Fish Passage Center

Weekly Report #00 - 11

May 19, 2000

2501 SW First Ave., Suite 230
Portland, OR 97201-4752
phone: 503/230-4582
fax: 503/230-7559

SUMMARY OF EVENTS:

Water Supply: Precipitation over the period of May 1-16 at Columbia above Coulee was 103% of normal, for the Snake River above Ice Harbor was 110% of normal and for the Columbia above The Dalles was 115% of normal. The highest precipitation in the region for the same period has been recorded at Hood/Lower Deschutes with 193% of normal, SW WA Cascades/Cowlitz with 163% of normal, and Umatilla/LWR John Day with 160% of normal. The lowest precipitation continued to be recorded at Clark Fork with 67% of normal and Flathead with 61% of normal. Unseasonably cool weather from the beginning of May resulted in delayed snowmelt and further decrease in inflows. The new May-Midmonth Runoff Volume Forecast has been issued. Projected runoff volumes confirmed previous May Final forecast for the most of the subbasins. A significant increase is recorded at Libby of 4%, from 105% to 109%. The May midmonth forecast is presented in the following table:

Site	May-Early Runoff Volume Forecast		May-Final Runoff Volume Forecast		May-Midmonth Runoff Volume Forecast	
	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg	Runoff Volume [KAF]	% of avg
Mica (April-Sept.)	13.1	103	13.2	104	**13.2**	**104**
Hungry Horse (April-Sept.)	2.13	98	2.08	95	**2.08**	**95**
Libby (April-Sept.)	7.41	109	7.08	105	**7.36**	**109**
Grand Coulee (Jan.-July)	66.6	105	65.8	104	**66.0**	**104**
The Dalles (Jan.-July)	105.0	99	105.0	99	**105.0**	**99**
Brownlee (April-July)	4.32	75	4.08	70	**4.04**	**70**
Dworshak (April-July)	2.62	97	2.56	95	**2.58**	**96**
Lower Granite (Jan.-July)	26.9	90	26.4	89	**26.4**	**89**
Heise NR-ID (April-July)	2.94	85	2.83	82	**2.85**	**83**
Weiser –ID (April-July)	3.94	75	3.69	68	**3.66**	**67**

Reservoir Operations: Reservoirs were operated for spring flow augmentation and refill during the past week of May 12-18. A summary of actual elevations on May 18, and full pool elevations is shown in the following Table:

Project	Actual May 18 Elevation in [ft]	Full Pool Elevation in [ft]
Libby	2374.04	2459.0
Hungry Horse	3520.98	3560.0
Grand Coulee	1234.70	1290.0
Brownlee	2058.21*	2077.0
Dworshak	1551.38	1600.0

* elevation as of May 17

Libby reservoir continued to refill in order to meet the 95 BiOp and the sturgeon BiOp, which includes refill to full pool elevation by June 30 and sturgeon flow releases. The reservoir is at minimum outflows of 4 kcfs. Inflows to the project were fluctuating from 13.1 kcfs on May 18 to 16.8 kcfs on May 17.

Hungry Horse was operated for refill during May 12-18. Currently, inflows are increasing from 6.42 kcfs on May 14 to 13.09 kcfs on May 18. The project was operated with outflows in the range of 0.51 kcfs to 2.72 kcfs during May 12-18.

Grand Coulee was operated for flow augmentation through the past week of May 12-18 to maintain weekly average of 240 kcfs at McNary. The reservoir was at elevation 1234.7 ft on May 18, which was about 5 ft below the expected elevation due to decreased inflows in the system. Inflows fluctuated from 128.9 kcfs on May 17 to 141.2 kcfs on May 14.

Brownlee provided flow augmentation operations through May 15, and then started refilling again. The reservoir increased outflow to

22 kcfs on May 10 in agreement with Salmon Managers for flow augmentation at Lower Granite during the May 10-15 period. The outflows at Hells Canyon Dam were in the range of 18.24 kcfs-25.2 kcfs for the period of May 11-15. The agreement of IPCo with BPA for delivery of augmentation water expired on May 15. Outflows at Hells Canyon Dam were in the range of 11.86-11.91 kcfs for the period of May 16-17. Current inflows were in the range of 16.92 kcfs on May 15 to 19.35 kcfs on May 11.

Dworshak continued with refill operations. The outflow was further decreased to 1.5 kcfs on May 12 to meet refill target by the end of June with higher probability. Inflows increased from 12.1 kcfs on May 14 to 16.1 kcfs on May 18.

Upper Snake reservoirs: As of May 18, the Upper Snake system is at 92% of capacity. American Falls is at 99% of capacity and Palisades and Jackson Lake are at 83% and 91% of capacity. The irrigation demands in the system are increasing. Flow below American Falls is 9.9 kcfs, and at Milner, which is the lowest point in the Upper Snake system, is 0.27 kcfs.

Boise and Payette River Basins: Both systems continue with refill operations. As of May 18, the Boise River system is at 90% of capacity. The major reservoirs: Arrowrock is at 92% of full, Anderson Ranch is at 89% of full and Lucky Peak is at 91% of full. As of May 18, the Payette River system is at 93% of capacity. The major reservoir, Cascade is at 93% of full capacity.

Streamflow: The 1995 Biological Opinion spring flow targets based on May Final Runoff Volume forecast are: at Lower Granite 197 kcfs and at McNary 260 kcfs. The 1998 Biological Opinion flow target at Priest Rapids is 135 kcfs beginning on April 10.

The average discharges for the major run-of river projects for May 5-18 period are given in the following table:

Project	Average discharge [kcfs]	
	May 12-18	May 5-11
Priest Rapids	171.01	180.5
McNary	244.5	274.6
Lower Granite	69.98	86.3
Bonneville	266.04	289.3

Lower Granite: Early drafting of Dworshak reservoir by the COE for flood control in the March-April period followed by decreased May Final runoff volume forecast and continuation of the refill operations at Brownlee over the past week resulted in further decrease of flows at Lower Granite during May 12-18. Flows were in the range of 62.3 kcfs-78.5 kcfs.

Priest Rapids: Fishery Agencies requested minimum flows of 170 kcfs to avoid stranding fish during the peak emergence period of May 6-14. Daily average flows were fluctuating between 162.6 kcfs on May 14 to 175.3 kcfs on May 18 being higher than 170 kcfs beginning on May 7, with the exception of May 14.

McNary: Flows were in the range of 228.8 kcfs on May 13 to 258.2 kcfs on May 12.

Spill: Dworshak Dam was operated at the minimum of 1.5 Kcfs for the past week. Spill for fish passage continues at the Lower Snake projects as described by the NMFS and Action Agencies' Spill Plan.

Spill for fish passage continues at the lower Columbia River projects. The NMFS and Action Agencies' Spill Plan modifies spill at the lower Columbia Projects. The Dalles spill is reduced from 64% to 40% for 24 hours each day. Nighttime spill as described in the 1998 Supplemental Biological Opinion will continue at John Day and Bonneville dams, but daytime spill will be studied at John Day and Bonneville dams. At John Day Dam daytime spill will vary between 0 and 30% in three-day blocks. At Bonneville Dam daytime spill will vary between the old 75 Kcfs spill level and the gas cap spill (120-150 Kcfs). Days of gas cap spill at Bonneville Dam will correspond to days of zero daytime spill at John Day Dam.

Spill volumes were decreased at some projects because of total dissolved gas levels produced. The COE has reduced spill volumes at Lower Monumental, Little Goose, and Bonneville dams based on downstream forebay readings.

The FERC spill program continues at the Mid Columbia projects.

With the exception of a few forebay monitor readings levels of total dissolved gas were signifi-

cantly below the allowable TDGS levels at all locations measured. Monitoring for signs of gas bubble trauma (GBT) on fish collected through the Smolt Monitoring Program was conducted this past week. Few fish were detected with signs of GBT in fins.

Smolt Monitoring Program. Snake River basin: This week has seen Lower Granite Dam passage indices drop rapidly as Snake River flows dropped. Still above100,000 yearling chinook and 200,000 steelhead on May 10, the daily passage indices as of May 17 had dropped to only approximately 15,000 yearling chinook and 52,000 steelhead. During this week, increased numbers of steelhead were collected at the Salmon River trap, so we can expect further increases in steelhead passage at Lower Granite Dam if and when flows rise again. Mid-Columbia River: Yearling chinook and steelhead passage indices at Rock Island Dam began to rise later this year and are currently showing these smolt runs progressing about 10 days later than the historical average. Lower Columbia River: Yearling chinook passage indices at McNary and Bonneville dam's also show a later smolt run timing this year, while steelhead passage indices do not. During the past two weeks, the increases in passage indices for yearling chinook, steelhead, and sockeye at these two dams have been relatively small.

Adult Fish Passage: Passage of adult spring chinook at Bonneville Dam through the week (5/12-5/18) ranged between 1,432 and 827. The cumulative count through May 18 was 168,795, approximately 4.8 times and 2.9 times greater than the respective 1999 count and 10-year average. The adult counts at other lower Columbia River projects were: The Dalles 93,249; John Day 73,583; and McNary 54,092. About 55% of the adult chinook and 64.5% of the jack chinook counted at Bonneville have moved upstream past The Dalles Dam. Through May 14, approximately 2,922 adult spring chinook have been counted at 3-Mile Dam located on the Umatilla River and through May 6, 5,930 counted at Prosser Dam on the Yakama River. The turnoff of adult chinook salmon into the Snake River totaled 28,334 at Ice Harbor Dam through May 18 [May 6 & 12 count missing] and that was 11.4 times greater than the 1999 total and 2.7 times greater than the 10-year average. Adult salmon counted at Priest Rapids Dam was 16,615 through May 17. The count of adult chinook past Rock Island Dam was 7,262 through May 14; and of this total, 1,989 have passed Rocky Reach Dam. The year-2000 adult chinook counts at Bonneville, Ice Harbor and Priest Rapids remain nearly 3 times greater than the 10-year average.

Numbers of jack chinook continued their decline through the week at Bonneville with daily counts ranging from near 700 per day to 300 by week's end. The total jack chinook count at Bonneville Dam remains well above normal with 18,268 through May 18. The jack count was approximately 8 times greater than the 10-year average.

Steelhead counts at Bonneville Dam increased this week with counts ranging between 50 and 90 for the week. The cumulative count through May 18 was 2,799. Wild steelhead totaled 909 for the season.

Sampled fish at Lower Granite and Bonneville dams appear in good condition with few lesions or abrasions on the head area at either site. Marks from marine mammal attacks were mainly scratches rather than flesh wounds; however, the overall rate of these attacks were similar to previous years. As reported last week, about 14% (average to date) of the sampled fish at Bonneville Dam had marine mammal marks. Some chinook at the Umatilla River [3-Mile Dam] sampling facility were reported with additional damage to the snout and head area.

Hatchery Releases: Approximately 13.8 million fish were released from Basin hatcheries during the past two weeks and about 4.1 million projected for the upcoming two weeks.

Snake River – Yearling chinook, coho, and sockeye juvenile salmon are completed for the year 2000 migration. Juvenile steelhead are nearing completion for the year with the acclimation facilities at Grande Ronde sites releasing fish. Subyearling fall chinook will be released into the

Snake and Clearwater Rivers in June and July.

Mid-Columbia – (above McNary Dam) Yakama Tribal Supplementation Facilities at Clark Flat and Easton continued volitional release of yearling chinook in the upper Yakama River basin. Juvenile steelhead releases continued in the Wenatchee, Methow, and Okanogan rivers during the week and will continue until completed this month. Summer chinook releases (yearling fish) are now completed for the year. Subyearling summer and fall chinook are scheduled for release from late May to late June. Coho salmon were planted into the Yakama, Wenatchee, and Methow rivers during May.

Lower Columbia - (from above Bonneville Dam to below McNary Dam). Yearling spring chinook releases are finished for the year. Coho releases are complete in this Reach with exception of the volitional release from Klickitat Hatchery. Juvenile steelhead releases were completed this past week. The final release of subyearling fall chinook was completed on May 18 from Spring Creek NFH with the Umatilla River plants slated for late May and June.

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

	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/05/00	156.6	0.0	156.7	0.0	165.2	10.0	176.8	27.8	180.8	30.9	191.8	72.2	189.0	105.8
05/06/00	131.1	0.0	133.1	0.0	140.9	9.4	150.7	28.9	154.1	31.0	167.9	59.1	170.1	94.8
05/07/00	144.4	0.0	148.0	0.0	154.0	10.0	158.2	27.9	162.5	30.9	172.5	61.2	164.1	92.1
05/08/00	156.0	0.0	164.9	0.0	170.5	10.0	174.5	23.3	174.5	31.0	178.2	64.1	183.4	102.3
05/09/00	174.2	0.0	168.4	6.6	169.3	10.0	173.9	21.7	176.1	31.0	190.5	68.6	188.7	104.3
05/10/00	163.3	0.0	169.5	0.0	176.8	10.0	190.6	29.9	194.4	30.9	191.1	67.7	188.6	106.7
05/11/00	150.8	0.0	156.1	1.0	160.4	10.0	167.7	31.0	169.4	30.9	186.5	65.7	179.8	100.6
05/12/00	152.3	0.0	159.6	0.0	168.1	10.0	174.4	29.6	176.6	31.0	177.4	62.0	171.0	95.6
05/13/00	145.7	0.0	149.1	0.0	155.6	10.0	159.2	27.1	162.2	30.9	175.4	66.0	175.9	99.7
05/14/00	128.6	0.0	131.1	0.0	137.9	9.3	142.8	25.4	145.5	31.0	165.6	62.5	165.6	92.3
05/15/00	159.8	0.0	164.7	0.0	168.8	10.0	173.6	25.3	176.1	30.9	172.2	66.0	165.8	93.5
05/16/00	149.4	0.0	150.4	0.0	152.9	10.0	162.9	23.6	168.0	30.9	176.9	66.4	181.1	101.8
05/17/00	149.5	0.0	152.5	0.0	158.5	10.0	158.6	27.1	167.1	30.9	173.5	60.9	161.5	92.3
05/18/00	150.1	0.0	154.3	0.0	163.6	10.0	175.3	23.2	171.1	31.0	179.0	62.5	176.2	99.3

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

	Dworshak		Brownlee	Hells Canyon	Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
Date	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/05/00	10.6	0.0	18.7	13.2	99.3	24.0	96.1	23.0	97.4	32.2	104.9	64.5
05/06/00	10.5	0.0	18.8	13.4	96.3	23.1	93.1	23.4	96.8	32.7	100.1	63.5
05/07/00	10.5	0.0	19.1	11.9	88.5	22.0	85.7	23.5	88.6	32.3	95.2	65.7
05/08/00	9.7	0.0	18.1	11.9	83.0	21.2	79.8	22.2	81.8	32.5	85.6	62.9
05/09/00	3.7	0.0	18.2	18.2	76.1	19.0	74.1	22.7	73.8	30.4	77.2	57.1
05/10/00	3.5	0.0	18.5	22.1	79.7	20.1	76.2	22.3	77.8	25.7	84.5	63.0
05/11/00	3.4	0.0	19.4	22.7	81.9	20.4	78.5	24.3	80.4	23.3	85.6	62.0
05/12/00	1.5	0.0	18.7	21.4	78.5	20.2	74.9	27.2	75.9	24.2	81.0	61.7
05/13/00	1.4	0.0	18.1	23.1	72.7	18.6	70.2	27.4	72.6	28.8	79.3	61.5
05/14/00	1.5	0.0	18.0	23.0	70.8	17.9	67.6	27.0	69.3	34.9	74.6	58.1
05/15/00	1.5	0.0	16.9	16.2	69.7	17.8	67.9	27.3	69.6	37.7	73.3	55.9
05/16/00	1.5	0.0	17.9	11.8	62.3	16.7	60.8	25.2	62.9	35.8	65.8	53.0
05/17/00	1.5	0.0	16.8	11.9	67.0	17.8	64.5	25.7	64.0	31.1	70.6	55.4
05/18/00	1.5	0.0	---	---	68.9	17.3	65.7	26.8	67.0	28.5	72.4	56.4

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

	McNary		John Day		The Dalles		Bonneville			
Date	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
05/05/00	297.0	125.0	298.6	118.0	301.0	117.2	314.7	82.5	111.2	112.0
05/06/00	282.9	115.8	304.6	116.8	289.7	115.7	305.5	80.5	103.4	112.0
05/07/00	257.2	106.4	267.3	109.3	266.8	109.3	283.4	79.6	97.1	96.3
05/08/00	273.4	113.5	275.2	67.6	267.9	105.0	278.8	88.1	96.5	83.8
05/09/00	277.8	116.9	274.6	69.0	280.7	108.1	301.9	86.1	96.1	109.3
05/10/00	259.1	111.0	260.5	70.6	253.1	99.8	261.4	84.9	90.2	75.9
05/11/00	274.6	114.4	271.5	112.6	261.2	103.8	279.6	79.5	84.2	105.5
05/12/00	258.2	98.1	272.6	113.4	272.4	108.3	290.0	81.6	85.6	112.4
05/13/00	228.8	98.0	235.7	105.8	230.8	93.7	256.6	80.2	80.4	84.5
05/14/00	249.4	107.2	263.0	71.2	258.9	104.0	266.7	91.0	82.0	83.4
05/15/00	256.5	104.8	264.6	72.4	261.1	104.3	282.8	88.1	84.0	100.3
05/16/00	231.6	107.9	237.2	67.2	234.2	95.0	260.4	87.3	86.7	76.0
05/17/00	240.3	100.8	235.8	104.1	239.6	93.7	240.4	78.4	76.2	75.4
05/18/00	246.4	110.9	257.4	109.6	251.5	102.5	265.4	79.8	87.4	87.8

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: Rank 1	Rank 2	Rank 3	Rank 4	Fish with L. Line GBT: Num Fish	Avg. Rank
Lower Granite Dam													
	05/15/00	Yearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/15/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
Little Goose Dam													
	05/10/00	Yearling Chinook	100	1	1	1.00%	0.00%	1	0	0	0	0	0
	05/10/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/17/00	Yearling Chinook	100	2	2	2.00%	0.00%	2	0	0	0	0	0
	05/17/00	Steelhead	72	1	1	1.38%	0.00%	0	1	0	0	0	0
Lower Monumental Dam													
	05/15/00	Yearling Chinook	100	4	0	0.00%	0.00%	0	0	0	0	4	1.2
	05/15/00	Steelhead	100	3	0	0.00%	0.00%	0	0	0	0	3	1
Ice Harbor Dam													
	05/09/00	Yearling Chinook	99	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/09/00	Steelhead	87	1	0	0.00%	0.00%	0	0	0	0	0	0
	05/16/00	Yearling Chinook	35	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/16/00	Steelhead	27	0	0	0.00%	0.00%	0	0	0	0	0	0
McNary Dam													
	05/11/00	Yearling Chinook	100	4	0	0.00%	0.00%	0	0	0	0	4	1
	05/11/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/15/00	Yearling Chinook	100	2	0	0.00%	0.00%	0	0	0	0	2	1.5
	05/15/00	Steelhead	100	3	0	0.00%	0.00%	0	0	0	0	3	1
	05/18/00	Yearling Chinook	100	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/18/00	Steelhead	100	1	0	0.00%	0.00%	0	0	0	0	0	0
Bonneville Dam													
	05/11/00	Yearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/11/00	Steelhead	100	1	0	0.00%	0.00%	0	0	0	0	1	1
	05/15/00	Yearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/15/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/18/00	Yearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/18/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
Rock Island Dam													
	05/11/00	Yearling Chinook	100	5	2	2.00%	0.00%	1	1	0	0	3	1
	05/11/00	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0	0	0
	05/15/00	Yearling Chinook	100	5	3	3.00%	0.00%	2	1	0	0	2	1
	05/15/00	Steelhead	100	2	1	1.00%	0.00%	1	0	0	0	1	1
	05/18/00	Yearling Chinook	100	5	1	1.00%	0.00%	1	0	0	0	4	1
	05/18/00	Steelhead	100	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

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	99	99	100	24	123	123	124	24	111	111	112	24	109	109	110	24	107	107	108	23
5/6	103	104	105	24	123	123	124	24	111	112	112	24	109	109	110	24	107	107	107	23
5/7	103	104	104	24	122	123	124	24	111	112	112	24	109	109	110	24	107	107	108	23
5/8	100	101	104	24	123	123	124	24	113	113	114	24	110	110	110	24	108	108	108	23
5/9	101	102	104	24	123	123	123	17	113	114	114	24	111	111	111	24	109	109	110	23
5/10	100	101	103	24	123	123	124	8	113	113	113	24	111	111	111	24	110	110	110	23
5/11	100	101	103	24	122	123	124	24	112	112	113	24	110	110	111	24	109	109	109	23
5/12	99	100	103	24	119	121	122	24	112	112	113	24	109	110	110	24	108	108	109	23
5/13	103	104	105	24	117	121	124	22	113	113	113	24	110	111	111	24	109	110	110	23
5/14	103	104	104	24	131	136	145	22	114	114	115	24	111	112	112	24	111	111	111	23
5/15	100	101	103	24	133	137	143	20	114	115	116	24	111	112	112	24	111	111	112	23
5/16	100	101	104	25	125	131	143	24	114	115	115	25	112	112	113	25	112	112	113	23
5/17	99	100	103	24	118	119	120	24	114	114	115	24	111	111	111	24	112	112	112	23
5/18	101	103	133	24	119	120	122	24	113	113	114	24	110	110	111	24	111	111	112	22

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	108	108	109	23	107	107	107	24	108	108	109	24	108	108	108	22	110	110	111	20
5/6	107	108	109	23	106	107	107	24	108	108	108	24	107	108	108	22	110	110	111	19
5/7	107	108	109	23	107	107	107	23	108	108	108	23	107	108	108	22	109	109	110	21
5/8	108	108	108	23	108	108	108	24	109	109	109	24	108	108	109	22	109	109	110	22
5/9	109	110	110	22	108	109	109	23	109	110	110	23	109	109	109	24	110	110	110	21
5/10	109	109	111	23	108	108	109	24	109	110	110	24	108	109	109	23	110	111	112	19
5/11	108	109	110	23	107	108	108	24	109	109	109	24	107	107	108	23	110	110	111	21
5/12	108	108	109	23	107	107	108	24	109	109	109	24	107	107	107	24	109	109	110	22
5/13	109	109	110	23	108	108	109	23	109	110	110	23	108	108	109	23	109	110	110	22
5/14	110	111	111	23	110	110	110	10	111	111	112	10	109	110	110	22	110	110	111	20
5/15	110	110	111	23	110	110	111	23	111	112	112	23	109	110	110	23	111	111	112	20
5/16	111	112	114	23	111	111	111	25	112	112	113	25	110	110	110	24	112	112	112	23
5/17	113	113	116	23	110	111	111	24	111	112	112	24	109	109	110	22	111	111	112	22
5/18	111	112	113	23	109	110	110	24	111	111	111	24	109	109	110	23	110	111	111	18

Total Dissolved Gas Saturation at Mid Columbia River Sites

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	112	112	112	22	115	116	116	21	114	114	114	23	117	117	118	23	114	115	115	23
5/6	110	111	111	21	116	116	117	21	113	113	114	24	115	116	118	24	114	115	115	24
5/7	110	110	111	24	115	116	116	21	113	114	116	24	115	116	117	24	114	115	116	24
5/8	110	110	110	24	115	115	116	21	114	115	119	24	116	117	118	23	114	114	115	24
5/9	111	111	111	24	115	116	118	24	113	113	113	24	116	117	117	24	114	115	115	24
5/10	106	109	111	21	116	116	118	17	112	112	112	24	116	117	117	24	113	113	114	24
5/11	107	107	108	23	115	115	116	22	109	110	111	24	114	115	115	24	112	113	114	24
5/12	108	108	109	23	115	115	116	21	109	110	111	23	113	114	117	23	111	112	112	24
5/13	109	110	110	23	115	116	116	22	112	113	114	24	116	117	118	24	114	115	116	24
5/14	110	110	111	23	116	117	117	22	115	117	119	24	116	117	118	24	116	116	119	24
5/15	111	111	112	23	116	116	117	21	116	118	120	24	117	118	118	24	116	116	117	21
5/16	112	112	112	25	117	117	117	23	115	116	118	24	117	118	119	24	115	116	117	24
5/17	110	111	112	23	116	116	116	20	---	---	---	0	---	---	---	0	---	---	---	0
5/18	109	109	110	22	116	116	116	21	---	---	---	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

	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	121	121	122	23	113	113	114	24	100	101	101	24	101	102	102	24	104	104	105	24
5/6	120	120	121	24	112	113	114	24	100	100	101	24	101	102	103	24	104	105	106	24
5/7	120	120	121	24	113	113	114	23	100	100	101	24	101	102	103	24	104	105	106	24
5/8	120	121	121	24	113	114	114	24	101	101	102	24	101	102	102	24	104	104	105	24
5/9	120	120	121	24	112	113	114	24	102	102	103	24	102	102	103	24	104	104	105	24
5/10	119	120	120	24	109	109	110	24	102	103	103	23	102	102	102	23	103	104	104	24
5/11	119	119	120	24	108	109	109	24	102	103	104	24	101	102	102	24	103	104	105	24
5/12	118	119	119	23	109	110	112	24	107	109	110	24	102	103	104	24	104	105	105	24
5/13	120	120	120	24	112	113	113	24	110	111	112	24	103	104	105	24	104	105	106	24
5/14	121	121	121	24	113	114	115	24	108	108	110	24	103	103	104	24	104	105	106	24
5/15	121	121	121	23	114	114	115	24	108	109	111	24	103	104	105	24	104	105	106	24
5/16	121	121	122	24	114	115	116	25	107	109	110	25	103	104	105	25	104	105	106	25
5/17	---	---	---	0	111	112	114	24	106	107	109	24	102	103	104	24	103	104	105	24
5/18	---	---	---	0	110	110	111	24	106	107	109	24	103	104	105	24	104	105	106	24

Total Dissolved Gas Saturation Data at Snake River Sites

	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		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	102	102	103	24	104	104	104	24	110	111	112	24	108	108	109	24	113	118	118	24
5/6	102	103	104	24	105	106	107	24	110	110	111	24	107	107	108	24	113	118	118	24
5/7	102	103	104	24	104	105	105	24	109	110	111	24	108	109	111	24	113	118	118	24
5/8	102	103	104	24	105	106	107	24	110	110	110	24	108	108	109	24	113	118	119	24
5/9	102	102	104	24	106	106	107	24	109	109	110	24	108	108	108	24	113	118	119	24
5/10	101	102	103	23	105	105	105	24	109	109	110	24	107	107	107	24	113	118	119	24
5/11	101	102	103	24	103	104	104	24	109	109	109	24	105	106	106	24	112	119	120	24
5/12	102	104	105	24	103	104	105	24	108	109	109	24	104	105	108	24	112	120	121	24
5/13	103	105	106	24	104	105	106	24	108	108	108	24	106	107	108	24	113	120	121	24
5/14	103	104	105	24	106	108	110	24	108	109	109	24	107	108	109	24	114	120	121	24
5/15	103	105	106	24	108	109	110	24	109	109	109	24	109	111	114	24	115	121	121	24
5/16	103	105	106	25	107	107	108	25	108	109	110	25	108	109	111	25	115	120	121	25
5/17	102	104	105	24	105	105	106	24	108	108	109	24	107	107	109	24	113	120	121	24
5/18	103	104	105	24	104	104	106	24	107	108	109	24	106	106	106	24	114	120	121	24

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

	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		#	24 h	12 h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	112	114	116	24	117	118	119	24	113	113	114	24	115	116	117	24	113	114	115	24
5/6	113	115	117	24	117	118	119	21	114	115	116	24	114	115	117	24	114	115	117	24
5/7	114	117	120	24	117	118	118	24	116	118	121	24	115	117	117	24	114	115	116	23
5/8	114	116	119	24	117	117	118	24	117	117	118	24	114	115	117	24	114	115	116	24
5/9	113	115	116	24	116	117	118	24	117	117	117	24	113	115	117	24	115	116	118	24
5/10	112	113	114	24	115	116	117	24	115	115	116	24	114	115	116	24	113	114	114	24
5/11	110	111	113	24	114	114	115	24	111	112	113	24	114	114	116	24	108	109	111	24
5/12	108	110	112	24	114	115	116	24	109	110	112	24	113	114	116	24	107	108	111	24
5/13	111	114	115	24	116	116	117	24	111	112	115	24	114	115	116	24	109	110	111	24
5/14	113	115	119	24	117	118	119	24	114	115	116	24	114	114	115	24	113	115	117	24
5/15	115	117	120	24	118	119	119	24	116	118	119	23	113	114	115	24	116	118	120	24
5/16	115	117	119	25	117	118	120	25	118	119	119	24	113	114	116	25	116	118	120	25
5/17	113	115	117	24	116	117	118	24	117	117	118	24	113	113	116	24	114	114	116	24
5/18	112	113	114	24	115	115	117	12	115	116	116	23	113	114	116	24	113	114	117	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

	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		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
5/5	113	113	114	24	119	119	119	23	113	113	113	23	119	119	121	24	112	113	115	23
5/6	113	114	115	24	118	119	119	24	112	112	113	23	118	119	121	24	113	115	116	23
5/7	114	116	116	23	117	118	119	23	113	114	117	23	118	119	119	24	114	115	116	23
5/8	115	116	116	24	118	119	119	24	114	114	115	23	116	118	119	24	114	115	116	23
5/9	115	115	116	24	118	119	119	24	114	114	116	23	116	118	119	24	113	114	115	23
5/10	112	113	113	24	117	118	118	24	114	114	114	23	116	118	120	24	112	114	115	23
5/11	108	108	110	24	117	118	118	24	111	111	113	23	119	119	121	24	111	112	114	23
5/12	106	108	110	24	116	118	119	24	108	110	111	23	119	119	120	24	111	114	115	23
5/13	109	111	112	24	116	117	118	24	109	110	111	23	118	118	119	24	113	114	116	23
5/14	114	116	117	24	116	118	118	24	108	108	110	19	113	118	119	24	113	115	116	23
5/15	117	119	120	24	116	118	119	24	109	109	110	23	114	118	119	23	110	113	114	23
5/16	116	117	118	25	117	119	120	25	111	111	112	23	114	118	118	25	110	112	113	23
5/17	114	114	116	24	117	119	120	24	110	110	111	23	118	119	119	24	107	109	110	23
5/18	113	113	114	24	117	119	120	24	108	109	109	23	119	119	120	24	110	113	115	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

	The Dalles Dnst				Bonneville				Warrendale				Skamania				Camas\Washugal			
	24 h	12 h		#	24 h	12 h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
5/5	118	119	120	24	114	115	115	23	116	116	117	23	116	117	118	23	116	116	117	24
5/6	119	120	121	24	115	116	116	23	116	117	118	23	117	117	118	23	116	117	118	18
5/7	119	120	120	24	116	117	117	23	117	118	118	23	118	118	118	23	117	118	120	22
5/8	119	119	120	24	116	117	117	23	118	118	119	23	119	119	119	23	117	118	118	24
5/9	118	119	120	24	116	116	116	22	118	118	119	23	117	118	118	23	116	117	117	24
5/10	118	119	119	24	113	114	115	23	115	116	117	23	116	116	117	22	113	114	114	24
5/11	117	118	119	24	111	112	113	23	114	115	116	23	113	114	115	21	112	113	113	24
5/12	118	120	120	24	112	112	114	23	115	115	116	23	114	114	115	23	113	115	116	24
5/13	118	119	120	24	114	114	115	23	117	118	118	23	117	117	118	23	115	116	117	23
5/14	119	120	122	24	113	114	114	23	119	119	120	22	119	119	120	23	117	119	119	24
5/15	117	119	120	24	113	113	114	23	118	118	119	23	118	118	119	23	117	119	119	24
5/16	116	117	117	25	109	110	112	23	116	117	118	23	116	117	117	23	116	117	118	25
5/17	115	117	118	24	105	106	107	23	112	112	113	23	112	113	114	23	112	113	114	24
5/18	118	120	121	24	106	106	107	23	112	112	113	23	112	112	113	23	111	113	114	24

Hatchery Release Summary

From 5/5/00 to 5/18/00

Hatchery	Species...		Migration Year	Number Released	...Release Dates... Begin...	...End	Release Site	River Name
				IDFG				
Eagle								
	UN	Sockeye	2000	148	05/09/00	05/09/00	Redfish Lake Cr	Salmon River
Magic Valley								
	SU	Steelhead	2000	106,135	04/10/00	06/08/00	Squaw Cr Acclim Pd	Salmon River
	SU	Steelhead	2000	2,455,502	04/20/00	05/08/00	Squaw Cr Acclim Pd	Salmon River
Niagara Springs								
	SU	Steelhead	2000	180,000	05/05/00	05/08/00	Hammer Cr	Salmon River
			Agency Totals:	**2,741,785**	.....			
				Nez Perce Tribe				
Kooskia								
	UN	Coho	2000	270,000	05/10/00	05/10/00	Kooskia H	Clearwater Rvr M F
Magic Valley								
	SU	Steelhead	2000	100,078	05/03/00	05/09/00	Newsome Cr	S Fk Clearwater River
	SU	Steelhead	2000	96,187	05/05/00	05/09/00	American R	S Fk Clearwater River
	SU	Steelhead	2000	19,557	05/10/00	05/10/00	Meadow Cr	S Fk Clearwater River
	SU	Steelhead	2000	19,556	05/10/00	05/10/00	Mill Cr	S Fk Clearwater River
			Agency Totals:	**505,378**	.....			
				ODFW				
Big Canyon								
	SU	Steelhead	2000	65,250	05/10/00	05/20/00	Big Canyon H	Grande Ronde River
	SU	Steelhead	2000	65,250	05/11/00	05/25/00	Big Canyon H	Grande Ronde River
Irrigon								
	SU	Steelhead	2000	3,000	05/03/00	05/07/00	Deer Cr	Grande Ronde River
Li Sheep								
	SU	Steelhead	2000	75,000	05/11/00	05/22/00	L Sheep Acclim Pd	Imnaha River
Round Butte								
	SP	Chinook	2000	30,000	05/10/00	05/10/00	Bel. Pelton Dam	Deschutes River
Wallowa								
	SU	Steelhead	2000	108,750	05/04/00	05/18/00	Wallowa Acclim Pd	Wallowa River
			Agency Totals:	**347,250**	.....			
				USFWS				
Dworshak								
	SU	Steelhead	2000	1,311,447	05/03/00	05/05/00	Dworshak H	Clearwater Rvr M F
Hagerman								
	SU	Steelhead	2000	310,000	04/26/00	05/08/00	Little Salmon R	Salmon River
Spring Creek								
	FA	Chinook	2000	3,700,000	05/18/00	05/18/00	Spring Creek H	Columbia River
Winthrop								
	SU	Steelhead	2000	105,000	04/12/00	05/31/00	Winthrop H	Methow River
			Agency Totals:	**5,426,447**	.....			
				WDFW				
Chiwawa								
	SU	Steelhead	2000	43,400	04/26/00	05/15/00	Chiwawa H	Wenatchee River

Hatchery Release Summary

From 5/5/00 to 5/18/00

Hatchery	Species...		Migration Year	Number Released	...Release Dates... Begin...	...End	Release Site	River Name
	SU	Steelhead	2000	25,600	04/26/00	05/15/00	Chiwawa H	Wenatchee River
Klickitat								
	UN	Coho	2000	1,400,000	04/15/00	06/05/00	Klickitat H	Klickitat River
	SP	Chinook	2000	150,000	05/01/00	05/05/00	Upper Klickitat R	Klickitat River
Wells								
	SU	Steelhead	2000	67,000	04/22/00	05/22/00	Bel. Wells Dam	Mid-Columbia River
	SU	Steelhead	2000	88,000	04/26/00	05/10/00	Okanogan R	Okanogan River
			Agency Totals:	**1,774,000**	.....			
					Yakima Tribe			
Clark Flat								
	SP	Chinook	2000	229,000	03/15/00	06/01/00	Clark Flat Acclim Pd	Yakama River
Cle Elum Slough								
	UN	Coho	2000	125,000	04/30/00	05/07/00	Cle Elum R	Yakama River
Easton Pond								
	SP	Chinook	2000	236,800	03/15/00	06/01/00	Easton Pd	Yakama River
	UN	Coho	2000	125,000	05/07/00	05/07/00	Easton Pd	Yakama River
Jack Creek Pond								
	SP	Chinook	2000	137,500	03/31/00	06/01/00	Jack Creek Acclim Pd	Yakama River
Lost Creek								
	UN	Coho	2000	125,000	05/07/00	05/07/00	Lost Creek Acclim Pd	Yakama River
Prosser								
	FA	Chinook	2000	1,700,000	05/15/00	06/07/00	Prosser Acclim Pd	Yakama River
Stiles Pond								
	UN	Coho	2000	125,000	05/07/00	05/07/00	Naches R	Yakama River
Winthrop								
	UN	Coho	2000	200,000	04/26/00	05/15/00	Winthrop H	Methow River
			Agency Totals:	**3,003,300**	.....			
			Total Release..	**13,798,160**				

Hatchery Release Summary

From 5/19/00 to 6/1/00

Hatchery	Species...		Migration Year	Number Released	...Release Dates... Begin...	...End	Release Site	River Name
				Nez Perce Tribe				
Lyons Ferry								
	FA	Chinook	2000	500,000	06/01/00	06/09/00	Big Canyon (Clearwater	Clearwater Rvr M F
	FA	Chinook	2000	500,000	06/01/00	06/09/00	Cpt John Acclim Pd	Snake River
			Agency Totals:	**1,000,000**	.....			
				Umatilla Tribe				
Thornhollow								
	FA	Chinook	2000	2,682,000	05/20/00	05/31/00	Thornhollow Acclim Pd	Umatilla River
			Agency Totals:	**2,682,000**	.....			
				Yakima Tribe				
Easton Pond								
	UN	Coho	2000	125,000	05/25/00	05/25/00	Easton Pd	Yakama River
Lost Creek								
	UN	Coho	2000	125,000	05/25/00	05/25/00	Lost Creek Acclim Pd	Yakama River
Stiles Pond								
	UN	Coho	2000	125,000	05/25/00	05/25/00	Naches R	Yakama River
			Agency Totals:	**375,000**	.....			
			Total Release..	**4,057,000**				

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK

	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/00	114	24	283	384	247,032	53,522	29,583	668	29,238	30,232	34,465
05/06/00	---	---	---	---	155,816	72,001	33,463	571	40,346	28,354	42,125
05/07/00	---	---	---	---	126,608	40,381	26,984	639	39,059	23,993	45,455
05/08/00	18	25	43	84	141,256	33,460	17,469	808	51,636	16,029	56,333
05/09/00	34	25	43	31	119,984	35,635	26,607	1,048	59,833	19,684	38,328
05/10/00	31	23	42	35	126,923	63,684	22,923	807	68,672	29,575	45,043
05/11/00	23	53	82	29	79,458	79,198	44,666	1,440	73,473	20,018	36,505
05/12/00	26	9	62	20	66,851	114,742	26,486	693	79,998	25,737	40,948
05/13/00	---	---	---	---	59,168	43,993	48,143	1,265	63,498	12,995	43,298
05/14/00	---	---	---	---	28,689	27,321	21,957	1,483	69,031	9,635	49,552
05/15/00	3	12	0	4	42,336	26,204	11,915	1,011	57,160	11,230	53,973
05/16/00	35	14	7	7	19,131	24,570	6,464	1,024	67,818	15,057	69,705
05/17/00	18	22	20	3	15,098	23,865	4,286	778	60,797	18,528	39,560
05/18/00	13	35	53	3	16,097	22,836	12,215	899	39,933	10,722	39,346
Total:	**315**	**242**	**635**	**600**	**1,244,447**	**661,412**	**333,161**	**13,134**	**800,492**	**271,789**	**634,636**
# Days:	**10**	**10**	**10**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:	**32**	**24**	**64**	**60**	**88,889**	**47,244**	**23,797**	**938**	**57,178**	**19,414**	**45,331**

COMBINED SUBYEARLING CHINOOK

	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/00	0	1	0	20	0	0	26	4	434	268	426
05/06/00	---	---	---	---	0	0	0	2	350	56	446
05/07/00	---	---	---	---	0	0	0	4	435	326	963
05/08/00	0	0	0	36	401	0	0	6	522	556	1,280
05/09/00	0	0	0	16	0	0	20	1	341	435	429
05/10/00	0	0	0	7	0	0	29	0	826	226	144
05/11/00	0	0	0	11	0	0	25	1	386	49	1,083
05/12/00	0	0	0	11	200	0	9	0	524	568	375
05/13/00	---	---	---	---	0	0	0	0	378	73	374
05/14/00	---	---	---	---	0	0	0	1	799	0	456
05/15/00	0	0	0	12	0	0	14	0	663	257	1,353
05/16/00	0	0	0	22	100	0	0	0	875	50	658
05/17/00	0	0	0	11	0	102	9	5	475	19	368
05/18/00	0	0	0	7	0	69	202	0	711	33	587
Total:	**0**	**1**	**0**	**153**	**701**	**171**	**334**	**24**	**7,719**	**2,916**	**8,942**
# Days:	**10**	**10**	**10**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:	**0**	**0**	**0**	**15**	**50**	**12**	**24**	**2**	**551**	**208**	**639**

* See sampling comments http://www.fpc.org/2000Daily/smpcomments.htm

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.

Two-Week Summary of Passage Indices

COMBINED COHO

	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/00	0	0	0	8	792	157	132	57	175	7,084	17,268
05/06/00	---	---	---	---	1,384	160	152	42	613	11,609	18,736
05/07/00	---	---	---	---	793	0	0	97	522	12,731	24,718
05/08/00	0	0	0	0	1,605	332	78	91	435	22,595	29,127
05/09/00	0	0	0	3	1,211	666	168	136	594	20,471	38,757
05/10/00	0	0	0	4	1,408	0	116	175	413	12,084	43,604
05/11/00	0	0	0	2	2,202	0	177	205	386	8,189	35,887
05/12/00	0	0	0	2	1,201	747	78	143	393	13,030	39,700
05/13/00	---	---	---	---	1,220	190	794	231	756	9,550	58,396
05/14/00	---	---	---	---	201	199	188	191	799	5,437	52,288
05/15/00	0	0	0	3	806	412	58	276	663	6,462	60,137
05/16/00	0	0	0	0	202	0	81	340	875	4,276	86,408
05/17/00	0	0	0	0	207	102	27	414	760	1,975	52,440
05/18/00	0	0	0	0	1,228	0	11	586	445	2,708	58,725
Total:	**0**	**0**	**0**	**22**	**14,460**	**2,965**	**2,060**	**2,984**	**7,829**	**138,201**	**616,191**
# Days:	**10**	**10**	**10**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:	**0**	**0**	**0**	**2**	**1,033**	**212**	**147**	**213**	**559**	**9,872**	**44,014**

COMBINED STEELHEAD

	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/00	90	206	404	581	279,323	33,694	27,417	294	12,056	12,386	10,588
05/06/00	---	---	---	---	490,189	34,462	41,828	426	16,108	15,870	16,952
05/07/00	---	---	---	---	518,718	30,970	24,110	450	9,483	13,139	12,263
05/08/00	41	386	89	211	397,283	53,300	15,336	840	10,694	15,545	15,364
05/09/00	69	538	72	187	239,631	29,454	21,865	1,005	11,542	8,871	12,728
05/10/00	50	889	85	193	213,013	22,191	13,610	1,082	13,077	12,073	19,716
05/11/00	65	1,304	203	347	174,127	46,995	14,239	999	11,326	8,287	16,551
05/12/00	42	11	173	245	171,930	66,940	11,681	725	16,297	7,988	21,847
05/13/00	---	---	---	---	113,660	16,749	48,301	791	12,849	7,880	11,979
05/14/00	---	---	---	---	48,550	10,778	49,920	718	15,591	8,856	13,376
05/15/00	117	847	15	98	98,380	6,606	28,294	520	9,283	6,645	6,916
05/16/00	193	1,126	18	60	79,557	8,429	21,505	606	9,274	5,714	24,594
05/17/00	165	1,369	27	106	52,532	3,896	13,639	567	12,632	4,432	16,192
05/18/00	39	2,462	34	316	51,838	3,873	19,178	685	7,031	8,363	21,728
Total:	**871**	**9,138**	**1,120**	**2,344**	**2,928,731**	**368,337**	**350,923**	**9,708**	**167,243**	**136,049**	**220,794**
# Days:	**10**	**10**	**10**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:	**87**	**914**	**112**	**234**	**209,195**	**26,310**	**25,066**	**693**	**11,946**	**9,718**	**15,771**

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 SOCKEYE

	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/05/00	0	0	0	4	198	0	18	18	1,561	1,543	640
05/06/00	---	---	---	---	198	0	0	11	2,188	1,789	956
05/07/00	---	---	---	---	0	0	0	12	1,740	1,714	2,054
05/08/00	0	0	0	33	0	0	0	13	1,912	1,142	960
05/09/00	1	0	0	12	0	0	0	17	3,055	2,166	715
05/10/00	1	0	0	9	201	0	0	21	1,651	1,529	1,151
05/11/00	0	0	0	6	400	167	8	35	2,316	833	773
05/12/00	1	0	0	8	400	0	17	29	2,621	1,335	1,623
05/13/00	---	---	---	---	0	0	0	76	2,645	834	1,747
05/14/00	---	---	---	---	0	0	0	81	2,132	956	760
05/15/00	1	0	0	5	0	0	28	57	1,724	1,654	902
05/16/00	1	0	0	7	202	0	56	61	2,364	1,781	1,841
05/17/00	0	0	0	4	0	0	20	49	2,469	984	552
05/18/00	1	0	0	4	136	0	12	32	1,245	775	2,055
Total:	**6**	**0**	**0**	**92**	**1,735**	**167**	**159**	**512**	**29,623**	**19,035**	**16,729**
# Days:	**10**	**10**	**10**	**10**	**14**	**14**	**14**	**14**	**14**	**14**	**14**
Average:	**1**	**0**	**0**	**9**	**124**	**12**	**11**	**37**	**2,116**	**1,360**	**1,195**

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)}

LEW and WTB data collected for the FPC by Idaho Dept. of Fish and Game.
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 05/18

	Spring Chinook						Summer Chinook						Fall Chinook					
	2000		1999		10-Yr Avg.		2000		1999		10-Yr Avg.		2000		1999		10-Yr Avg.	
DAM	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	168,795	18,268	34,903	6,665	58,165	2,233	0	0	0	0	0	0	0	0	0	0	0	0
TDA	93,249	11,781	14,073	4,102	32,502	1,313	0	0	0	0	0	0	0	0	0	0	0	0
JDA	73,583	9,186	11,214	2,936	24,909	979	0	0	0	0	0	0	0	0	0	0	0	0
MCN	54,092	7,326	6,170	1,474	22,570	822	0	0	0	0	0	0	0	0	0	0	0	0
IHR	28,334	5,177	2,483	882	10,510	300	0	0	0	0	0	0	0	0	0	0	0	0
LMN	24,436	5,037	1,352	557	8,758	236	0	0	0	0	0	0	0	0	0	0	0	0
LGS	19,501	3,821	1,003	440	**	**	0	0	0	0	**	**	0	0	0	0	**	**
LWG	22,432	4,708	795	357	6,397	152	0	0	0	0	0	0	0	0	0	0	0	0
PRD	16,706	455	2,519	43	6,288	41	0	0	0	0	0	0	0	0	0	0	0	0
RIS	7,262	113	615	9	2,453	9	0	0	0	0	0	0	0	0	0	0	0	0
RRH	1,989	28	126	11	364	2	0	0	0	0	0	0	0	0	0	0	0	0
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Coho						Sockeye			Steelhead			
	2000		1999		10-Yr Avg.				10-Yr			10-Yr	Wild
DAM	Adult	Jack	Adult	Jack	Adult	Jack	2000	1999	Avg.	2000	1999	Avg.	2000
BON	0	0	0	0	0	0	0	0	0	2,799	1,764	3,567	909
TDA	0	0	0	0	0	0	0	0	0	604	427	1,482	225
JDA	0	0	0	0	0	0	0	0	0	3,004	3,111	2,907	1,243
MCN	0	0	0	1	0	0	0	0	0	688	371	2,103	229
IHR	0	0	0	0	0	0	0	0	0	764	791	2,348	368
LMN	0	0	0	0	0	0	0	0	0	851	591	2,332	480
LGS	0	0	0	0	**	**	0	0	**	889	898	**	454
LWG	0	0	0	0	0	0	0	0	0	2,428	3,026	5,201	849
PRD	0	0	0	0	0	0	1	3	0	8	14	40	***
RIS	0	0	0	0	0	0	5	0	0	20	26	63	20
RRH	0	0	0	0	0	0	0	0	0	68	45	52	26
WEL	0	0	0	0	0	0	0	0	0	0	0	0	0

COE began WEL counts on May 15 , but no counts are yet available.
PRD 2000 data from Grant Co. PUD, since the COE only has data to 05/14 and they have an incorrect ST count.
LMN, LGS are through 05/17; RIS, RRH are through 05/14.
Note: JDA adult chinook counts missing for 05/09; JDA has a partial count on 4/16; LMN is missing 4/8, 5/12; RIS, RRH are missing 5/10 & 5/12; IHR is missing 05/06, 5/12; LGS is missing 5/6 to 5/9.
These numbers were collected from the COE's Running Sums text files.
Wild steelhead numbers are included in the total.
**Adult count records at Little Goose Dam have been maintained since 1991, visual counts were not conducted at Little Goose Dam between 1982 and 1990.
***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
05/05/00 TO 05/18/00

		Species					
Site	**Data**	**CH0**	**CH1**	**CO**	**SO**	**ST**	**Grand Total**
LGR	Sum Of NumberCollected	450	933,750	10,800	1,300	2,197,900	3,144,200
	Sum Of NumberBarged	402	864,888	10,400	1,281	2,044,742	2,921,713
	Sum Of NumberBypassed	46	67,704	400	14	153,046	221,210
	Sum Of NumberTrucked	0	0	0	0	0	0
	Sum Of TotalProjectMort	2	1,157	0	5	112	1,276
LGS	Sum Of NumberCollected	160	449,491	1,981	120	256,506	708,258
	Sum Of NumberBarged	159	447,880	1,980	120	256,298	706,437
	Sum Of NumberBypassed	0	0	0	0	0	0
	Sum Of NumberTrucked	0	0	0	0	0	0
	Sum Of TotalProjectMort	1	1,611	1	0	208	1,821
LMN	Sum Of NumberCollected	197	209,112	1,271	83	206,339	417,002
	Sum Of NumberBarged	195	196,095	1,271	83	206,043	403,687
	Sum Of NumberBypassed	0	12,679	0	0	200	12,879
	Sum Of NumberTrucked	0	0	0	0	0	0
	Sum Of TotalProjectMort	2	338	0	0	96	436
MCN	Sum Of NumberCollected	4,376	455,578	4,451	16,901	95,195	576,501
	Sum Of NumberBarged	0	0	0	0	0	0
	Sum Of NumberBypassed	4,375	455,430	4,451	16,901	95,162	576,319
	Sum Of NumberTrucked	0	0	0	0	0	0
	Sum Of TotalProjectMort	1	148	0	0	33	182
Total Sum Of NumberCollected		5,183	2,047,931	18,503	18,404	2,755,940	4,845,961
Total Sum Of NumberBarged		756	1,508,863	13,651	1,484	2,507,083	4,031,837
Total Sum Of NumberBypassed		4,421	535,813	4,851	16,915	248,408	810,408
Total Sum Of NumberTrucked		0	0	0	0	0	0
Total Sum Of TotalProjectMort		6	3,254	1	5	449	3,715

YTD Transportation Summary
TO: 05/18/00

		Species					
Site	**Data**	**CH0**	**CH1**	**CO**	**SO**	**ST**	**Grand Total**
LGR	Sum Of NumberCollected	3,310	2,260,710	15,526	2,160	4,091,834	6,373,540
	Sum Of NumberBarged	3,126	2,146,561	15,110	1,937	3,859,455	6,026,189
	Sum Of NumberBypassed	46	105,100	400	16	220,792	326,354
	Sum Of NumberTrucked	117	6,084	16	187	11,238	17,642
	Sum Of TotalProjectMort	21	2,966	0	20	349	3,356
LGS	Sum Of NumberCollected	280	1,184,105	4,688	931	934,577	2,124,581
	Sum Of NumberBarged	278	1,175,228	4,680	835	927,274	2,108,295
	Sum Of NumberBypassed	0	0	0	0	0	0
	Sum Of NumberTrucked	0	4,308	5	76	6,791	11,180
	Sum Of TotalProjectMort	2	4,554	3	20	511	5,090
LMN	Sum Of NumberCollected	309	516,020	1,705	595	554,252	1,072,881
	Sum Of NumberBarged	306	474,215	1,695	583	552,802	1,029,601
	Sum Of NumberBypassed	1	14,866	0	0	500	15,367
	Sum Of NumberTrucked	0	25,741	10	10	810	26,571
	Sum Of TotalProjectMort	2	1,198	0	2	140	1,342
MCN	Sum Of NumberCollected	14,614	666,353	6,319	35,164	239,090	961,540
	Sum Of NumberBarged	0	0	0	0	0	0
	Sum Of NumberBypassed	14,598	666,024	6,319	35,156	239,007	961,104
	Sum Of NumberTrucked	0	0	0	0	0	0
	Sum Of TotalProjectMort	16	329	0	8	83	436
Total Sum Of NumberCollected		18,513	4,627,188	28,238	38,850	5,819,753	10,532,542
Total Sum Of NumberBarged		3,710	3,796,004	21,485	3,355	5,339,531	9,164,085
Total Sum Of NumberBypassed		14,645	785,990	6,719	35,172	460,299	1,302,825
Total Sum Of NumberTrucked		117	36,133	31	273	18,839	55,393
Total Sum Of TotalProjectMort		41	9,047	3	50	1,083	10,224