



Fish Passage Center

Weekly Report #02 - 15

June 21, 2002

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SUMMARY OF EVENTS:

- **Storage reservoirs are currently operating to both meet the BiOp flow objectives and refill.**
- **As of June 20th, 2002: Grand Coulee is 6.6 feet from full, Libby is 14.6 feet from full, Dworshak is 0.5 feet from full, Brownlee is 0.5 feet from full (6-5-02), and Hungry Horse is 10.6 feet from full. All storage reservoirs appear to be on target to refill by June 30th, 2002.**
- **The BiOp spring flow period has ended at Lower Granite. Flows averaged 83.4 Kcfs between April 3rd and June 20th, 13.6 Kcfs below the flow objective of 97 Kcfs. From June 14th to June 20th flows at Lower Granite averaged 88.1 Kcfs (BiOp target = 97 Kcfs).**
- **Flows at McNary have averaged 262.4 Kcfs between April 10th and June 20th and 313.1 Kcfs over the week from June 14th to June 20th (BiOp target = 246 Kcfs).**
- **Flows at Priest Rapids have averaged 174.0 Kcfs between April 10th and June 20th and 226.3 Kcfs over the week from June 14th to June 20th (BiOp target = 135 Kcfs).**
- **Combined storage in the Upper Snake River System is at 62% of capacity, the same as last week.**

Water Supply: Precipitation in June of 2002 remains below normal throughout much of the Columbia Basin; ranging between 38% and 138% of average. WY 2002 appears to be approximately average in terms of cumulative precipitation.

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

Location	June 2002		Cumulative 10/1/01 - 6/18/02	
	Observed (inches)	% Avg	Observed (inches)	% Avg
Columbia Above Coulee	1.28	89	19.88	102
Snake R. Above Ice Harbor	0.65	75	12.93	89
Columbia Above The Dalles	0.89	83	18.54	98
Kootenai	1.03	70	18.51	92
Clark Fork	1.47	127	14.19	106
Flathead	2.18	138	19.21	108
Pend Oreille/Spokane	0.83	63	29.90	113
Central Washington	0.41	107	7.01	91
Snake R. Plain	0.22	38	6.68	73
Clearwater	1.36	91	27.12	105
SW Washington Cascades/Cowlitz	0.87	49	69.52	108
Willamette Valley	0.78	58	55.16	100

The NWRFC released the June Mid-Month water supply forecast on June 20, 2002. Table 2 displays the 2002 June Final runoff volume forecast along with the June Mid-month forecast for multiple reservoirs.

Table 2. June Final and June Mid-month runoff volume forecasts for various reservoirs within the Columbia and Snake River Basins during WY 2002.

Site	June Final		June Mid-month	
	Runoff Volume (Kaf)	% of Avg	Runoff Volume (Kaf)	% of Avg
Mica (April-Sept)	12100	97	12200	98
Hungry Horse (April-Sept)	2180	103	2300	108
Libby (April-Sept)	7710	116	7710	116
Grand Coulee (Jan-July)	65300	104	65600	104
The Dalles (Jan-July)	100000	93	100000	93
Brownlee (April-July)	3320	53	3280	52
Dworshak (April-July)	3050	115	3300	125
Lower Granite (Jan-July)	23100	77	23400	78
Heise (ID) (April-July)	2810	79	2620	74
Weiser (ID) (April-July)	2970	54	2940	51

Of the ten locations listed in Table 2, five sites reported increasing forecasts between the June Final and June Mid-month water supply forecasts, three sites reported decreasing forecasts and two did not change.

Over the past 4.5 weeks, flows in the Columbia Basin have improved as a result of increasing precipitation and snowmelt. According to the Northwest River Forecast Center (NWRFC), snowmelt and runoff is expected to remain steady or recede slightly throughout much of the Columbia Basin over the next week. Because of the increasing streamflows, storage reservoirs along the Columbia and Snake Rivers have been operating to meet BiOp flow requirements and to refill.

Due to continued high flows in the Columbia River, the Grand Coulee Reservoir has been refilling; beginning the week at 1278.8 feet (6-14-02) and ending the week at 1283.4 feet AMSL (6-20-02). Presently, Grand Coulee is 6.6 feet from its full pool elevation of 1290.0 feet AMSL, and therefore should not have a problem refilling by June 30th, 2002. Total outflows at Grand Coulee over the last week (6-14-02 to 6-20-02) have averaged approximately 217 Kcfs.

Libby has been refilling over the past nine weeks. The Libby reservoir has gained 10.3 feet over the last week; outflows have been ramped up to approximately 26.0 Kcfs. Libby is currently (midnight, 6-20-02) at an elevation of 2444.4 feet AMSL, 14.6 feet from the full pool elevation of 2459.0 feet AMSL. If Libby continues to refill at its current rate, the reservoir will be at or very near full by June 30th, 2002.

From 6-14-02 to 6-20-02, the Dworshak reservoir refilled 8.7 feet. Outflows at Dworshak have varied between 5.3 and 14.1 Kcfs. Currently (midnight, 6-20-02) Dworshak is at an elevation of 1599.5 feet AMSL; 0.5 feet below the full pool elevation of 1600 feet AMSL. Because of current high flows, operations at Dworshak call for the reservoir to fill beyond full and/or spill water beyond the gas cap.

Over the past week, the Brownlee reservoir has remained approximately constant. Currently (midnight, 6-19-02), Brownlee was at an elevation of 2076.5 feet AMSL; 0.5 feet below its full pool elevation of 2077.0 feet AMSL. Outflows at Brownlee have averaged approximately 11.5 Kcfs between 6-14-02 and 6-19-02.

From 6-14-02 to 6-20-02, the Hungry Horse Reservoir refilled 7.4 feet. Over the last week, outflows have averaged approximately 4.6 Kcfs. Currently (midnight, 6-20-02), Hungry Horse is at an elevation of 3549.4 feet AMSL; 10.6 feet below its full pool elevation of 3560.0 feet AMSL. If Hungry Horse continues to refill at its current rate, the reservoir will be at or very near full by June 30th, 2002.

Based upon the April final forecasts, flow objectives are 97 kcfs at Lower Granite between 4/3/02 and 6/20/02, 246 kcfs at McNary between 4/10/02 and 6/30/02, and 135 kcfs at Priest Rapids from 4/10/02 and 6/30/02. From April 3rd to June 20th, 2002, outflows at Lower Granite have averaged 83.4 Kcfs; from April 10th to June 20th, 2002, outflows at McNary have averaged 262.4 Kcfs; from April 10th to June 20th, 2002, outflows at Priest Rapids have averaged 174.0 Kcfs. Therefore, to date, flow objectives are being met at McNary and Priest Rapids. Over the week from June 14th to 20th, 2002 flows have averaged 88.1 Kcfs at Lower Granite, 313.1 Kcfs at McNary, and 226.3 Kcfs at Priest Rapids. On a weekly basis, BiOp flow objectives are being met at both Priest Rapids and McNary. The spring BiOp flow objective period at Lower Granite ended on 6-20-02, the spring average was 83.4 kcfs, 13.6 Kcfs below the 97 Kcfs flow objective.

Over the last week (6-14-02 to 6-20-02), operations have varied along the reservoirs on the Upper Snake River. Currently, as of June 20th, 2002, the entire Upper Snake River System is at 62% of capacity. Individually, American Falls is at 56% of capacity, Palisades is at 54% of capacity, Jackson Lake is at 77% of capacity, Island Park is at 90% of capacity, Lake Walcott is at 97% of capacity, Milner is at 100% of capacity, and Grassy Lake is at 92% of capacity.

Spill: Dworshak Reservoir has reached full pool. However, inflow to the project remains high and it has become necessary to spill water at volumes that will cause total dissolved gas levels to exceed the Idaho State and Nez Perce tribal standard of 110%. The project has granted a temporary exceedence of the forebay maximum elevation to 1600.5 feet to attempt to smooth discharge and reduce TDG exceedences. The total dissolved gas levels have been in excess of 116% since midnight of June 20th. This project operated with no spill from May 16th until June 16th, and at minimum discharge between the 25th of May and June 11th.

In general, the Snake River Projects have had lower spill levels. Spill at Lower Granite Dam averaged 31% of daily flows this past week. At Little Goose Dam spill levels averaged only 15% of average daily flow. Little Goose Dam spill is being reduced to address the gas levels in the Lower Monumental forebay. At Lower Monumental Dam flows were less than hydraulic capacity and no spill occurred. At Ice Harbor Dam spill averaged 70% of daily flows over the past week.

Lower River spill decreased the beginning of last week, but increased towards the end of the week when flows increased. Spill averaged 47% of average daily flow at McNary Dam, 28% of average daily flow at John Day Dam, 32% of average daily flow at The Dalles Dam and 39% of average daily flow at Bonneville Dam. Grand Coulee Dam is spilling and spill has averaged 11% of daily discharge over the past three days. The total dissolved gas levels at all federal and Mid Columbia hydroprojects remain high with many projects exceeding the water quality waiver standards. Fish have been observed with minor signs of GBT this past week at some monitoring locations, however, at Lower Monumental Dam a high proportion of late migrating steelhead were observed with signs of GBT this past week.

Smolt Monitoring: In the Snake River, this week's passage indices of yearling chinook and steelhead combined still exceed that of subyearling chinook, however, in the last several days subyearling chinook passage indices has jumped dramatically at Little Goose Dam to levels over 10,000 fish. In the Columbia River, passage indices of springtime migrants have continued declining over the course of the week, while passage indices of subyearling chinook rose sharply at Rock Island, McNary, and John Day dams. This produced a 354%, 69%, and 26% increase, respectively, in this week's average subyearling chinook passage indices at these three dams over last week's average. There was no change in the weekly average of the subyearling chinook passage indices at Bonneville Dam from last week to this week.

Adult Fish Passage: This year's summer chinook count at Bonneville Dam is about 1.69 and 5.1 times greater than the respective year 2001 and 10-year average through June 20. At Bonneville Dam, the daily counts averaged 2,962 per day for the week with the cumulative count through June 20 at 53,494. PIT tagged chinook passing Bonneville Dam are comprised of decreasing numbers from the Snake River basin, i.e., S. Fork Salmon River and the Imnaha River. PIT tag returns from fish tagged at Rock Island Dam and other areas in the Mid to Upper Columbia River are increasing at Bonneville Dam. The early portion of the summer chinook run is normally comprised of Snake River origin fish (early June) with the upper Columbia River fish normally arriving at Bonneville from June 15 through the end of July. All projects with the exception of Wells Dam are counting salmon as summer run fish. The Snake River turnoff of summer chinook totaled 12,401 through June 20. The 2002 count of summer chinook at Ice Harbor is 1.8 and 5.6 times greater than the respective 2001 and 10-year average through June 20. At Priest Rapids Dam, the count through June 18 was 1,448, and that compares to 1,192 in 2001 and 498 for the 10-year average. This year's spring chinook run remained well above the 10-year average counts throughout the Snake and Columbia River basin. Most hatcheries should reach their production goals for spring chinook throughout the Basin. Sockeye salmon continued their increase at Bonneville Dam with counts near 500 per day at the beginning of the report week and ending the week with 1,100 counted. The cumulative total through June 20 is 6,251, about 50% of the 10-year average.

Steelhead passage at Bonneville Dam increased with daily counts averaging 534 per day through the past week. The total counted through June 20 was 13,498. Numbers of steelhead upstream past The Dalles Dam increased during the week. Bonneville pool tributaries are still pulling in a portion of these early returning steelhead.

Hatchery Releases: For the past two weeks, approximately 17.2 million juvenile chinook were directly or volitionally released from State, Federal or Tribal facilities in the Columbia River basin. For the upcoming two weeks, about 14.9 million chinook are scheduled for release from hatcheries in the Columbia River basins.

Snake River - Subyearling fall chinook from CPT Johns and Big Canyon (Clearwater) Acclimation Ponds was completed this week, June 18-20. A direct release of subyearling chinook from Lyons Ferry H will be released on June 24.

Mid-Columbia [above McNary Dam] -About 10 million subyearling fall chinook should be in-river by June 21 at Priest Rapids and the final push from Ringold Springs H. completed by the 25th. In addition, subyearling summer chinook from Wells H (376,000) were in-river (June 18) with Turtle Rock H. starting their releases of 2 groups of subyearling summer chinook in early July. Approximately 1.7 million subyearling fall chinook were released in the Yakama River basin in late May.

Lower Columbia [Bonneville Dam to McNary Dam] - About four million subyearling fall chinook will be released into the Klickitat River beginning June 3 and lasting through about July 12. Three separate releases are scheduled with the initial release planted on June 3. Also, a release of subyearling fall chinook from the Umatilla River should be migrating through the lower river. About 2 million subyearling fall chinook from Little White Salmon Hatchery were released on June 20.

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
06/07/02	205.3	6.7	209.3	27.8	235.1	76.5	237.6	75.5	241.5	47.7	256.0	118.0	255.7	169.3
06/08/02	193.0	18.4	197.9	12.1	221.4	73.6	229.2	68.3	238.0	37.6	258.3	116.1	261.5	177.1
06/09/02	190.0	13.7	192.9	17.9	207.7	33.1	202.4	43.1	206.6	29.9	213.0	75.1	214.9	133.1
06/10/02	204.8	0.1	203.1	18.9	230.4	65.5	226.7	64.1	228.9	36.3	241.7	99.7	239.8	154.7
06/11/02	179.4	0.1	182.1	14.3	203.5	30.6	202.8	43.2	209.1	27.3	223.6	84.3	227.9	144.4
06/12/02	178.1	0.1	181.2	0.0	208.6	61.6	209.4	57.9	217.1	14.9	232.0	94.4	238.2	149.7
06/13/02	157.1	0.1	159.3	0.0	189.2	53.9	185.9	34.0	198.2	13.5	208.4	72.8	203.0	123.6
06/14/02	162.9	0.1	169.6	3.4	199.2	47.3	194.4	42.7	203.9	19.6	209.2	75.4	205.6	128.4
06/15/02	147.5	2.6	145.1	4.1	176.3	19.1	181.5	34.4	198.5	27.4	213.0	77.3	214.1	126.8
06/16/02	133.1	0.1	139.8	0.0	169.7	12.2	172.6	29.8	183.2	32.7	196.8	68.8	197.7	109.3
06/17/02	175.1	0.2	169.9	0.0	192.8	31.6	190.6	39.4	199.5	41.1	210.7	80.1	209.0	118.7
06/18/02	185.6	14.5	186.3	16.1	213.8	52.2	212.8	53.6	215.4	46.9	228.7	93.7	227.6	135.0
06/19/02	211.4	33.4	200.1	24.1	230.8	69.5	233.3	75.8	236.5	45.7	258.5	123.2	257.5	152.3
06/20/02	218.9	17.9	221.6	23.0	248.3	101.2	254.2	99.3	251.1	41.7	275.7	139.3	272.4	157.7

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/07/02	1.5	0.0	15.8	16.2	107.8	53.1	102.5	40.9	106.1	0.0	108.2	74.4
06/08/02	1.6	0.0	14.6	16.1	104.9	40.6	98.3	28.5	102.3	0.0	100.8	67.6
06/09/02	1.6	0.0	14.4	14.2	89.6	29.2	86.8	24.3	89.2	0.0	93.1	71.3
06/10/02	1.6	0.0	14.1	17.0	79.0	55.7	72.4	19.4	74.5	0.0	75.8	58.5
06/11/02	1.7	0.0	14.1	14.5	82.1	28.0	76.0	19.0	80.6	0.0	84.9	63.3
06/12/02	4.0	0.0	13.0	14.0	75.0	23.1	71.3	17.5	72.4	0.0	75.1	50.8
06/13/02	7.4	0.0	12.2	13.5	75.7	22.6	72.9	15.8	76.0	0.0	79.9	57.3
06/14/02	7.3	0.0	12.0	12.3	76.2	18.0	74.4	13.5	76.0	0.0	76.9	57.0
06/15/02	5.3	0.0	11.9	12.7	77.6	22.9	73.7	16.0	74.5	0.0	76.9	57.6
06/16/02	5.4	0.0	11.6	12.8	82.3	19.8	80.9	12.0	81.5	0.0	84.4	60.8
06/17/02	8.1	0.7	12.5	12.3	94.3	27.3	94.2	13.0	98.0	0.0	97.7	65.2
06/18/02	10.2	2.8	12.3	13.2	96.9	39.5	90.4	13.5	91.6	0.0	96.8	62.7
06/19/02	11.8	3.4	11.3	12.7	99.4	40.5	96.9	14.8	100.7	0.0	99.2	68.0
06/20/02	14.1	4.5	---	---	89.9	29.1	84.5	7.4	87.4	0.0	91.7	65.9

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		
06/07/02	344.8	184.1	348.0	146.3	337.4	142.3	348.4	166.2	71.2	104.3
06/08/02	370.8	212.8	376.3	165.2	364.9	145.0	353.2	182.6	68.4	95.3
06/09/02	332.6	163.5	341.3	132.6	329.8	139.2	321.5	150.9	62.9	100.8
06/10/02	294.7	128.4	295.2	72.5	288.6	108.8	305.4	118.4	74.1	106.1
06/11/02	338.7	168.7	349.8	124.3	340.8	110.0	337.1	153.7	72.7	104.0
06/12/02	297.8	145.2	298.8	89.4	289.5	99.8	298.1	115.3	71.6	106.1
06/13/02	308.3	143.8	314.8	86.8	303.2	96.7	308.4	118.5	74.2	109.0
06/14/02	281.8	121.3	278.4	75.5	268.3	85.8	285.2	96.6	72.0	109.9
06/15/02	306.1	134.8	297.6	76.7	286.8	80.0	300.4	106.3	74.2	113.2
06/16/02	271.0	98.0	262.3	72.8	249.3	83.8	278.4	101.4	65.6	104.7
06/17/02	297.7	141.1	303.8	102.2	303.2	94.6	304.5	123.5	65.5	108.7
06/18/02	328.2	166.7	310.9	83.6	301.0	101.9	298.0	107.8	63.2	120.0
06/19/02	345.7	179.5	358.6	79.8	336.6	105.0	342.7	149.1	64.5	122.4
06/20/02	201.8	188.7	370.3	111.9	355.8	110.8	359.5	163.6	66.3	122.9

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
Lower Granite Dam											
	06/11/02	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/18/02	Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	06/12/02	Steelhead	39	0	0	0.00%	0.00%	0	0	0	0
	06/19/02	Steelhead	60	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	06/11/02	Steelhead	100	8	8	8.00%	0.00%	6	2	0	0
	06/17/02	Steelhead	95	26	26	27.36%	1.05%	21	4	1	0
McNary Dam											
	06/14/02	Subyearling Chinook	42	0	0	0.00%	0.00%	0	0	0	0
	06/14/02	Yearling Chinook	35	0	0	0.00%	0.00%	0	0	0	0
	06/14/02	Steelhead	23	3	3	13.04%	0.00%	3	0	0	0
	06/17/02	Subyearling Chinook	81	0	0	0.00%	0.00%	0	0	0	0
	06/17/02	Yearling Chinook	12	0	0	0.00%	0.00%	0	0	0	0
	06/17/02	Steelhead	7	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	06/13/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	06/17/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
	06/20/02	Subyearling Chinook	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	06/13/02	Yearling Chinook	50	2	2	4.00%	0.00%	2	0	0	0
	06/13/02	Steelhead	50	0	0	0.00%	0.00%	0	0	0	0
	06/17/02	Yearling Chinook	16	0	0	0.00%	0.00%	0	0	0	0
	06/17/02	Steelhead	84	1	1	1.19%	0.00%	1	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
6/7	97	98	99	24	131	132	133	24	114	115	116	21	110	110	111	24	109	109	109	23
6/8	96	96	97	24	131	131	132	24	116	117	118	24	112	113	113	24	109	109	109	23
6/9	96	96	96	8	131	131	131	5	114	115	115	24	116	116	117	4	111	112	112	23
6/10	96	96	96	24	131	131	132	24	114	115	115	24	112	112	113	24	113	114	115	23
6/11	96	96	96	23	132	132	133	24	115	115	116	24	112	113	113	24	112	113	113	23
6/12	100	103	106	19	131	132	132	17	115	116	116	24	113	113	114	16	113	113	114	23
6/13	107	107	107	24	131	131	132	24	116	116	116	24	114	115	115	24	113	114	114	23
6/14	103	107	107	24	132	132	133	24	117	117	118	21	115	116	116	24	115	115	116	23
6/15	98	99	99	24	132	132	133	24	118	118	119	24	116	117	117	24	116	116	116	23
6/16	99	99	100	24	132	132	133	24	118	118	119	24	116	117	117	24	116	116	117	23
6/17	100	101	103	24	132	132	134	4	119	119	119	24	116	117	117	24	116	117	117	23
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	101	103	103	24	132	132	133	24	118	118	119	24	116	117	117	24	115	115	115	23
6/20	99	99	99	24	131	132	133	24	118	118	119	24	116	117	118	24	115	117	118	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
6/7	119	120	123	23	109	109	110	24	119	121	125	24	115	117	118	23	118	120	122	23
6/8	114	118	122	23	109	109	109	24	120	123	128	24	117	119	121	24	119	120	122	24
6/9	117	121	122	23	109	110	110	24	113	115	126	24	118	121	122	24	120	122	122	24
6/10	117	120	122	23	111	112	112	24	120	124	129	24	113	115	121	24	116	119	123	24
6/11	117	121	123	23	113	114	114	23	117	119	126	23	117	120	122	24	119	121	124	24
6/12	112	112	113	23	112	112	112	24	121	124	128	24	116	117	120	24	118	120	123	24
6/13	113	113	114	19	112	112	113	24	119	121	124	24	115	116	117	24	117	117	118	24
6/14	115	115	118	23	113	113	114	24	118	121	128	24	118	119	120	23	119	120	122	23
6/15	116	116	117	23	114	114	115	23	117	119	130	23	117	118	119	23	118	119	120	22
6/16	116	116	116	23	114	114	115	23	116	116	118	23	116	119	121	24	117	119	121	24
6/17	116	116	116	23	113	114	114	24	117	119	124	24	113	113	113	24	115	116	119	24
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	119	120	121	23	114	114	115	24	121	125	133	24	116	119	123	23	119	123	124	23
6/20	116	118	119	20	115	115	116	24	127	130	134	24	121	123	128	23	123	124	127	23

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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>		<u>Avg</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>		<u>hr</u>	<u>Avg</u>			<u>Avg</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>
6/7	117	118	119	23	121	122	123	23	116	117	118	24	123	125	127	24	119	120	123	24
6/8	118	119	120	24	121	121	122	24	117	118	120	24	123	126	128	24	119	121	124	24
6/9	119	120	120	24	121	122	122	24	118	119	122	24	118	118	119	24	118	119	121	24
6/10	116	117	119	24	119	121	122	24	119	120	121	24	121	123	125	24	120	122	123	24
6/11	118	120	122	24	120	123	124	24	121	122	124	24	120	121	126	24	121	123	125	24
6/12	119	120	121	24	120	121	122	24	120	122	125	24	121	123	128	24	121	123	124	24
6/13	119	120	120	24	120	121	121	24	---	---	---	0	---	---	---	0	---	---	---	0
6/14	119	119	120	24	120	121	121	24	---	---	---	0	---	---	---	0	---	---	---	0
6/15	118	118	119	22	120	121	121	22	---	---	---	0	---	---	---	0	---	---	---	0
6/16	116	117	117	24	119	120	120	23	---	---	---	0	---	---	---	0	---	---	---	0
6/17	113	114	115	24	118	119	120	24	---	---	---	0	---	---	---	0	---	---	---	0
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	118	119	121	23	121	123	124	23	---	---	---	0	---	---	---	0	---	---	---	0
6/20	121	122	123	23	123	124	125	23	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	Priest R. Dnst			Pasco			Dworshak			Clrwrtr-Peck			Anatone			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/7	123	123	124	24	114	115	116	21	107	108	113	21	103	104	104	21	105	105	106	21
6/8	124	124	125	24	114	115	116	24	105	106	106	24	102	102	103	24	104	104	104	23
6/9	122	122	123	24	115	116	116	24	106	107	108	24	102	102	103	24	104	104	105	24
6/10	123	123	124	24	115	116	117	24	107	107	108	24	102	102	103	24	104	105	105	24
6/11	123	124	124	24	117	118	119	24	107	109	111	24	102	104	105	24	104	105	106	24
6/12	123	124	125	24	117	118	118	24	104	105	109	24	102	103	105	24	104	105	106	24
6/13	---	---	---	0	118	119	119	24	103	103	104	24	102	103	104	24	104	105	106	24
6/14	---	---	---	0	118	118	118	21	103	104	104	21	102	103	104	21	104	105	105	21
6/15	---	---	---	0	117	118	118	24	103	104	104	24	103	104	105	24	104	105	106	24
6/16	---	---	---	0	115	115	116	24	103	104	104	24	103	104	105	24	104	104	105	24
6/17	---	---	---	0	112	112	114	13	104	104	106	23	103	104	104	23	103	104	104	24
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	---	---	---	0	114	116	117	24	108	109	110	24	104	105	106	24	104	105	106	24
6/20	---	---	---	0	117	118	118	24	110	112	116	24	105	106	107	23	104	105	106	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwrtr-Lewiston			Lower Granite			L. Granite Tlwr			Little Goose			L. Goose Tlwr			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/7	101	102	102	21	104	104	104	21	120	122	125	21	114	115	116	21	116	120	124	21
6/8	100	101	101	24	103	104	104	24	116	121	125	24	115	116	118	24	116	119	124	24
6/9	100	101	101	24	103	103	103	24	113	116	117	24	115	116	117	24	116	117	117	24
6/10	101	101	102	24	102	103	103	24	119	120	124	24	113	114	114	24	115	117	117	24
6/11	102	103	104	24	103	104	106	24	113	118	119	24	112	113	116	24	114	116	117	24
6/12	102	103	104	24	105	105	107	24	113	120	120	23	113	115	117	24	113	116	117	24
6/13	102	103	104	24	106	108	109	24	113	120	121	24	116	117	118	24	116	117	117	24
6/14	102	103	104	21	107	108	109	21	111	115	120	21	114	115	118	21	113	114	115	21
6/15	102	103	104	24	106	107	110	24	112	116	117	24	113	114	115	24	112	113	113	24
6/16	102	103	104	24	105	106	107	24	111	113	114	23	112	112	113	24	112	112	113	24
6/17	101	102	102	23	103	103	104	24	113	115	118	24	110	110	111	18	110	111	112	17
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	102	103	104	24	102	103	104	24	120	121	122	24	107	107	109	24	110	113	113	24
6/20	103	104	105	24	103	104	106	24	115	120	122	24	112	114	117	24	112	113	114	24

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

Date	Lower Mon.			L. Mon. Tlwr			Ice Harbor			Ice Harbor Tlwr			McNary-Oregon			#				
	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High	#	24 h	12 h	High		#			
	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg		hr	Avg	Avg			hr	Avg	Avg	hr
6/7	120	122	123	21	119	121	122	21	115	115	116	21	117	119	122	21	114	115	115	21
6/8	120	122	123	24	119	121	122	24	115	116	116	24	116	117	118	24	113	114	114	24
6/9	116	117	118	24	115	116	118	24	117	117	118	24	116	118	119	24	113	113	114	24
6/10	115	116	116	24	114	115	116	24	117	117	118	24	114	115	117	24	115	116	118	24
6/11	116	117	118	24	115	116	117	24	115	116	117	24	115	116	118	24	115	116	118	24
6/12	117	118	119	24	116	116	117	24	115	116	117	24	114	115	116	24	117	118	120	24
6/13	117	117	119	24	116	116	117	24	116	117	119	24	114	115	117	24	117	118	120	24
6/14	116	117	119	21	115	115	117	20	117	117	119	21	114	115	117	21	117	118	119	21
6/15	117	117	118	24	117	117	118	24	116	117	117	24	114	115	117	24	118	119	121	24
6/16	115	116	117	24	115	115	117	24	115	115	116	24	115	116	117	23	115	116	117	24
6/17	112	113	113	18	112	112	113	18	114	114	115	24	116	117	118	24	113	113	114	24
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	109	110	112	24	108	109	110	24	109	109	110	24	116	118	120	24	110	111	113	24
6/20	111	113	116	24	110	112	113	24	110	110	111	24	116	118	120	24	112	113	114	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	High				
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg				Avg	High	
6/7	114	115	115	21	122	123	124	21	110	110	110	23	121	122	124	21	114	117	119	23
6/8	113	113	114	24	123	124	124	24	109	110	110	23	121	122	125	24	112	115	120	23
6/9	113	113	113	24	120	121	122	24	112	112	112	23	119	121	125	24	114	116	120	23
6/10	114	115	116	24	118	119	119	24	112	112	112	23	115	119	119	24	112	112	115	14
6/11	115	115	116	24	119	121	122	24	114	115	117	23	119	119	121	24	113	115	116	22
6/12	116	118	120	24	107	109	112	16	116	116	117	23	119	120	120	24	115	115	116	23
6/13	117	118	119	24	120	120	120	11	116	117	118	23	119	120	120	24	115	115	116	18
6/14	117	118	120	21	120	120	121	21	117	118	118	23	119	119	119	21	115	115	116	23
6/15	118	119	121	24	120	120	121	23	117	117	118	23	118	119	120	24	113	114	114	23
6/16	115	116	118	24	119	119	120	24	115	115	116	23	116	118	119	24	113	113	114	23
6/17	112	113	114	24	119	119	120	24	112	112	112	23	119	120	120	24	113	114	116	23
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	109	110	112	24	122	122	122	24	108	109	110	23	117	120	120	24	109	109	110	22
6/20	113	114	115	24	123	124	124	24	109	110	111	23	120	120	121	24	111	112	113	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>	#	hr
	Avg	Avg			High	Avg			Avg	High			Avg	Avg		
6/7	119	120	121	24	116	117	117	23	120	122	124	23	119	120	121	24
6/8	118	119	121	24	114	115	115	23	120	122	125	23	118	120	122	24
6/9	119	120	122	24	113	114	114	23	121	124	129	23	118	120	122	24
6/10	118	119	120	24	114	115	116	23	119	120	120	23	115	115	116	24
6/11	118	119	120	24	116	117	118	23	122	124	125	23	116	117	119	24
6/12	119	119	120	24	117	118	119	23	119	121	125	23	118	119	120	24
6/13	119	119	120	24	118	118	118	19	118	119	120	19	117	117	118	20
6/14	119	120	120	16	117	118	119	22	121	122	124	23	117	118	120	24
6/15	117	118	118	24	112	113	114	23	118	118	118	23	114	114	115	24
6/16	118	118	118	24	111	111	112	23	117	117	118	23	112	112	112	24
6/17	117	118	119	24	112	113	115	23	116	118	120	23	112	112	113	24
6/18	---	---	---	0	---	---	---	0	---	---	---	0	---	---	---	0
6/19	115	116	116	24	113	113	114	23	119	120	121	23	114	116	116	24
6/20	116	118	119	24	115	115	116	23	121	121	121	11	117	118	119	24

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary									
From:	6/7/02		to	6/20/02					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	06-18-02	06-20-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	06-18-02	06-20-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe Total					1,000,000				
USFWS	L White Salmon	CH0	FA	2002	2,000,000	06-20-02	06-20-02	Little White Salmon H	Little White Salmon River
USFWS Total					2,000,000				
WDFW	Klickitat	CH0	FA	2002	4,000,000	06-03-02	07-12-02	Klickitat H	Klickitat River
WDFW	Priest Rapids	CH0	FA	2002	6,782,000	06-11-02	06-21-02	Priest Rapids H	Mid-Columbia River
WDFW	Ringold Springs	CH0	FA	2002	3,000,000	06-17-02	06-25-02	Ringold Springs H	Mid-Columbia River
WDFW	Wells	CH0	SU	2002	376,027	06-17-02	06-18-02	Wells H	Mid-Columbia River
WDFW Total					14,158,027				
Grand Total					17,158,027				

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary									
From:	6/21/02		to	7/4/02					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
WDFW	East Bank	CH0	SU	2002	436,000	07-01-02	07-05-02	Turtle Rock H	Mid-Columbia River
WDFW	East Bank	CH0	SU	2002	450,000	07-01-02	07-05-02	Turtle Rock H	Mid-Columbia River
WDFW	Klickitat	CH0	FA	2002	4,000,000	06-03-02	07-12-02	Klickitat H	Klickitat River
WDFW	Lyons Ferry	CH0	FA	2002	200,000	06-24-02	06-26-02	Lyons Ferry H	Snake River
WDFW	Priest Rapids	CH0	FA	2002	6,782,000	06-11-02	06-21-02	Priest Rapids H	Mid-Columbia River
WDFW	Ringold Springs	CH0	FA	2002	3,000,000	06-17-02	06-25-02	Ringold Springs H	Mid-Columbia River
WDFW Total					14,868,000				
Grand Total					14,868,000				

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

Two-Week Summary of Passage Indices

* 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: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmpsubmitdata.asp>

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.

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)
06/07/2002 *	---	3	---	16	1,273	3,185	6,790	587	6,104	7,027	15,569
06/08/2002 *	---	3	---	---	1,062	3,466	---	361	6,571	5,713	7,638
06/09/2002 *	---	7	---	---	1,446	2,402	3,135	294	5,867	5,447	8,060
06/10/2002 *	---	1	---	---	1,284	1,913	---	179	0	5,448	9,170
06/11/2002 *	---	1	---	---	2,090	1,402	2,200	433	---	6,062	5,578
06/12/2002 *	---	1	---	---	729	1,561	1,600	195	---	4,529	7,226
06/13/2002 *	---	---	---	---	305	484	4,600	322	---	4,820	16,315
06/14/2002 *	---	---	---	---	813	234	700	77	1,250	7,838	7,027
06/15/2002	---	---	---	---	1,305	523	600	70	4,353	6,491	6,947
06/16/2002 *	---	---	---	---	1,529	267	200	39	4,055	5,420	9,832
06/17/2002 *	---	---	---	---	1,507	596	500	29	3,472	4,369	5,097
06/18/2002	---	---	---	---	3,029	1,340	1,050	36	2,591	2,159	5,092
06/19/2002 *	---	---	---	---	1,563	2,183	900	59	961	1,506	4,396
06/20/2002	---	---	---	---	864	1,506	1,300	62	916	1,597	2,701
Total:	0	16	0	16	18,799	21,062	23,575	2,743	36,140	68,426	110,648
# Days:	0	6	0	1	14	14	12	14	11	14	14
Average:	0	3	0	16	1,343	1,504	1,965	196	3,285	4,888	7,903
YTD	38,199	28,542	8,013	7,847	2,449,479	2,838,644	2,216,500	28,573	3,501,748	2,094,739	3,310,507

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)
06/07/2002 *	---	0	---	99	1,630	1,224	872	86	44,882	26,514	30,637
06/08/2002 *	---	0	---	---	2,231	1,061	---	42	49,106	26,228	25,038
06/09/2002 *	---	0	---	---	3,646	4,842	4,627	48	53,822	17,466	37,613
06/10/2002 *	---	0	---	---	5,520	7,288	---	35	3,424	14,908	39,592
06/11/2002 *	---	0	---	---	9,346	5,231	1,800	75	---	13,989	31,931
06/12/2002 *	---	0	---	---	3,389	4,124	1,400	82	---	15,995	37,935
06/13/2002 *	---	---	---	---	3,321	857	3,200	76	---	16,699	27,138
06/14/2002 *	---	---	---	---	2,536	528	2,100	127	4,425	13,189	27,125
06/15/2002	---	---	---	---	2,937	1,454	1,550	162	5,753	9,225	22,597
06/16/2002 *	---	---	---	---	3,655	1,784	550	147	27,179	8,620	36,183
06/17/2002 *	---	---	---	---	2,071	3,458	750	261	38,072	20,171	28,923
06/18/2002	---	---	---	---	5,337	15,477	1,800	415	148,357	23,965	36,471
06/19/2002 *	---	---	---	---	7,543	18,496	3,200	477	110,094	33,267	46,041
06/20/2002	---	---	---	---	4,078	11,464	5,300	428	113,998	58,078	34,831
Total:	0	0	0	99	57,240	77,288	27,149	2,461	599,112	298,314	462,055
# Days:	0	6	0	1	14	14	12	14	11	14	14
Average:	0	0	0	99	4,089	5,521	2,262	176	54,465	21,308	33,004
YTD	0	4	26	3,488	89,347	82,058	27,995	3,735	862,036	374,559	2,392,967

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)
06/07/2002 *	---	0	---	1	916	771	4,052	1,749	8,927	5,303	30,453
06/08/2002 *	---	0	---	---	1,224	1,027	---	1,464	5,242	11,167	22,247
06/09/2002 *	---	0	---	---	1,145	1,670	4,012	1,061	3,812	10,462	17,374
06/10/2002 *	---	0	---	---	899	1,434	---	687	489	5,524	16,885
06/11/2002 *	---	0	---	---	1,683	1,178	3,300	938	---	6,262	15,059
06/12/2002 *	---	0	---	---	317	822	700	690	---	5,292	9,525
06/13/2002 *	---	---	---	---	363	458	1,300	837	---	5,153	18,253
06/14/2002 *	---	---	---	---	476	226	200	700	866	4,888	8,292
06/15/2002	---	---	---	---	705	310	1,300	765	1,648	2,460	13,105
06/16/2002 *	---	---	---	---	528	159	50	509	1,743	2,221	10,095
06/17/2002 *	---	---	---	---	590	278	200	439	2,002	992	7,008
06/18/2002	---	---	---	---	837	352	450	319	1,522	1,155	4,954
06/19/2002 *	---	---	---	---	646	447	1,500	284	1,068	1,639	5,618
06/20/2002	---	---	---	---	207	396	650	241	541	1,324	2,559
Total:	0	0	0	1	10,536	9,528	17,714	10,683	27,860	63,842	181,427
# Days:	0	6	0	1	14	14	12	14	11	14	14
Average:	0	0	0	1	753	681	1,476	763	2,533	4,560	12,959
YTD	0	0	0	101	120,995	101,114	63,411	83,680	192,451	308,525	2,309,455

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)
06/07/2002 *	---	114	---	6	5,695	8,308	20,959	225	15,079	4,110	41,550
06/08/2002 *	---	66	---	---	5,057	5,666	---	209	6,201	5,021	27,376
06/09/2002 *	---	115	---	---	4,926	4,940	28,953	136	2,934	11,327	20,598
06/10/2002 *	---	45	---	---	4,044	5,867	---	95	293	4,994	27,947
06/11/2002 *	---	27	---	---	3,831	5,256	29,000	109	---	2,665	37,230
06/12/2002 *	---	22	---	---	2,407	3,244	3,400	68	---	4,503	11,988
06/13/2002 *	---	---	---	---	3,861	1,437	13,100	116	---	4,390	10,823
06/14/2002 *	---	---	---	---	2,606	801	6,400	81	481	4,427	8,151
06/15/2002	---	---	---	---	5,012	1,290	16,200	100	647	1,640	10,802
06/16/2002 *	---	---	---	---	5,030	1,118	4,900	119	1,423	1,265	13,241
06/17/2002 *	---	---	---	---	2,975	1,338	3,045	140	1,471	1,121	4,205
06/18/2002	---	---	---	---	3,764	2,200	5,550	104	1,060	1,166	2,890
06/19/2002 *	---	---	---	---	2,990	2,055	6,550	93	1,068	1,329	3,786
06/20/2002	---	---	---	---	2,972	1,540	8,700	85	291	2,236	2,843
Total:	0	389	0	6	55,170	45,060	146,757	1,680	30,948	50,194	223,430
# Days:	0	6	0	1	14	14	12	14	11	14	14
Average:	0	65	0	6	3,941	3,219	12,230	120	2,813	3,585	15,959
YTD	2,833	32,040	3,494	11,810	2,561,390	2,255,782	1,746,038	28,283	781,193	539,029	1,414,561

* See sampling comments <http://www.fpc.org/currentDaily/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.

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.

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)	
06/07/2002	*	---	0	---	11	335	100	145	344	4,970	3,315	3,641
06/08/2002	*	---	0	---	---	288	130	---	208	6,128	4,588	3,178
06/09/2002	*	---	0	---	---	331	485	1,001	134	3,960	4,928	5,732
06/10/2002	*	---	0	---	---	225	433	---	132	293	4,540	7,569
06/11/2002	*	---	0	---	---	406	426	800	312	---	4,663	8,924
06/12/2002	*	---	0	---	---	285	175	300	188	---	4,012	5,419
06/13/2002	*	---	---	---	---	102	100	600	259	---	3,769	8,238
06/14/2002	*	---	---	---	---	168	63	400	73	770	3,690	6,465
06/15/2002		---	---	---	---	144	79	100	72	1,778	3,007	4,887
06/16/2002	*	---	---	---	---	111	143	0	66	1,138	1,815	5,244
06/17/2002	*	---	---	---	---	92	65	100	81	1,961	1,512	2,931
06/18/2002		---	---	---	---	144	285	50	65	571	606	1,651
06/19/2002	*	---	---	---	---	102	208	400	52	641	843	1,954
06/20/2002		---	---	---	---	69	277	50	48	458	1,278	1,990
Total:		0	0	0	11	2,802	2,969	3,946	2,034	22,668	42,566	67,823
# Days:		0	6	0	1	14	14	12	14	11	14	14
Average:		0	0	0	11	200	212	329	145	2,061	3,040	4,845
YTD		18	0	0	261	75,400	63,666	37,761	19,923	1,396,081	924,998	823,055

Definitions for Smolt Index Counts

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

IMN (Collection) = Imnaha River Trap : Collection Counts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Cumulative Adult Passage at Mainstem Dams Through: 06/20

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.		2002		2001		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	268,813	6,477	391,367	14,172	104,143	5,654	53,494	2,669	31,585	4,491	10,416	1,382	0	0	0	0	0	0
TDA	180,861	3,884	303,912	9,953	68,586	3,925	34,795	1,270	22,303	2,530	6,289	757	0	0	0	0	0	0
JDA	139,890	2,403	264,177	6,208	58,196	3,052	31,460	1,116	19,057	1,452	5,711	553	0	0	0	0	0	0
MCN	128,890	3,806	258,689	6,683	54,462	2,970	23,545	1,166	16,825	1,406	4,601	463	0	0	0	0	0	0
IHR	85,207	1,825	171,173	3,026	32,988	1,807	12,401	668	6,794	566	2,195	233	0	0	0	0	0	0
LMN	76,304	1,531	180,787	1,784	32,825	1,838	7,847	244	5,945	109	1,569	149	0	0	0	0	0	0
LGS	77,232	1,815	174,823	2,990	31,528	1,921	6,252	339	4,284	300	1,354	159	0	0	0	0	0	0
LWG	75,025	2,132	171,958	3,135	30,329	1,865	3,508	157	2,204	233	773	103	0	0	0	0	0	0
PRD	34083	196	50,379	987	14,082	343	1912	12	1,669	163	728	52	0	0	0	0	0	0
RIS	25233	904	39,785	1,761	10,725	505	192	5	469	56	159	17	0	0	0	0	0	0
RRH	11105	217	15,895	543	3,314	135	0	0	0	0	0	0	0	0	0	0	0	0
WEL	6,675	30	9,435	771	1,664	150	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2002		2001		10-Yr Avg.		2002	2001	10-Yr Avg.	2002	2001	10-Yr Avg.	Wild 2002
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	0	0	1	0	0	0	6,251	48,973	13,172	13,498	17,727	8,704	4,027
TDA	0	0	0	0	0	0	2,040	17,766	4,578	4,183	4,775	2,429	1,581
JDA	0	0	0	0	0	0	2,644	20,086	5,221	9,895	6,027	4,112	3,563
MCN	0	0	0	0	0	0	779	11,602	2,890	5,654	3,988	2,611	2,063
IHR	0	0	0	0	0	0	2	3	0	4,769	2,284	2,227	1,338
LMN	0	0	0	0	0	0	2	0	0	5,139	2,222	2,193	2,124
LGS	0	0	0	0	0	0	0	1	0	6,282	2,345	1,367	2,571
LWG	0	0	0	0	0	0	0	1	0	12,522	6,037	4,808	3,434
PRD	193	0	1	1	0	0	36	2,833	870	75	72	51	**
RIS	1	0	7	0	0	0	1	367	141	98	92	112	63
RRH	13	0	0	0	1	0	6	183	71	193	109	96	84
WEL	0	0	0	0	0	0	0	30	17	72	35	38	53

RIS and RRH are through 06/19 and are from Chelan CO PUD - except for Wild ST which are from USACE.

TDA is through 06/18; LMN is through 06/19

PRD is through 06/20 and is from Douglas CO PUD. WEL is through 6/19 and is from the COE.

**PRD is not reporting Wild Steelhead numbers.

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

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.

Two Week Transportation Summary

		06/08/02 TO 06/21/02					
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	34,249	11,660	6,230	1,640	34,331	88,110
	Sum of NumberBarged	33,065	10,136	6,526	1,667	33,537	84,931
	Sum of NumberBypassed	0	1,323	0	0	1,401	2,724
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	224	27	24	52	20	347
LGS	Sum of NumberCollected	62,259	14,835	6,927	2,274	30,999	117,294
	Sum of NumberBarged	52,896	15,897	6,989	1,959	35,383	113,124
	Sum of NumberBypassed	0	0	0	0	0	0
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	69	63	133	108	97	470
LMN	Sum of NumberCollected	27,149	23,575	17,714	3,946	146,757	219,141
	Sum of NumberBarged	21,831	22,134	17,054	3,862	137,171	202,052
	Sum of NumberBypassed	0	0	0	0	195	195
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	22	146	10	34	728	940
MCN	Sum of NumberCollected	296,145	18,071	13,347	10,935	14,278	352,776
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	296,015	18,063	13,343	10,930	14,262	352,613
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	131	8	4	5	16	164
Total Sum of NumberCollected		419,802	68,141	44,218	18,795	226,365	777,321
Total Sum of NumberBarged		107,792	48,167	30,569	7,488	206,091	400,107
Total Sum of NumberBypassed		296,015	19,386	13,343	10,930	15,858	355,532
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		446	244	171	199	861	1,921

YTD Transportation Summary

TO: 06/21/02

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	51,292	1,528,384	78,316	49,744	1,667,120	3,374,856	
	Sum of NumberBarged	48,641	1,476,064	78,056	47,930	1,594,987	3,245,678	
	Sum of NumberBypassed	1	38,152	5	7	65,895	104,060	
	Sum of NumberTrucked	29	9,847	20	343	3,383	13,622	
	Sum of TotalProjectMortalities	307	3,825	115	1,426	1,135	6,808	
LGS	Sum of NumberCollected	65,356	1,902,670	76,879	45,655	1,546,827	3,637,387	
	Sum of NumberBarged	55,652	1,898,758	75,997	44,842	1,542,494	3,617,743	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of NumberTrucked	0	1,034	4	74	1,024	2,136	
	Sum of TotalProjectMortalities	77	1,612	545	507	2,016	4,757	
LMN	Sum of NumberCollected	27,950	2,209,287	60,306	37,363	1,705,161	4,040,067	
	Sum of NumberBarged	22,594	2,115,556	57,645	36,264	1,660,104	3,892,163	
	Sum of NumberBypassed	38	68,125	1,994	213	31,855	102,225	
	Sum of NumberTrucked	0	20,104	0	13	356	20,473	
	Sum of TotalProjectMortalities	22	4,207	17	828	4,178	9,252	
MCN	Sum of NumberCollected	433,869	2,195,170	105,846	899,791	456,875	0	4,091,551
	Sum of NumberBarged	0	0	0	0	109	0	109
	Sum of NumberBypassed	433,697	2,194,216	105,822	898,963	456,506	0	4,089,204
	Sum of NumberTrucked	0	0	0	0	0	0	0
	Sum of TotalProjectMortalities	173	954	24	828	260	0	2,239
Total Sum of NumberCollected		578,467	7,835,511	321,347	1,032,553	5,375,983	0	15,143,861
Total Sum of NumberBarged		126,887	5,490,378	211,698	129,036	4,797,694	0	10,755,693
Total Sum of NumberBypassed		433,736	2,300,493	107,821	899,183	554,256	0	4,295,489
Total Sum of NumberTrucked		29	30,985	24	430	4,763	0	36,231
Total Sum of TotalProjectMortalities		579	10,598	701	3,589	7,589	0	23,056

