



Fish Passage Center

Weekly Report #04 - 11

May 21, 2004

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Highlights:

- Precipitation and snowpack throughout the Columbia Basin are below average.
- The May Mid-Month Water Supply Forecast has been issued by RFC, some sites show increased WSF relative to the May Final, while others have decreased.
- Over the spring flow objective period at Lower Granite, flows have averaged 56.9 Kcfs at Lower Granite; the flow objective is 85 Kcfs. In recent years seasonal flows were only lower at Lower Granite in 2001.
- Over the spring flow objective period at McNary, flows have averaged 183.3 Kcfs; the flow objective is 220 Kcfs. Also, in recent years flows were only lower at McNary in 2001.
- SOR 2004-7 requested week average flows at Priest Rapids of 135 Kcfs beginning on May 10, 2004. From May 10th to May 16th, flows averaged 139.3 Kcfs, slightly above the requested flow.
- The Salmon Managers submitted SOR 2004-10, requesting full implementation of Biological Opinion spill for fish passage measures after noting that spill was consistently implemented at less than BIOP levels.
- The steelhead low cumulative passage for McNary is the result of low flows and maximization of transportation at Snake River sites.

Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has been below average through the first half of May. Several sites in Table 1 have experienced increased precipitation relative to past weeks; the Salmon/Boise/Payette, Clearwater, and Central Washington locations have all experienced above average precipitation over May. Over the entire water year, precipitation has been generally below average.

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

Location	Water Year 2004		Water Year 2004	
	May 1-14		October 1, 2003 to May 14, 2004	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.86	71	15.48	90
Snow River Above Ice Harbor	0.91	88	10.96	86
Columbia Above The Dalles	0.87	80	15.47	91
Kootenai	0.64	52	15.76	90
Clark Fork	0.94	84	9.34	82
Flathead	0.86	64	13.37	89
Pend Oreille/Spokane	1.00	70	20.91	88
Central Washington	0.51	122	6.12	88
Snow River Plain	0.43	53	6.13	77
Salmon/Boise/Payette	1.25	127	12.80	83
Clearwater	2.23	134	22.07	96
SW Washington Cascades/Cowlitz	1.09	53	51.76	85
Willamette Valley	1.79	92	47.69	92

Snowpack within the Columbia Basin is below average for this time of year. Average snowpack in the Columbia River for basins above the Snake River confluence is 40% of average, for Snake River Basins the average snowpack is 29% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 45% of average.

May Mid-Month Water Supply Forecasts have increased at some locations relative to the May Final Forecast, others have decreased. All locations in Table 2 remain below average in terms of Water Supply.

Table 2. May Final and May Mid-Month Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Location	May Final		May Mid-Month	
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	74	79500	74	79700
Grand Coulee (Jan-July)	83	52200	82	51500
Libby Res. Inflow, MT (Jan-July)	79	4960	75	4760
Hungry Horse Res. Inflow, MT (Jan-July)	81	1810	77	1710
Lower Granite Res. Inflow (Apr- July)	61	13100	66	14200
Brownlee Res. Inflow (Apr-July)	40	2500	42	2640
Dworshak Res. Inflow (Apr-July)	76	2010	83	2190

The spring flow objective period started in the Lower Snake River on April 3rd, 2004. Based on the April Final Forecast at Lower Granite (Apr-July), the flow objective is 85 Kcfs at Lower Granite through June 20th. Over the spring flow objective period, flows have averaged 56.9 Kcfs at Lower Granite. Over the last week, flows have averaged 64.2 Kcfs; flows are currently 75.5 Kcfs.

The Spring Flow Objective Periods at McNary Dam and Priest Rapids Dam began on April 10th. The flow objectives at McNary and Priest Rapids are 220 Kcfs and 135 Kcfs, respectively. Over the spring flow objective period, flows have averaged 183.3 Kcfs at McNary Dam and 116.4 Kcfs at Priest Rapids Dam. Flows at McNary have averaged 207.6 Kcfs over the last week. SOR 2004-7 was submitted to the Action Agencies on May 4, 2004 and asked for flows at Priest Rapids to be increased to a day average of 120 Kcfs on May 7, 2004 and begin meeting a week average of 135 Kcfs on May 10, 2004. From May 10th to May 16th, flows averaged 139.3 Kcfs, slightly above the requested flow.

Grand Coulee is currently at an elevation of 1272.9 feet (5-20-04) and has drafted approximately 0.4 feet over the last week.

The Libby Reservoir is currently at an elevation of 2424.0 feet (5-20-04). Inflows to Libby over the last week have ranged between 13.0 and 17.3 Kcfs; Libby has been able to refill 3.0 feet in the last week while still maintaining minimum project outflow of 4.0 Kcfs.

The Hungry Horse Reservoir is currently at an elevation of 3544.8 feet (5-20-04). Over the last week, inflows to Hungry Horse have ranged between 5.0 and 7.4 Kcfs, enabling Hungry Horse to refill 1.4 feet. Outflows over the last week have ranged between 2.1 and 4.6 Kcfs.

The Dworshak Reservoir is currently at an elevation of 1582.7 feet (5-20-04). Inflows to Dworshak have remained relatively high over the past week ranging between 9.2 and 12.5 Kcfs; outflows have been ranging between 2.2 and 4.3 Kcfs. Dworshak has refilled 5.3 feet in the last week, and needs to refill slightly less than 17 feet to refill.

The Brownlee Reservoir is currently at an elevation of 2075.9 feet (5-20-04). Inflows to Brownlee have ranged between 13.8 and 16.6 Kcfs; outflows have ranged between 13.2 and 17.6 Kcfs. Brownlee has remained relatively steady in the last week and is currently 1.1 feet from full.

Spill: No spill for fish passage occurred at Lower Granite or Little Goose Dams over the past week, as transportation of smolts is being maximized at those sites. Spill for fish passage ended at Lower Monumental Dam on May 14. Transportation of smolts is being maximized at Lower Monumental. Spill for fish passage continued at the lower Columbia River projects. Over the past week spill at McNary Dam averaged 43%, spill at John Day averaged 58%, spill at The Dalles averaged 39%, spill at Bonneville Dam averaged 40%. The Biological Opinion requires John Day to spill 60% of total flow for 12 hours and the The Dalles to spill 40% of the flow over the 24-hour period. The agencies and tribes submitted SOR # 2004-10, requesting implementation of the Biological Opinion spill measures after noting that spill was being implemented at lower levels than required by the Opinion at John Day and The Dalles. Spill for fish passage continued over the past week at all of the Mid-Columbia Public Utility projects. Total dissolved levels have remained below the waiver limits. Gas bubble trauma monitoring continued over the past week at the Mid and Lower Columbia projects. Over the past week only one fish (Bonneville Dam) was seen with GBT symptom.

Smolt Monitoring: The yearling chinook numbers in the Snake River remained steady over the past week while numbers continued to increase at most Lower Columbia River sites. Steelhead indices appeared to pass their peak at Lower Granite this past week too, but we are likely to see more high indices for steelhead at Snake River sites if flows increase again in the Snake River, while in the Columbia River steelhead numbers are still likely to increase at Lower River SMP sites.

At Snake River Basin traps yearling chinook and steelhead numbers were down at most sites.

At the White Bird Trap the collection for yearling chinook averaged 6 per day this week compared to 20 last week, while steelhead numbers were 58 per day this week versus 26 per day last week. The collection of yearling chinook averaged 57 this week at the Imnaha Trap compared to 166 per day last week. Steelhead collection was down this past week with daily collection averaging about 900 per day this week compared to 1,000 per day last week. Numbers of yearling chinook captured at the Grande Ronde trap were down slightly compared to the previous week with a daily average of 36 compared to 40 last week. Steelhead numbers decreased to 25 per day after collecting 50 per day last week. At the Lewiston Trap the numbers of yearling chinook declined rapidly this past week with an average daily catch of 12, compared to 42 per day last week. Steelhead collection also declined to 150 per day average this week compared to 380 per day average last week.

At Lower Granite Dam the numbers of yearling chinook and steelhead decreased rapidly over the past week as did average daily discharge. The average passage index for yearling chinook averaged 23,000 this past week compared to 112,000 last week. The steelhead average daily passage index was at 92,000 this week down from 278,000 last week. Little Goose Dam also saw a drop in yearling chinook numbers over the past week with the average daily index of yearling chinook at 34,000 this week compared to 110,000 last week while steelhead averaged 29,000 per day this week compared to 68,000 per day last week. Lower Monumental Dam also had a slight increase in the yearling chinook indices with an average daily value of 11,900 compared to 9,800 per day last week. Steelhead indices were 3,900 per day this week compared to 6,700 per day the week past.

In the Mid-Columbia River the Entiat Trap appears to be capturing mainly subyearling chinook at this time, with small numbers of steelhead and sockeye also reported.

At Rock Island Dam the numbers of yearling chinook decreased with an average yearling chinook index of 210 this week compared to 420 last week, while steelhead averaged 240 per day

compared to 600 last week, and sockeye averaged 120 per day this week compared to 220 per day last week. Subyearling chinook numbers increased steadily this week with the average daily index up to 55 per day this week while coho indices remained high over 800 per day average this past week.

In the Lower Columbia, indices for most species were increasing. At McNary, based on full samples taken every other day, yearling chinook indices averaged 74,000 per day this week compared to 53,000 last week, while steelhead indices averaged 8,200 per day compared to 8,300 per day last week. Coho indices were up to 3,300 per day, up from 1,200 last week. Sockeye indices also increased from 4,300 per day last week to 12,000 this week. Subyearling chinook indices also continued to increase this past week, with the average daily index at 3500 per day this week compared to 2,200 last week. Testing of the vertical barrier screens and FGE of those units operated outside 1% was suspended again this week. The Salmon Managers (except for NOAA) submitted an SOR asking for tests to be halted because of concerns about increased descaling and mortality associated with the tests. Testing, on a limited basis (of a single unit), may resume soon if logistics can be worked out to operate the orifice trap in unit 6 to collect fish exiting the gatewell. Further tests of other units for FGE, are likely to be contingent on results of unit 6 tests showing no increased harm to fish of the operation.

At John Day Dam the numbers of yearling chinook continued to increase with the average daily index at 40,000 this week, compared to 27,000 last week. Steelhead indices increased over the past week with the average daily value at 8,000 compared to 3,500 last week. Coho indices were at 3,900 per day this past week compared to 3,100 last week, while sockeye indices rose to 3,300 and small, but increasing numbers of subyearling chinook smolts were reported this past week.

At Bonneville Dam , the average daily index for yearling chinook was 17 ,000 compared to 27 ,000 last week. The steelhead index averaged 6 ,400 this week compared to 3 ,400 last week. The

indices for coho remained steady this week with an average index of 9,200 per day versus 9,800 per day last week. Sockeye indices continued increasing with the average daily index at 1,500 this week. The subyearling chinook tapered off quickly after the May 8 as the Spring Creek Hatchery release of 3.4 million fish on May 6 passed, and the index was down to 6,000 per day this week.

Hatchery Releases - The scheduled release of juvenile salmonids from Columbia River Basin hatcheries above Bonneville Dam for the 2004 migration season is estimated near 82.1 million. Supplemental and planned releases completed during the fall 2003 season are considered to be 2004 migrants. The Zone Release Report below summarizes "planned" hatchery releases from State, federal or Tribal hatcheries or acclimation ponds for the 2004 Migration Season. These totals are updated after release information is received from the hatcheries and numbers finalized.

Juvenile sockeye were released from net pens into Lake Wenatchee last summer and fall (2003); the majority of these fish reside in the lake and migrate from the lake and to the ocean the next spring (2004). In the Snake River basin, juvenile sockeye were released in Redfish, Alturas, and Pettit lakes last fall and most begin their migration in late April and May from the lakes.

Hatcheries in the Snake and Columbia River basins released about 5.4 million juvenile salmon during the past two weeks. Releases of yearling spring, summer, and fall chinook and also steelhead from hatcheries were completed for the 2004 migration year in the Columbia River basin. The upcoming two weeks will see completion of hatchery reared yearling coho in the Klickitat R for the season, and the beginning or continuation of the subyearling fall and summer chinook releases from hatcheries in the Basin. About 4.1 million fish are scheduled for release during the next two weeks. See the Hatchery Release Summary Tables for details of individual release groups.

2004 Hatchery Zone Report

Race/Species	Friday 21-May-2004			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	2,606,355	12,430,000	21,738,594	36,774,949
Spring Chinook	10,471,291	4,015,312	5,190,834	19,677,437
Summer Chinook	2,374,050	3,235,917		5,609,967
Coho	1,367,111	1,240,000	5,917,000	8,524,111
Sockeye	62,000	315,790		377,790
Summer Steelhead	9,266,814	1,302,231	476,912	11,045,957
Winter Steelhead			90,000	90,000
Total	26,147,621	22,539,250	33,413,340	82,100,211

Snake River -Release of yearling chinook from hatcheries in the Snake River basin is completed for the 2004 migration season. About 12.8 million yearling spring/summer chinook and another 1-million yearling fall chinook were released for this year's migration. Juvenile steelhead releases were completed during the past two weeks with approximately 9.3 million released for the 2004 migration season in this Basin. In addition, about 1.4 million subyearling and yearling coho were released in the Snake River. Subyearling fall chinook will be released from hatcheries or acclimation ponds during the next month and a half.

Mid-Columbia - Releases of yearling spring chinook are completed for the 2004 migration with about 4.0 million released from the hatcheries and acclimation ponds. Steelhead releases for the season totaled about 1.3 million from State hatcheries with the Wenatchee, Methow, and Okanogan River basins receiving the majority of the juvenile steelhead. The large yearling summer chinook releases from Dryden, Similkameen, and Carlton ponds as well as Wells H were completed by early May. The first group of subyearling chinook was released from Wells H (on-site) with another subyearling release completed in the Yakima River. Yearling coho were released into the Wenatchee, Methow and Yakima River basins this spring.

Lower Columbia - Yearling fall and spring chinook and coho salmon were released from acclimation ponds located in the Umatilla River basin in March and April. Yearling spring chinook were released from Round Butte H, Warm Springs NFH, Carson,

Warm Springs, and Little White Salmon NFHs and Hood River Acclimation Ponds mainly in April with Klickitat H releasing their fish in early March. About 2.5 million yearling coho from Washougal H were trucked and released by the first week of April with the on-site volitional release of coho from Klickitat H. scheduled from 5/17 to 5/28. Juvenile steelhead releases were completed from mid-April through early May in most of the rivers in this Reach. The final release of subyearling fall chinook from Spring Creek NFH was completed on 5/6 with the next subyearling bright fall chinook scheduled for release in the Umatilla River in late May.

Adult Fish Passage - At Bonneville Dam, counts of spring chinook ranged from 1,043 to 2,380 per day through the report week, ending May 20. The total count of adult spring chinook through May 20 was 154,678, and that compares to 176,959 in 2003 and 121,440 for the 10-year average. The majority of chinook salmon returning this season are comprised of 4-year old fish that migrated to the ocean in 2002, spending two years at sea. Of the spring chinook past Bonneville Dam, approximately 73.7% were counted at The Dalles Dam with 90,631 past McNary Dam through May 20. The majority of chinook salmon passing McNary Dam this year are migrating up the Snake River with 63,008 counted at Ice Harbor Dam. The count at Priest Rapids Dam (Mid-upper Columbia River) totaled 9,818 with a missing count date on May 9. Through May 17, about 8,000 adult chinook have been counted at Prosser Dam on the Yakima River.

About 300 to 500 jack chinook salmon were counted per day at Bonneville Dam for the week with the season total now at 6,994. This compares to 12,081 in 2003 and 6,225 for the 10-year average. The jack totals are normally an indicator of the following year's projected run total.

As a point of interest, steelhead passage at Bonneville Dam averaged about 100 per day. Most of these fish would be destined for the Bonneville Pool area rather than upstream projects. Note that The Dalles counts of steelhead were about 20 per day for the week. Steelhead passage for upstream stocks will begin in mid-June.

Shad are now passing Bonneville and The Dalles dams.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/07/04	105.3	0.0	103.3	0.0	117.7	7.9	114.2	28.3	119.6	23.2	120.9	19.1	123.9	76.5
05/08/04	80.5	0.2	84.4	0.0	99.0	7.6	100.6	24.5	110.6	20.9	112.2	6.5	117.9	73.1
05/09/04	89.4	0.0	86.5	0.0	99.6	7.0	99.1	23.3	106.0	18.9	108.0	1.2	107.0	66.4
05/10/04	120.8	0.0	126.2	0.0	142.1	9.0	142.7	34.1	149.1	26.6	151.5	11.9	145.9	90.5
05/11/04	104.9	0.0	106.9	0.0	121.2	8.2	123.2	32.9	129.9	28.0	147.3	19.1	157.0	98.2
05/12/04	109.0	0.0	107.0	0.0	119.9	8.0	120.9	34.1	128.2	28.3	126.3	18.8	126.2	77.5
05/13/04	116.3	0.0	119.9	0.0	129.8	8.4	125.2	31.6	129.6	25.2	127.4	19.5	128.4	80.1
05/14/04	127.4	0.0	126.2	0.0	137.7	8.5	137.4	27.5	145.1	24.9	148.1	20.1	149.4	92.3
05/15/04	112.3	0.0	111.1	0.0	121.1	8.3	117.8	23.5	125.9	21.2	126.6	9.3	130.0	80.8
05/16/04	95.2	0.0	97.3	0.0	107.8	8.4	111.5	21.4	117.9	19.1	129.3	0.0	138.1	85.9
05/17/04	114.2	0.0	121.2	0.0	132.1	8.6	130.5	30.8	136.6	26.4	137.7	11.3	134.8	83.7
05/18/04	127.2	0.0	123.6	0.0	133.0	8.6	131.5	33.8	138.0	28.3	138.6	19.9	138.9	86.2
05/19/04	102.7	0.0	116.4	0.0	130.4	8.8	132.7	34.9	139.2	29.8	144.6	20.3	145.1	90.0
05/20/04	95.0	0.0	95.4	0.0	108.1	8.0	111.2	31.4	120.5	27.4	130.8	19.4	136.2	84.4

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

Date	Dworshak		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/07/04	3.9	0.0	13.9	10.3	80.5	0.0	81.1	0.0	88.3	30.7	87.5	51.4
05/08/04	2.2	0.0	14.3	9.1	78.7	0.0	78.3	0.0	85.9	29.3	83.3	43.0
05/09/04	2.2	0.0	12.5	9.1	75.2	0.0	73.5	0.0	74.1	28.7	77.5	65.1
05/10/04	4.1	0.0	14.6	11.9	73.1	0.0	73.8	0.0	75.9	29.0	77.3	70.0
05/11/04	3.5	0.0	13.0	10.6	72.2	0.0	71.4	0.0	72.4	26.7	75.6	37.9
05/12/04	3.8	0.0	14.4	12.0	72.1	0.0	72.0	0.0	73.7	26.7	76.5	44.6
05/13/04	3.1	0.0	14.4	12.0	64.1	0.0	65.2	0.0	69.1	27.7	70.5	59.0
05/14/04	4.1	0.0	15.2	15.7	59.5	0.0	58.5	0.0	60.0	5.9	64.7	54.5
05/15/04	2.2	0.0	15.0	16.8	57.9	0.0	58.4	0.0	62.3	0.0	64.4	42.4
05/16/04	2.2	0.0	13.8	17.4	55.9	0.0	56.3	0.0	58.2	0.0	62.1	44.9
05/17/04	4.2	0.0	15.5	18.9	68.2	0.0	68.7	0.0	72.8	0.0	74.1	65.6
05/18/04	4.3	0.0	14.0	14.7	64.9	0.0	64.4	0.0	65.1	0.0	66.4	58.8
05/19/04	4.2	0.0	14.8	13.1	67.7	0.0	67.2	0.0	71.7	0.0	75.0	43.6
05/20/04	3.8	0.0	---	---	75.5	0.0	75.2	0.0	78.6	0.0	79.0	42.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
05/07/04	211.6	81.8	211.6	69.9	212.3	83.1	238.5	95.2	36.5	95.4
05/08/04	202.2	87.3	200.5	60.7	207.8	81.5	233.3	94.1	26.0	101.9
05/09/04	201.5	82.3	198.4	63.6	201.3	79.3	225.1	94.2	28.3	91.2
05/10/04	216.8	97.0	201.4	60.3	204.9	80.8	228.8	93.3	28.6	95.4
05/11/04	224.8	95.4	222.4	63.5	225.5	89.0	248.9	89.1	43.5	104.9
05/12/04	221.6	98.1	219.6	59.1	228.9	89.9	257.0	90.7	55.2	99.7
05/13/04	210.4	85.8	207.0	64.2	214.4	83.3	246.3	93.4	48.0	93.5
05/14/04	209.2	86.1	206.0	63.6	201.9	79.6	225.9	94.6	15.4	104.5
05/15/04	200.6	86.2	188.4	46.9	197.3	77.7	232.0	92.5	17.5	110.6
05/16/04	188.9	80.4	181.4	49.3	182.6	72.0	208.3	93.8	8.2	94.9
05/17/04	204.1	88.4	207.6	56.5	212.5	84.5	240.7	94.7	22.5	112.1
05/18/04	208.7	89.6	196.1	52.4	199.9	77.3	230.2	95.1	10.6	113.1
05/19/04	207.1	90.0	213.6	58.7	216.4	85.5	232.9	96.2	19.2	106.1
05/20/04	201.8	99.8	220.6	62.8	224.9	88.3	255.8	95.9	27.9	120.6

HATCHERY RELEASE LAST TWO WEEKS

Hatchery Release Summary								
From:	5/7/2004	to	5/20/2004					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2004	3,000	05-06-04	05-07-04	Deer Creek
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2004	81,000	05-06-04	05-13-04	Big Canyon Acclim.Pd (G R
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2004	161,000	05-05-04	05-13-04	Wallowa Acclim Pond
Oregon Dept. of Fish and Wildlife Total					245,000			
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2004	96,072	05-10-04	05-11-04	East Fk Salmon River
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2004	138,663	05-11-04	05-13-04	Yankee Fk (Salmon R)
U.S. Fish and Wildlife Service Total					234,735			
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2004	304,000	05-20-04	05-31-04	Thornhollow Acclim Pond
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2004	304,000	05-20-04	05-31-04	Umatilla River
Umatilla Tribe Total					608,000			
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2004	25,000	04-08-04	05-07-04	Parkdale Acclim Pond
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2004	25,000	04-12-04	05-07-04	E Fk Irrig Dist Sand Trap
Warm Springs Tribe Total					50,000			
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SP	2004	150,179	04-15-04	05-07-04	Chiwawa Hatchery
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2004	192,000	04-19-04	05-14-04	Chiwawa Hatchery
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CO	UN	2004	943,000	05-17-04	05-28-04	Klickitat Hatchery
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2004	312,000	04-19-04	05-07-04	Carlton Acclim Pond
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2004	20,000	05-03-04	05-10-04	Drano Lake
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2004	100,000	04-30-04	05-07-04	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2004	214,000	05-12-04	05-12-04	Wells Hatchery
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2004	45,000	04-15-04	05-07-04	Similkameen Acclim Pd
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2004	55,000	04-19-04	05-07-04	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2004	76,042	04-15-04	05-07-04	Methow River
Washington Dept. of Fish and Wildlife Total					2,107,221			
Yakama Tribe	Klickitat Hatchery	CH0	SP	2004	319,300	05-10-04	05-10-04	Upper Klickitat River
Yakama Tribe	Little White Salmon NFH	CH0	FA	2004	1,700,000	05-17-04	05-31-04	Prosser Acclim Pond
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2004	180,000	05-12-04	05-31-04	Prosser Acclim Pond
Yakama Tribe Total					2,199,300			
Grand Total					5,444,256			

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

HATCHERY RELEASE NEXT TWO WEEKS

Hatchery Release Summary								
From:		5/21/2004	to	6/3/2004				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite
Idaho Dept. of Fish and Game	Oxbow-Idaho	CH0	FA	2004	10,000	05-28-04	05-28-04	Hells Canyon Dam
Idaho Dept. of Fish and Game Total					10,000			
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2004	200,000	05-21-04	05-31-04	Pittsburg Landing A Pond
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2004	500,000	05-21-04	05-31-04	Cpt John Acclim Pond
Nez Perce Tribe Total					700,000			
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2004	304,000	05-20-04	05-31-04	Thornhollow Acclim Pond
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2004	304,000	05-20-04	05-31-04	Umatilla River
Umatilla Tribe Total					608,000			
Washington Dept. of Fish and Wildlife	Klickitat Hatchery	CO	UN	2004	943,000	05-17-04	05-28-04	Klickitat Hatchery
Washington Dept. of Fish and Wildlife Total					943,000			
Yakama Tribe	Little White Salmon NFH	CH0	FA	2004	1,700,000	05-17-04	05-31-04	Prosser Acclim Pond
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2004	180,000	05-12-04	05-31-04	Prosser Acclim Pond
Yakama Tribe Total					1,880,000			
Grand Total					4,141,000			

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

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
McNary Dam											
	05/14/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/20/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/11/04	Chinook + Steelhead	104	0	0	0.00%	0.00%	0	0	0	0
	05/15/04	Chinook + Steelhead	101	0	0	0.00%	0.00%	0	0	0	0
	05/18/04	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Rock Island Dam											
	05/13/04	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/17/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/20/04	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/7	---	---	---	0	114	117	119	24	108	109	109	24	107	108	108	24	106	107	107	23
5/8	---	---	---	0	113	114	116	24	109	109	109	24	107	107	108	24	107	107	107	23
5/9	---	---	---	0	114	116	116	24	108	109	109	24	107	107	108	24	106	107	107	23
5/10	---	---	---	0	116	118	118	24	109	110	110	24	107	108	109	24	107	107	108	23
5/11	---	---	---	0	115	117	118	24	109	109	110	24	107	108	109	24	107	107	107	23
5/12	---	---	---	0	115	117	118	24	108	108	108	24	107	107	109	24	105	106	106	23
5/13	---	---	---	0	116	118	119	24	108	108	109	24	106	107	108	24	105	106	106	23
5/14	---	---	---	0	114	115	118	24	108	109	109	21	107	107	108	24	106	106	107	23
5/15	---	---	---	0	114	116	117	24	109	109	110	24	107	108	109	24	107	107	108	23
5/16	---	---	---	0	116	117	120	24	109	109	110	24	107	108	109	24	107	107	109	23
5/17	---	---	---	0	117	120	121	24	109	109	110	24	107	108	109	23	106	107	107	23
5/18	---	---	---	0	115	118	119	24	109	110	110	24	108	108	110	24	107	107	108	23
5/19	---	---	---	0	115	118	119	24	109	109	110	24	107	108	109	24	107	107	108	23
5/20	---	---	---	0	115	117	118	24	108	109	109	24	107	108	108	24	107	107	108	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/7	106	107	107	23	107	108	108	23	109	109	110	23	110	110	110	24	112	112	113	24
5/8	107	108	109	23	107	107	107	24	108	108	109	24	109	109	109	24	110	111	112	24
5/9	107	107	108	23	106	107	108	24	108	109	109	24	108	108	109	24	110	110	111	24
5/10	107	107	108	23	107	108	108	24	109	109	110	24	109	109	110	24	111	112	113	24
5/11	107	108	109	23	106	107	108	23	108	109	109	23	109	109	110	24	111	112	113	23
5/12	106	107	107	23	105	106	106	24	107	108	108	24	107	108	108	24	110	111	112	24
5/13	106	106	107	23	106	107	107	24	108	108	109	24	107	107	108	24	110	111	112	24
5/14	106	107	108	23	106	106	106	24	108	108	108	24	107	108	109	24	110	110	111	24
5/15	107	108	109	23	106	107	107	24	108	108	109	24	108	109	109	24	110	110	111	24
5/16	108	108	109	23	106	107	107	24	108	109	110	24	108	108	108	24	109	110	111	24
5/17	107	108	108	23	106	107	107	24	108	108	109	24	108	108	109	24	110	111	112	24
5/18	107	108	108	23	107	107	108	24	109	109	110	24	109	109	109	24	111	112	112	24
5/19	107	107	109	23	107	107	107	24	109	109	109	24	109	109	109	22	111	112	113	22
5/20	108	109	110	23	107	108	108	24	109	109	110	24	109	109	109	24	111	112	112	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/7	111	111	112	24	115	117	119	24	111	112	112	23	115	116	116	23	114	115	115	23
5/8	111	112	112	24	115	116	118	24	110	110	111	23	112	113	115	23	112	113	114	23
5/9	110	111	111	24	115	115	116	24	---	---	---	0	---	---	---	0	---	---	---	0
5/10	110	111	111	24	115	116	117	24	111	112	112	23	112	114	115	23	109	109	110	23
5/11	111	111	112	24	115	116	118	24	109	110	111	22	113	114	114	23	110	110	111	23
5/12	111	111	112	24	116	116	118	24	109	109	109	23	113	114	115	23	110	111	113	23
5/13	111	111	112	24	115	116	118	24	---	---	---	0	---	---	---	0	---	---	---	0
5/14	110	111	111	24	115	116	117	24	112	113	114	23	116	116	118	23	113	114	115	23
5/15	111	111	112	24	115	116	117	24	113	113	114	23	115	117	118	23	115	115	115	23
5/16	110	110	112	24	114	115	116	24	111	112	112	23	111	112	112	23	111	113	116	23
5/17	110	110	111	24	115	116	117	24	111	112	113	23	113	114	117	23	110	110	111	23
5/18	111	112	112	24	116	117	118	24	---	---	---	0	---	---	---	0	---	---	---	0
5/19	111	111	112	22	116	117	117	22	111	112	114	23	114	115	117	23	113	114	114	23
5/20	112	112	113	24	116	117	118	24	113	113	114	23	116	117	117	23	114	115	116	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 and Snake River Sites

Date	Priest R. Dnst			Pasco				Dworshak				Clrwr-Peck				Anatone				
	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
5/7	119	119	119	23	112	113	114	24	100	101	105	24	102	103	104	24	103	104	105	24
5/8	118	119	119	23	112	112	113	24	100	100	101	24	102	103	103	24	103	103	104	24
5/9	---	---	---	0	112	113	113	24	100	101	101	24	102	103	104	24	103	104	105	24
5/10	117	118	119	23	112	112	113	24	100	100	101	24	102	102	103	24	103	103	104	24
5/11	118	118	119	23	110	111	111	24	102	104	106	24	101	101	102	24	102	103	103	24
5/12	118	118	118	23	111	112	113	24	101	102	105	24	101	102	102	24	103	103	104	24
5/13	---	---	---	0	112	113	113	24	100	102	103	24	101	102	103	24	103	104	105	22
5/14	119	120	120	23	114	115	115	24	99	100	101	24	102	102	103	24	103	104	105	24
5/15	119	119	120	23	114	114	115	24	100	100	101	24	101	102	102	24	103	103	103	24
5/16	118	119	119	23	113	114	114	24	99	100	100	24	101	101	101	24	102	103	103	24
5/17	117	118	118	23	114	114	115	24	100	101	101	24	102	103	104	24	103	104	105	24
5/18	---	---	---	0	112	113	114	24	100	100	102	24	101	101	102	24	103	103	103	24
5/19	118	119	119	23	112	114	115	24	99	100	100	24	101	102	102	24	103	103	104	24
5/20	119	119	119	23	114	115	116	24	99	100	100	24	102	103	103	24	103	104	105	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwr-Lewiston			Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr				
	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
5/7	102	103	104	24	102	102	102	24	102	102	103	24	103	104	104	24	103	103	104	24
5/8	101	101	102	24	102	102	102	24	102	102	102	24	104	104	104	24	104	104	105	24
5/9	102	103	104	24	102	103	103	24	102	102	103	24	102	102	103	24	102	102	103	24
5/10	101	101	102	24	103	103	103	24	103	103	103	24	102	103	103	24	102	102	103	24
5/11	100	101	101	24	102	103	103	24	102	103	103	24	102	102	103	24	102	102	103	24
5/12	101	101	102	24	102	102	103	24	102	102	103	24	101	101	101	24	101	101	101	24
5/13	101	103	104	24	101	102	104	24	101	101	102	24	102	103	105	24	101	101	102	24
5/14	102	103	104	24	101	102	102	24	101	101	101	24	102	102	104	24	101	102	102	24
5/15	101	102	103	24	103	103	104	24	102	103	103	24	103	104	104	24	102	102	103	24
5/16	101	101	101	24	103	103	104	24	103	103	104	24	102	102	103	24	102	102	102	24
5/17	102	103	104	24	104	105	107	24	103	104	105	24	103	105	107	24	102	102	102	24
5/18	101	101	102	24	103	103	104	24	103	103	104	24	102	102	103	24	102	102	102	24
5/19	101	102	103	24	103	103	105	24	102	102	103	24	102	103	103	24	102	102	103	24
5/20	102	103	103	24	103	104	104	24	103	103	104	24	104	104	104	24	103	104	104	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 Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr	24 h Avg	12 h Avg	High	# hr
5/7	103	103	103	24	119	120	120	24	112	113	114	24	115	116	120	24	113	115	116	24
5/8	103	103	103	24	119	120	120	24	112	112	113	24	113	114	114	24	113	114	115	24
5/9	103	103	103	24	119	120	120	24	111	111	112	24	116	118	119	24	113	114	114	24
5/10	104	104	104	24	119	120	120	23	112	112	113	24	118	119	119	24	111	112	113	24
5/11	103	103	104	24	117	118	118	24	112	112	113	24	114	116	118	24	110	111	112	24
5/12	101	101	102	24	117	118	118	24	112	112	112	24	113	113	114	24	110	110	111	24
5/13	101	102	103	24	118	119	119	24	112	113	114	24	116	117	119	24	111	113	117	24
5/14	101	102	102	24	106	110	118	24	113	114	115	24	117	117	117	24	112	114	116	24
5/15	102	102	103	24	102	102	102	24	115	115	116	24	113	114	117	24	112	113	115	24
5/16	102	102	102	24	102	102	102	24	113	114	115	24	112	113	113	24	114	116	117	24
5/17	103	103	106	24	102	102	103	24	106	107	108	24	116	118	120	24	115	116	118	24
5/18	103	103	104	24	102	103	103	24	103	103	103	24	117	118	119	24	112	112	113	24
5/19	102	102	103	24	102	102	103	24	102	102	103	24	113	114	116	24	112	113	115	24
5/20	103	103	103	24	103	103	104	22	102	103	103	24	113	113	114	24	112	114	116	24

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#	<u>24h</u>	<u>12h</u>	#					
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		AVG	High			
5/7	112	112	113	24	115	118	119	24	110	110	110	23	114	118	118	24	113	115	116	23
5/8	113	113	114	24	116	117	118	24	109	109	110	23	113	117	118	24	111	113	114	23
5/9	112	112	113	24	115	118	119	24	108	108	109	23	113	118	118	24	112	114	116	23
5/10	112	112	112	24	116	119	119	24	109	109	109	23	114	118	119	24	110	112	116	23
5/11	110	110	111	24	115	119	119	24	108	108	109	18	113	118	118	24	108	110	111	23
5/12	110	110	110	24	115	118	119	24	106	107	107	23	112	117	118	24	109	112	114	23
5/13	110	110	112	24	114	118	119	24	107	108	109	23	112	118	118	24	111	114	116	23
5/14	113	114	115	24	115	118	119	24	108	108	109	23	113	117	118	24	111	114	116	23
5/15	113	114	115	24	116	118	119	24	108	109	109	23	112	117	118	24	111	113	114	23
5/16	114	114	114	24	116	118	119	24	108	109	109	23	112	117	118	24	108	110	112	23
5/17	114	115	116	24	116	119	119	24	110	111	112	23	113	117	118	24	111	114	116	23
5/18	112	112	112	24	115	118	119	24	112	112	112	23	114	117	118	24	111	112	114	23
5/19	112	112	113	24	115	119	120	24	111	111	111	23	114	117	118	24	109	111	112	23
5/20	112	113	114	24	116	119	119	24	110	110	110	23	113	117	118	24	112	114	116	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>				<u>Bonneville</u>				<u>Warrendale</u>				<u>Camas\Washugal</u>			
	<u>24 h</u>	<u>12 h</u>	#	hr	<u>24 h</u>	<u>12 h</u>	#	hr	<u>24h</u>	<u>12h</u>	#	hr	<u>24h</u>	<u>12h</u>	#	
	Avg	Avg			High	Avg			Avg	High			Avg	Avg		High
5/7	116	117	118	24	113	113	114	23	114	115	116	23	112	113	114	24
5/8	115	116	117	24	113	113	113	23	115	116	116	23	113	114	115	24
5/9	115	117	118	24	112	113	114	23	114	115	116	23	113	115	117	24
5/10	115	117	118	24	111	112	112	23	114	115	117	23	112	113	114	24
5/11	114	114	115	24	109	109	109	23	112	113	115	23	110	111	113	24
5/12	114	116	117	24	108	108	108	23	111	112	113	23	110	111	112	24
5/13	115	116	117	24	110	111	111	23	113	113	115	23	111	113	114	24
5/14	116	117	117	24	113	114	114	23	115	116	117	23	113	115	117	24
5/15	115	116	118	24	112	112	113	23	114	115	117	23	112	113	113	24
5/16	114	115	116	24	110	110	111	23	114	115	117	23	112	114	115	24
5/17	115	116	117	24	111	112	113	23	114	115	116	23	112	114	116	24
5/18	115	116	118	24	111	112	112	23	114	115	117	23	111	112	114	24
5/19	114	115	115	24	109	109	109	23	113	114	116	23	111	113	115	24
5/20	116	117	118	24	109	110	111	23	113	114	116	23	111	113	115	24

Two-Week Summary of Passage Indices

COMBINED YEARLING CHINOOK													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/07/2004	*	0	55	32	110	183	229,552	174,807	15,789	440	43,707	27,723	37,765
05/08/2004	*	---	---	169	---	---	172,089	243,410	2,430	342	1,614	36,697	46,126
05/09/2004	*	---	---	161	---	---	108,508	132,014	4,191	623	41,384	23,685	31,571
05/10/2004	*	0	7	341	34	10	78,955	55,609	1,764	479	2,056	20,043	19,801
05/11/2004	*	0	10	252	32	4	97,164	69,417	19,929	452	57,885	18,721	19,324
05/12/2004	*	0	1	149	23	4	67,612	54,803	12,764	324	3,226	29,874	18,951
05/13/2004	*	0	28	61	13	7	29,701	36,615	12,021	309	70,412	32,979	18,893
05/14/2004	*	0	15	91	12	4	24,030	47,018	11,691	281	1,794	25,564	14,857
05/15/2004		---	---	73	---	---	24,323	36,401	14,407	263	104,734	32,889	14,543
05/16/2004	*	---	---	73	---	---	22,521	27,411	27,406	211	5,025	29,568	18,184
05/17/2004	*	0	2	56	30	5	27,447	21,000	5,442	432	65,651	40,336	11,129
05/18/2004	*	0	6	23	17	9	17,116	55,713	8,967	56	1,830	39,988	13,032
05/19/2004	*	---	9	23	19	6	25,671	22,802	9,492	119	52,766	49,576	21,325
05/20/2004	*	---	0	---	102	37	25,075	27,303	6,039	138	1,466	59,996	26,065

Total:	0	133	1,504	392	269	949,764	1,004,323	152,332	4,469	453,550	467,639	311,566	
# Days:	8	10	13	10	10	14	14	14	14	14	14	14	
Average:	0	13	116	39	27	67,840	71,737	10,881	319	32,396	33,403	22,255	
YTD	741	29,040	72,899	9,646	1,546	4,919,112	2,455,475	844,333	10,646	849,631	704,152	1,114,009	

COMBINED SUBYEARLING CHINOOK													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	
05/07/2004	*	3	0	1	0	42	149	200	1,858	12	1,259	0	6,591
05/08/2004	*	---	---	1	---	---	0	0	14	9	20	32	194,020
05/09/2004	*	---	---	0	---	---	149	0	146	41	1,293	10	177,978
05/10/2004	*	16	0	0	3	15	0	0	238	21	42	0	46,415
05/11/2004	*	10	0	0	1	13	149	0	4,382	27	1,423	32	16,477
05/12/2004	*	7	0	0	2	17	0	0	5,798	9	49	68	11,704
05/13/2004	*	5	0	0	3	30	0	401	5,281	19	4,804	540	6,859
05/14/2004	*	9	0	0	2	11	0	201	1,232	26	79	75	5,278
05/15/2004		---	---	1	---	---	0	202	1,267	14	3,084	95	10,061
05/16/2004	*	---	---	0	---	---	0	200	3,515	15	80	71	7,437
05/17/2004	*	8	0	1	15	15	0	200	1,479	11	2,398	112	4,115
05/18/2004	*	2	0	0	21	11	0	100	2,844	101	96	256	4,492
05/19/2004	*	---	0	0	16	4	0	133	1,373	108	5,061	320	4,180
05/20/2004	*	---	0	---	9	101	149	0	959	109	101	393	5,677

Total:	60	0	4	72	259	596	1,637	30,386	522	19,789	2,004	501,284	
# Days:	8	10	13	10	10	14	14	14	14	14	14	14	
Average:	8	0	0	7	26	43	117	2,170	37	1,414	143	35,806	
YTD	239	0	27	76	533	4,461	2,637	32,789	1,790	25,644	2,109	1,947,941	

* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>
 this means that one or more of the sites on this date had an incomplete or biased sample.

For clip information see: [Daily Catch Report](#)
 For sockeye and yearling chinook (Snake only) race information see: [Current Passage Index Query](#)

If the text appears garbled, please hit the refresh button on your browser

NOTE for 2002 Lower Monumental Data: Due to the non-standard operation of Lower Monumental this year, the passage index reliability is in question and is being looked into.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

Two-Week Summary of Passage Indices

COMBINED COHO													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2004	*	0	0	0	0	6	8,806	400	0	296	360	533	16,891
05/08/2004	*	---	---	0	---	---	10,299	1,200	2	303	84	979	13,058
05/09/2004	*	---	---	0	---	---	10,150	200	51	668	1,624	4,218	6,315
05/10/2004	*	0	0	0	0	3	11,194	400	2	802	152	1,832	11,214
05/11/2004	*	0	0	0	0	2	11,791	1,000	5	1,465	1,868	3,854	3,997
05/12/2004	*	0	0	0	0	1	9,702	0	37	776	160	3,372	10,627
05/13/2004	*	0	0	0	0	1	8,507	1,600	8	771	1,070	6,961	6,732
05/14/2004	*	0	0	0	0	0	9,403	3,001	348	975	165	4,967	5,401
05/15/2004		---	---	0	---	---	4,776	1,000	624	1,268	2,387	6,244	9,997
05/16/2004	*	---	---	0	---	---	3,433	200	463	1,059	112	3,144	10,148
05/17/2004	*	0	0	0	0	0	9,403	400	207	1,045	1,476	623	8,089
05/18/2004	*	0	0	0	0	0	2,686	1,200	356	292	130	4,487	4,573
05/19/2004	*	---	0	0	0	1	5,821	1,333	153	1,000	6,141	4,387	10,766
05/20/2004	*	---	0	---	0	6	7,015	500	101	144	331	3,427	15,603

Total:		0	0	0	0	20	112,986	12,434	2,357	10,864	16,060	49,028	133,411
# Days:		8	10	13	10	10	14	14	14	14	14	14	14
Average:		0	0	0	0	2	8,070	888	168	776	1,147	3,502	9,529
YTD		0	0	0	0	34	126,830	13,234	3,153	11,029	18,555	51,985	649,735

COMBINED STEELHEAD													
	ENT	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/07/2004	*	1	78	1,113	184	635	364,925	157,409	15,727	378	6,145	4,350	2,313
05/08/2004	*	---	---	1,425	---	---	480,447	99,604	7,127	422	847	4,615	4,598
05/09/2004	*	---	---	989	---	---	343,582	33,605	4,150	612	7,165	3,999	4,698
05/10/2004	*	0	11	898	24	467	202,986	50,406	2,618	723	726	3,440	4,148
05/11/2004	*	0	2	1,122	13	385	251,791	28,808	5,316	973	8,570	3,138	4,786
05/12/2004	*	0	11	753	13	312	228,955	59,403	6,960	629	1,139	3,796	1,725
05/13/2004	*	2	28	627	8	99	76,716	46,405	5,258	545	11,561	7,482	1,374
05/14/2004	*	0	46	574	3	176	60,000	72,203	4,251	404	1,301	7,607	2,919
05/15/2004		---	---	643	---	---	107,761	45,601	5,409	526	12,974	7,338	9,720
05/16/2004	*	---	---	789	---	---	41,344	10,202	4,190	358	713	4,985	8,322
05/17/2004	*	1	54	2,495	13	300	225,373	15,401	2,258	219	5,720	5,058	7,237
05/18/2004	*	1	96	587	7	106	83,880	14,802	3,794	116	890	10,613	2,975
05/19/2004	*	---	31	299	14	70	72,537	33,878	2,625	69	5,962	12,784	5,455
05/20/2004	*	---	65	---	90	107	51,791	13,400	4,704	20	228	8,148	8,139

Total:		5	422	12,314	369	2,657	2,592,088	681,127	74,387	5,994	63,941	87,353	68,409
# Days:		8	10	13	10	10	14	14	14	14	14	14	14
Average:		1	42	947	37	266	185,149	48,652	5,313	428	4,567	6,240	4,886
YTD		189	2,079	34,357	1,537	7,847	4,411,146	1,328,002	211,691	7,695	100,709	119,335	106,458

* See sampling comments

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE											
	ENT (Coll)	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/07/2004 *	0	0	0	0	2	149	200	0	253	1,980	222	186
05/08/2004 *	---	---	0	---	---	0	0	0	34	120	359	0
05/09/2004 *	---	---	0	---	---	0	0	5	68	2,809	607	734
05/10/2004 *	0	1	0	0	0	0	0	0	139	274	302	198
05/11/2004 *	0	0	0	0	1	149	200	0	478	5,336	347	569
05/12/2004 *	0	0	0	0	1	448	0	0	262	386	673	570
05/13/2004 *	0	4	0	0	3	0	200	0	335	7,296	899	511
05/14/2004 *	0	4	0	0	0	597	0	0	246	362	626	450
05/15/2004	---	---	0	---	---	448	0	2	143	12,684	922	703
05/16/2004 *	---	---	0	---	---	298	0	100	81	990	1,106	1,180
05/17/2004 *	1	0	0	0	1	299	0	0	112	7,930	2,457	1,034
05/18/2004 *	0	0	0	0	0	0	0	101	182	416	2,211	890
05/19/2004 *	---	0	0	0	1	149	0	1	81	17,908	8,161	2,634
05/20/2004 *	---	0	---	0	2	0	300	3	14	2,575	7,485	3,653
Total:	1	9	0	0	11	2,537	900	212	2,428	61,066	26,377	13,312
# Days:	8	10	13	10	10	14	14	14	14	14	14	14
Average:	0	1	0	0	1	181	64	15	173	4,362	1,884	951
YTD	1	9	0	0	17	2,982	1,524	295	6,207	70,615	27,963	14,165

* See sampling comments

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

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

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

ENT (Collection) = Entiat River Trap : 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. ENT data collected for the FPC by USFWS.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

5/21/04 9:44 AM

		05/08/04 TO 05/21/04					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	596	949,764	112,986	2,537	2,592,088	3,657,971
	Sum of NumberBarged	548	905,164	109,526	2,519	2,476,083	3,493,840
	Sum of NumberBypassed	39	41,578	3,408	7	115,199	160,231
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	9	3,022	52	11	806	3,900
LGS	Sum of NumberCollected	1,637	1,004,323	12,434	900	681,127	1,700,421
	Sum of NumberBarged	1,627	1,003,688	12,427	900	680,745	1,699,387
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	10	635	7	0	382	1,034
LMN	Sum of NumberCollected	23,543	124,247	2,228	210	56,437	206,665
	Sum of NumberBarged	23,541	120,609	2,227	210	54,995	201,582
	Sum of NumberBypassed	0	3,505	0	0	1,322	4,827
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	2	133	1	0	120	256
MCN	Sum of NumberCollected	11,099	255,398	8,997	34,327	36,052	345,873
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	11,044	245,033	8,990	34,177	35,509	334,753
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	55	861	7	150	147	1,220
Total Sum of NumberCollected		36,875	2,333,732	136,645	37,974	3,365,704	5,910,930
Total Sum of NumberBarged		25,716	2,029,461	124,180	3,629	3,211,823	5,394,809
Total Sum of NumberBypassed		11,083	290,116	12,398	34,184	152,030	499,811
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		76	4,651	67	161	1,455	6,410

YTD Transportation Summary

Source: Fish Passage Center

Updated:

5/21/04 9:44 AM

TO: 05/21/04

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	3,494	4,602,906	125,391	2,847	4,313,940	9,048,578
	Sum of NumberBarged	3,244	4,406,173	121,413	2,639	4,148,736	8,682,205
	Sum of NumberBypassed	94	130,459	3,697	7	147,407	281,664
	Sum of NumberTrucked	129	43,991	220	181	15,496	60,017
	Sum of TotalProjectMortalities	27	22,283	61	20	2,301	24,692
LGS	Sum of NumberCollected	2,428	2,373,073	13,234	1,515	1,299,834	3,690,084
	Sum of NumberBarged	2,410	2,370,033	13,227	1,513	1,297,955	3,685,138
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of NumberTrucked	0	2,096	0	2	1,333	3,431
	Sum of TotalProjectMortalities	18	1,008	7	0	545	1,578
LMN	Sum of NumberCollected	25,394	775,824	2,962	292	163,585	968,057
	Sum of NumberBarged	25,382	767,951	2,961	292	161,058	957,644
	Sum of NumberBypassed	0	5,299	0	0	1,622	6,921
	Sum of NumberTrucked	10	1,352	0	0	604	1,966
	Sum of TotalProjectMortalities	2	1,222	1	0	301	1,526
MCN	Sum of NumberCollected	14,926	523,513	10,673	40,663	61,271	651,046
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	14,860	511,737	10,664	40,486	60,676	638,423
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	67	2,263	9	177	199	2,715
Total Sum of NumberCollected		46,242	8,275,316	152,260	45,317	5,838,630	14,357,765
Total Sum of NumberBarged		31,036	7,544,157	137,601	4,444	5,607,749	13,324,987
Total Sum of NumberBypassed		14,954	647,495	14,361	40,493	209,705	927,008
Total Sum of NumberTrucked		139	47,439	220	183	17,433	65,414
Total Sum of TotalProjectMortalities		114	26,776	78	197	3,346	30,511

Cumulative Adult Passage at Mainstem Dams Through: 05/20

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.		2004		2003		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	154,678	6,994	176,959	12,081	121,440	6,225	0	0	0	0	0	0	0	0	0	0	0	0
TDA	113,942	5,602	115,841	8,798	78,331	3,980	0	0	0	0	0	0	0	0	0	0	0	0
JDA	96,864	4,730	87,277	7,506	63,080	2,943	0	0	0	0	0	0	0	0	0	0	0	0
MCN	90,631	4,128	80,519	6,945	55,474	2,620	0	0	0	0	0	0	0	0	0	0	0	0
IHR	63,008	2,427	62,706	4,675	34,603	1,535	0	0	0	0	0	0	0	0	0	0	0	0
LMN	56,780	1,873	52,143	3,841	31,526	1,348	0	0	0	0	0	0	0	0	0	0	0	0
LGS	48,033	1,363	50,141	3,256	29,278	1,238	0	0	0	0	0	0	0	0	0	0	0	0
LWG	53,607	1,608	48,187	2,955	27,414	1,088	0	0	0	0	0	0	0	0	0	0	0	0
PRD	9,818	269	15,906	253	12,220	141	0	0	0	0	0	0	0	0	0	0	0	0
RIS	6,737	69	13,936	218	7,623	145	0	0	0	0	0	0	0	0	0	0	0	0
RRH	2,333	38	2,869	44	2,533	19	0	0	0	0	0	0	0	0	0	0	0	0
WEL	1,228	4	981	6	1,277	13	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2004		2003		10-Yr Avg.		2004	2003	10-Yr Avg.	2004	2003	10-Yr Avg.	Wild 2004
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	0	0	0	0	0	0	0	4,595	3,531	3,420	1,115
TDA	0	0	0	0	0	0	0	0	0	1,417	942	1,018	633
JDA	0	0	0	0	0	0	0	0	0	1,730	1,434	3,184	897
MCN	0	0	0	0	0	0	0	0	0	1,460	1,410	1,635	625
IHR	0	0	0	0	0	0	0	0	0	1,763	1,607	1,709	773
LMN	2	0	0	0	0	0	0	0	0	1,573	1,912	1,779	856
LGS	0	0	0	0	0	0	0	0	0	1,878	2,102	1,846	1,047
LWG	0	0	0	0	0	0	0	0	0	7,594	15,798	5,911	2,627
PRD	0	0	0	0	0	0	0	0	1	35	9	1	**
RIS	0	0	0	0	0	0	0	2	0	98	28	21	0
RRH	0	0	0	0	0	0	0	0	0	245	46	50	0
WEL	0	0	0	0	0	0	0	0	0	66	21	8	42

PRD is missing 5/9.

RIS/RRH are through 5/18; WEL is through 5/19.

**PRD is not reporting Wild Steelhead numbers.

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

Wild steelhead numbers are included in the total.

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

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

Page last updated on: 05/21/04

BON counts from January 1, 2004 to March 14, 2004 (our traditional counts begin March 15)

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
156	1	1,489	238

