---	---	---	0
3/23	107	108	108	24	106	107	107	24	---	---	---	0	99	99	99	2	---	---	---	0
3/24	108	109	110	24	107	108	108	24	---	---	---	0	---	---	---	0	---	---	---	0
3/25	107	107	108	24	107	107	108	24	---	---	---	0	---	---	---	0	---	---	---	0
3/26	105	105	105	24	105	106	106	24	---	---	---	0	99	99	100	8	---	---	---	0
3/27	105	106	106	24	105	106	106	24	105	105	106	10	105	105	105	12	---	---	---	0
3/28	105	105	106	24	105	106	106	24	105	105	106	24	105	106	107	24	104	104	105	13
3/29	104	105	105	23	104	104	104	23	105	105	105	24	104	105	106	24	103	104	104	24

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	#	24h	12h	#					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr				
3/16	---	---	---	0	103	104	104	24	103	103	103	23	104	104	104	24	103	104	104	24
3/17	---	---	---	0	104	104	104	24	103	103	104	24	104	104	104	24	103	103	104	24
3/18	---	---	---	0	104	104	104	24	104	104	104	24	104	104	104	24	103	104	104	24
3/19	---	---	---	0	103	104	104	18	103	104	105	24	104	104	104	24	104	105	106	23
3/20	---	---	---	0	104	104	105	17	104	104	105	17	104	105	105	17	104	105	106	17
3/21	---	---	---	0	105	105	106	23	104	104	105	24	105	105	105	24	104	106	106	23
3/22	---	---	---	0	105	106	106	22	104	105	106	22	105	106	106	24	105	107	107	23
3/23	---	---	---	0	106	106	106	24	105	105	106	24	105	106	106	24	106	107	108	23
3/24	---	---	---	0	105	106	106	24	105	105	107	24	106	106	106	24	105	105	106	23
3/25	---	---	---	0	105	105	105	24	104	104	104	24	105	105	105	24	104	104	105	23
3/26	---	---	---	0	104	104	105	24	104	104	105	24	104	104	105	24	104	104	105	23
3/27	---	---	---	0	104	105	105	22	104	104	104	24	104	105	105	24	104	104	104	23
3/28	104	104	105	11	104	104	105	22	104	104	105	22	104	104	105	24	104	104	105	23
3/29	104	104	105	23	104	104	104	23	104	104	105	24	104	104	105	24	105	106	106	19

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 03/16/01 to 03/29/01

Colville Tribe								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Winthrop	Chinook Yearling	SP	2001	40,000	03/27/2001	03/27/2001	Okanogan R	Okanogan River
Colville Tribe Total				40,000				
IDFG								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
McCall	Chinook Yearling	SU	2001	1,077,900	03/26/2001	03/29/2001	S Fk Salmon R	Salmon River
McCall	Chinook Yearling	SU	2001	88,500	03/26/2001	03/29/2001	S Fk Salmon R	Salmon River
Niagara Springs	Steelhead	SU	2001	550,000	03/26/2001	04/07/2001	Hells Canyon Dam	Snake River
Rapid River	Chinook Yearling	SP	2001	736,000	03/15/2001	04/25/2001	Rapid River H	Little Salmon River
IDFG Total				2,452,400				
Nez Perce Tribe								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Lolo Cr	Clearwater Rvr M F
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Newsome Cr	S Fk Clearwater River
Willard	Coho	UN	2001	275,688	03/16/2001	03/16/2001	Potlatch R	Clearwater Rvr M F
Nez Perce Tribe Total				585,688				
ODFW								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Imnaha	Chinook Yearling	SP	2001	123,000	03/21/2001	04/19/2001	Imnaha Acclim Pd	Imnaha River
ODFW Total				123,000				
Umatilla Tribe								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Bonneville	Chinook Yearling	FA	2001	213,499	03/16/2001	03/16/2001	Thornhollow Acclim Pd	Umatilla River
L White Salmon	Chinook Yearling	SP	2001	166,700	03/10/2001	03/20/2001	Imeques Acclim Pd	Umatilla River
Lower Herman C	Coho	UN	2001	750,000	03/10/2001	03/20/2001	Pendelton Acclim Pd	Umatilla River
Umatilla Tribe Total				1,130,199				
USFWS								
Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Dworshak	Chinook Yearling	SP	2001	333,000	03/28/2001	03/28/2001	Dworshak H	Clearwater Rvr M F
Kooskia	Chinook Yearling	SP	2001	81,600	03/27/2001	03/27/2001	Kooskia H	Clearwater Rvr M F
Warm Springs	Chinook Yearling	SP	2001	785,000	03/25/2001	04/18/2001	Warm Springs H	Warm Springs River
USFWS Total				1,199,600				

HATCHERY RELEASE SUMMARY LAST TWO WEEKS (CON'T)

WDFW

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Lyons Ferry	Steelhead	SU	2001	100,000	03/26/2001	04/30/2001	Dayton Acclim Pd	Touchet River
Lyons Ferry	Steelhead	SU	2001	200,000	03/26/2001	04/30/2001	Cottonwood Acclim Pd	Grande Ronde River
WDFW Total				300,000				

Warm Spgs Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Parkdale Pond	Chinook Yearling	SP	2001	7,000	03/19/2001	03/19/2001	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe Total				7,000				

Yakima Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Cle Elum	Chinook Yearling	SP	2001	266,600	03/15/2001	05/31/2001	Easton Pd	Yakama River
Cle Elum	Chinook Yearling	SP	2001	257,700	03/15/2001	05/31/2001	Jack Creek Acclim Pd	Yakama River
Cle Elum	Chinook Yearling	SP	2001	232,700	03/15/2001	05/31/2001	Clark Flat Acclim Pd	Yakama River
Yakima Tribe Total				757,000				

GRAND TOTAL **6,594,887**

Hatchery Release Summary Next Two Weeks

Hatchery Release Summary

From: **03/30/01** to **04/12/01**

IDFG

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Clearwater	Chinook Yearling	SP	2001	212,777	04/12/2001	04/12/2001	Powell Acclim Pd	Lochsa River
Clearwater	Steelhead	SU	2001	249,000	04/09/2001	04/26/2001	Red River Acclim Pd	S Fk Clearwater River
Magic Valley	Steelhead	SU	2001	435,000	04/10/2001	04/27/2001	Little Salmon R	Salmon River
Magic Valley	Steelhead	SU	2001	80,000	04/09/2001	04/10/2001	Little Salmon R	Salmon River
Magic Valley	Steelhead	SU	2001	80,000	04/09/2001	04/12/2001	Squaw Cr Acclim Pd	Salmon River
Magic Valley	Steelhead	SU	2001	60,000	04/11/2001	04/11/2001	Lemhi R	Salmon River
Magic Valley	Steelhead	SU	2001	115,000	04/12/2001	04/24/2001	Salmon R Idaho	Salmon River
Niagara Springs	Steelhead	SU	2001	550,000	03/26/2001	04/07/2001	Hells Canyon Dam	Snake River
Niagara Springs	Steelhead	SU	2001	250,000	04/08/2001	04/13/2001	Little Salmon R	Salmon River
Pahsimeroi	Chinook Yearling	SP	2001	85,000	04/12/2001	04/20/2001	Pahsimeroi H	Pahsimeroi River
Pahsimeroi	Chinook Yearling	SP	2001	197,000	04/12/2001	04/20/2001	Pahsimeroi H	Pahsimeroi River
Rapid River	Chinook Yearling	SP	2001	736,000	03/15/2001	04/25/2001	Rapid River H	Little Salmon River

IDFG Total **3,049,777**

Nez Perce Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Lolo Cr	Clearwater Rvr M F
Clearwater	Chinook Yearling	SP	2001	155,000	03/19/2001	03/30/2001	Newsome Cr	S Fk Clearwater River
Hagerman	Steelhead	SU	2001	164,000	04/02/2001	04/10/2001	Little Salmon R	Salmon River
Hagerman	Steelhead	SU	2001	50,000	04/02/2001	04/02/2001	Hazard Cr/Little Salmon R	Little Salmon River
Hagerman	Steelhead	SU	2001	140,000	04/11/2001	04/15/2001	Yankee Fk (Salmon R)	Salmon River
Lookingglass	Chinook Yearling	SP	2001	134,800	04/01/2001	04/15/2001	Lostine Accim Pd	Grande Ronde River
Lookingglass	Chinook Yearling	SP	2001	142,400	04/01/2001	04/15/2001	Catherine Cr Acclim Pd	Grande Ronde River
Lyons Ferry	Chinook Yearling	FA	2001	113,000	04/09/2001	04/13/2001	Pittsburg Landing	Snake River
Lyons Ferry	Chinook Yearling	FA	2001	111,000	04/09/2001	04/13/2001	Cpt John Acclim	Snake River
Lyons Ferry	Chinook Yearling	FA	2001	129,000	04/09/2001	04/13/2001	Big Canyon	Clearwater Rvr M F

Nez Perce Tribe Total **1,294,200**

ODFW

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Big Canyon	Steelhead	SU	2001	87,000	04/06/2001	04/07/2001	Big Canyon	Grande Ronde
Big Canyon	Steelhead	SU	2001	87,000	04/08/2001	04/22/2001	Big Canyon	Grande Ronde
Imnaha	Chinook Yearling	SP	2001	123,000	03/21/2001	04/19/2001	Imnaha Acclim Pd	Imnaha River
Li Sheep	Steelhead	SU	2001	155,000	04/12/2001	04/13/2001	L Sheep Acclim Pd	Imnaha River
Lookingglass	Chinook Yearling	SP	2001	2,500	04/01/2001	04/15/2001	Grande Ronde Acclim Pd	Grande Ronde River
Round Butte	Steelhead	SU	2001	169,000	04/02/2001	04/09/2001	Bel. Pelton Dam	Deschutes River
Round Butte	Chinook Yearling	SP	2001	302,000	04/02/2001	04/19/2001	Bel. Pelton Dam	Deschutes River
Wallowa	Steelhead	SU	2001	174,000	03/30/2001	03/31/2001	Wallowa Acclim Pd	Grande Ronde
Wallowa	Steelhead	SU	2001	174,000	04/01/2001	04/15/2001	Wallowa Acclim Pd	Grande Ronde River

ODFW Total **1,273,500**

Hatchery Release Summary Next Two Weeks (con't)

Umatilla Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Bonneville	Chinook Yearling	FA	2001	240,000	04/10/2001	04/20/2001	Thornhollow Acclim	Umatilla River
Cascade	Coho	UN	2001	750,000	04/10/2001	04/20/2001	Pendelton Acclim	Umatilla River
L White Salmon	Chinook Yearling	SP	2001	183,378	04/10/2001	04/20/2001	Imeques Acclim Pd	Umatilla River
Umatilla	Steelhead	SU	2001	53,000	04/02/2001	04/06/2001	Minthorn Acclim Pd	Umatilla River
Umatilla	Steelhead	SU	2001	53,000	04/10/2001	04/20/2001	Bonifer Acclim Pd	Umatilla River
Umatilla Tribe Total				1,279,378				

USFWS

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Entiat	Chinook Yearling	SP	2001	402,000	04/03/2001	04/04/2001	Entiat H	Entiat River
Warm Springs	Chinook Yearling	SP	2001	785,000	03/25/2001	04/18/2001	Warm Springs H	Warm Springs River
Winthrop	Chinook Yearling	SP	2001	177,000	04/11/2001	04/20/2001	Winthrop H	Methow River
Winthrop	Steelhead	SU	2001	99,000	04/11/2001	05/20/2001	Winthrop H	Methow River
USFWS Total				1,463,000				

WDFW

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Lyons Ferry	Chinook Yearling	FA	2001	450,000	04/02/2001	04/13/2001	Lyons Ferry H	Snake River
Lyons Ferry	Steelhead	SU	2001	100,000	03/26/2001	04/30/2001	Dayton Acclim Pd	Touchet River
Lyons Ferry	Steelhead	SU	2001	200,000	03/26/2001	04/30/2001	Cottonwood Acclim Pd	Grande Ronde River
Lyons Ferry	Steelhead	SU	2001	40,000	04/02/2001	04/30/2001	Dayton Acclim Pd	Touchet River
Ringold Springs	Steelhead	SU	2001	225,000	04/02/2001	04/15/2001	Ringold Springs H	Mid-Columbia River
Tucannon	Chinook Yearling	SP	2001	100,000	04/02/2001	04/13/2001	Curl Lake	Tucannon River
Washougal	Coho	SO	2001	2,800,000	04/02/2001	04/12/2001	Klickitat R	Klickitat River
Wells	Chinook Yearling	SU	2001	633,600	04/02/2001	04/27/2001	Similkameen Acclim Pd	Similkameen River
WDFW Total				4,548,600				

Warm Spgs Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Oak Springs	Steelhead	SU	2001	15,000	04/12/2001	04/12/2001	Blackberry Acclim	Hood River
Round Butte	Chinook Yearling	SP	2001	31,400	04/09/2001	04/24/2001	Parkdale Acclim Pd	Hood River
Round Butte	Chinook Yearling	SP	2001	57,800	04/09/2001	04/23/2001	Blackberry Acclim	Hood River
Round Butte	Chinook Yearling	SP	2001	40,000	04/09/2001	04/23/2001	Jones Creek	Hood River
Warm Spgs Tribe Total				144,200				

Yakima Tribe

Hatchery	Species	Race	MigYr	NumRel	RelStart	RelFinish	RelSite	RelRiver
Cle Elum	Chinook Yearling	SP	2001	266,600	03/15/2001	05/31/2001	Easton Pd	Yakama River
Cle Elum	Chinook Yearling	SP	2001	257,700	03/15/2001	05/31/2001	Jack Creek Acclim	Yakama River
Cle Elum	Chinook Yearling	SP	2001	232,700	03/15/2001	05/31/2001	Clark Flat Acclim	Yakama River
Yakima Tribe Total				757,000				

GRAND TOTAL **13,809,655**

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/16/2001 *	9	252	0	0	---	---	---	---	---	---	401
03/17/2001	---	102	---	---	---	---	---	---	---	---	372
03/18/2001	---	106	---	---	---	---	---	---	---	---	150
03/19/2001	77	94	0	0	---	---	---	---	---	---	377
03/20/2001	115	465	0	0	---	---	---	---	---	---	315
03/21/2001 *	201	982	1	0	---	---	---	---	---	---	0
03/22/2001 *	147	790	19	0	---	---	---	---	---	---	0
03/23/2001 *	85	760	8	0	---	---	---	---	---	---	337
03/24/2001 *	---	574	---	---	---	---	---	---	---	---	231
03/25/2001	---	606	---	---	---	---	---	---	---	---	122
03/26/2001 *	226	0	3	0	60	---	---	---	---	---	211
03/27/2001	471	935	8	0	200	---	---	---	---	---	314
03/28/2001	297	1,000	36	1	280	---	---	---	---	---	224
03/29/2001	176	269	21	0	460	---	---	---	---	---	257
03/30/2001 *	536	---	---	---	---	---	---	---	---	0	299
Total:	2,340	6,935	96	1	1,000	0	0	0	0	0	3,610
# Days:	11	14	10	10	4	0	0	0	0	1	15
Average:	213	495	10	0	250	0	0	0	0	0	241

COMBINED SUBYEARLING CHINOOK

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/16/2001 *	0	0	0	0	---	---	---	---	---	---	5,075
03/17/2001	---	0	---	---	---	---	---	---	---	---	4,760
03/18/2001	---	0	---	---	---	---	---	---	---	---	3,024
03/19/2001	0	0	0	0	---	---	---	---	---	---	2,531
03/20/2001	0	0	0	0	---	---	---	---	---	---	4,782
03/21/2001 *	0	0	0	1	---	---	---	---	---	---	225
03/22/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/23/2001 *	0	0	0	0	---	---	---	---	---	---	2,132
03/24/2001 *	---	0	---	---	---	---	---	---	---	---	2,076
03/25/2001	---	0	---	---	---	---	---	---	---	---	928
03/26/2001 *	0	0	0	0	0	---	---	---	---	---	614
03/27/2001	0	0	0	0	0	---	---	---	---	---	776
03/28/2001	1	0	0	0	0	---	---	---	---	---	982
03/29/2001	0	0	0	0	0	---	---	---	---	---	571
03/30/2001 *	0	---	---	---	---	---	---	---	---	0	546
Total:	1	0	0	1	0	0	0	0	0	0	29,022
# Days:	11	14	10	10	4	0	0	0	0	1	15
Average:	0	0	0	0	0	0	0	0	0	0	1,935

*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)
03/16/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/17/2001	---	0	---	---	---	---	---	---	---	---	0
03/18/2001	---	0	---	---	---	---	---	---	---	---	0
03/19/2001	0	0	0	0	---	---	---	---	---	---	63
03/20/2001	0	0	0	0	---	---	---	---	---	---	0
03/21/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/22/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/23/2001 *	0	0	0	0	---	---	---	---	---	---	25
03/24/2001 *	---	0	---	---	---	---	---	---	---	---	12
03/25/2001	---	0	---	---	---	---	---	---	---	---	0
03/26/2001 *	0	0	0	0	0	---	---	---	---	---	0
03/27/2001	0	0	0	0	0	---	---	---	---	---	21
03/28/2001	0	0	0	0	0	---	---	---	---	---	16
03/29/2001	0	0	0	0	20	---	---	---	---	---	7
03/30/2001 *	0	---	---	---	---	---	---	---	---	0	7
Total:	0	0	0	0	20	0	0	0	0	0	151
# Days:	11	14	10	10	4	0	0	0	0	1	15
Average:	0	0	0	0	5	0	0	0	0	0	10

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)
03/16/2001 *	0	8	0	0	---	---	---	---	---	---	0
03/17/2001	---	5	---	---	---	---	---	---	---	---	0
03/18/2001	---	7	---	---	---	---	---	---	---	---	0
03/19/2001	0	13	0	0	---	---	---	---	---	---	0
03/20/2001	0	41	1	0	---	---	---	---	---	---	24
03/21/2001 *	0	45	0	0	---	---	---	---	---	---	0
03/22/2001 *	0	39	3	0	---	---	---	---	---	---	0
03/23/2001 *	0	21	2	0	---	---	---	---	---	---	0
03/24/2001 *	---	26	---	---	---	---	---	---	---	---	12
03/25/2001	---	16	---	---	---	---	---	---	---	---	0
03/26/2001 *	1	0	2	2	40	---	---	---	---	---	0
03/27/2001	0	17	3	0	60	---	---	---	---	---	21
03/28/2001	0	26	10	3	100	---	---	---	---	---	16
03/29/2001	0	14	1	2	120	---	---	---	---	---	21
03/30/2001 *	0	---	---	---	---	---	---	---	---	20	30
Total:	1	278	22	7	320	0	0	0	0	20	124
# Days:	11	14	10	10	4	0	0	0	0	1	15
Average:	0	20	2	1	80	0	0	0	0	20	8

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
03/16/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/17/2001	---	0	---	---	---	---	---	---	---	---	0
03/18/2001	---	0	---	---	---	---	---	---	---	---	0
03/19/2001	0	0	0	0	---	---	---	---	---	---	0
03/20/2001	0	0	0	0	---	---	---	---	---	---	0
03/21/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/22/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/23/2001 *	0	0	0	0	---	---	---	---	---	---	0
03/24/2001 *	---	0	---	---	---	---	---	---	---	---	0
03/25/2001	---	0	---	---	---	---	---	---	---	---	0
03/26/2001 *	0	0	0	0	20	---	---	---	---	---	0
03/27/2001	0	0	0	0	10	---	---	---	---	---	14
03/28/2001	0	0	0	0	10	---	---	---	---	---	0
03/29/2001	0	0	0	0	10	---	---	---	---	---	0
03/30/2001 *	0	---	---	---	---	---	---	---	---	0	0
Total:	0	0	0	0	50	0	0	0	0	0	14
# Days:	11	14	10	10	4	0	0	0	0	1	15
Average:	0	0	0	0	13	0	0	0	0	0	1

Definitions for Smolt Index Counts

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

IMN (Collection) = Imnaha River Trap : Collection Counts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Cumulative Adult Passage at Mainstem Dams Through 03/28

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	5,625	4	728	4	352	1	0	0	0	0	0	0	0	0	0	0	0	0
TDA	---	---					---	---					---	---				
JDA	---	---					---	---					---	---				
MCN	---	---					---	---					---	---				
IHR	---	---					---	---					---	---				
LMN	---	---					---	---					---	---				
LGS	---	---					---	---					---	---				
LWG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD	---	---					---	---					---	---				
RIS	---	---					---	---					---	---				
RRH	---	---					---	---					---	---				
WEL	---	---					---	---					---	---				

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	743	599	508	186
TDA	---	---					---			---			---
JDA	---	---					---			---			---
MCN	---	---					---			---			---
IHR	---	---					---			---			---
LMN	---	---					---			---			---
LGS	---	---					---			---			---
LWG	0	0	0	0	0	0	0	0	0	2,812	1,318	1,794	378
PRD	---	---					---			---			---
RIS	---	---					---			---			---
RRH	---	---					---			---			---
WEL	---	---					---			---			---

LGR is through 03/27/01

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

		03/17/01 TO 03/30/01				
		Species				
Site	Data	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	1,000	20	50	320	1,390
	Sum of NumberBarged	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	0
	Sum of NumberTrucked	997	20	48	320	1,385
	Sum of TotalProjectMortalities	3	0	2	0	5
Total Sum of NumberCollected		1,000	20	50	320	1,390
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		0	0	0	0	0
Total Sum of NumberTrucked		997	20	48	320	1,385
Total Sum of TotalProjectMortalities		3	0	2	0	5

YTD Transportation Summary

		TO: 03/30/01				
		Species				
Site	Data	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	1,000	20	50	320	1,390
	Sum of NumberBarged	0	0	0	0	0
	Sum of NumberBypassed	0	0	0	0	0
	Sum of NumberTrucked	997	20	48	320	1,385
	Sum of TotalProjectMortalities	3	0	2	0	5
Total Sum of NumberCollected		1,000	20	50	320	1,390
Total Sum of NumberBarged		0	0	0	0	0
Total Sum of NumberBypassed		0	0	0	0	0
Total Sum of NumberTrucked		997	20	48	320	1,385
Total Sum of TotalProjectMortalities		3	0	2	0	5