



Fish Passage Center

Weekly Report #02 - 12

May 31, 2002

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SUMMARY OF EVENTS:

- **Precipitation over the start of May has averaged between 50% and 165% of that recorded over the same period between 1971 and 2000.**
- **Due to increases in flow along much of the Columbia and Snake Rivers, storage reservoirs are currently operating to both meet the BiOp flow objectives and refill.**
- **Flows at Lower Granite have averaged 76.3 Kcfs between April 3rd and May 29th and 95.2 Kcfs over the week from May 24th to May 29th (BiOp target = 97 Kcfs).**
- **Flows at McNary have averaged 234.6 Kcfs between April 10th and May 29th and 263.1 Kcfs over the week May 24th to May 29th (BiOp target = 246 Kcfs).**
- **Flows at Priest Rapids have averaged 152.8 Kcfs between April 10th and May 29th and 162.0 Kcfs over the week from May 24th to May 29th (BiOp target = 135 Kcfs).**
- **Combined storage in the Upper Snake River System is at 61% of capacity, the same as last week.**

Water Supply: Over the last week, precipitation has increased over much of the Columbia Basin; May precipitation has ranged from 50% to 165% of average. WY 2002 is appears to be approximately average in terms of cumulative precipitation.

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	May 2002		Cumulative 10/1/01 – 5/28/02	
	Observed (inches)	% Avg	Observed (inches)	% Avg
Columbia Above Coulee	2.67	132	18.34	102
SNAKE R. Above Ice Harbor	0.97	57	12.19	91
Columbia Above The Dalles	1.77	99	17.51	99
Kootenai	3.31	165	17.28	94
Clark Fork	1.65	89	12.51	104
Flathead	2.42	110	16.87	106
Pend Oreille/Spokane	2.82	120	29.06	117
Central Washington	0.49	70	6.60	91
SNAKE R. Plain	0.70	52	6.39	75
Clearwater	2.42	88	25.61	107
SW Washington Cascades/Cowlitz	2.08	61	67.69	109
Willamette Valley	1.61	50	53.99	101

The NWRFC released the June Early-Bird water supply forecast on May 30, 2002. Table 2 displays the 2002 May Final runoff volume forecast along with the June Early-Bird forecast for multiple reservoirs.

Table 2. May Final and June Early-Bird Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins during WY 2002.

Site	May Final		June Early-Bird	
	Runoff Volume (Kaf)	% of Avg	Runoff Volume (Kaf)	% of Avg
Mica (April-Sept)	11700	94	12100	97
Hungry Horse (April-Sept)	2180	103	2220	105
Libby (April-Sept)	6750	102	7690	116
Grand Coulee (Jan-July)	62300	99	65200	104
The Dalles (Jan-July)	98200	92	100000	93
Brownlee (April-July)	3580	57	3320	53
Dworshak (April-July)	3050	115	3050	115
Lower Granite (Jan-July)	24200	81	23400	78
Heise (ID) (April-July)	2870	81	2750	77
Weiser (ID) (April-July)	3130	54	2930	51

Of the ten locations listed in Table 2, five sites reported increasing forecasts between the June Early-Bird and May Final water supply forecasts, four sites reported decreasing forecasts and one did not change.

Over the past 1.5 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 is expected to increase throughout much of the Columbia Basin over the next few days. 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 increased flows in the Columbia River, the Grand Coulee Reservoir has been refilling; beginning the week at 1246.1 feet (5-24-02) and ending the week at 1255.0 feet AMSL (5-29-02). The end of May flood control elevation at Grand Coulee is 1245.0 feet AMSL; currently, Grand Coulee is ten feet above this elevation. Presently, Grand Coulee is 35.0 feet from its full pool elevation of 1290.0 feet AMSL.

Libby has been refilling over the past 7 1/2 weeks. The Libby reservoir has gained 9.8 feet over the last week; outflows continue to be 8.0 Kcfs. Libby is currently (midnight, 5-29-02) at an elevation of 2407.0 feet AMSL, 52.0 feet from the full pool elevation of 2459.0 feet AMSL.

From 5-24-02 to 5-29-02, the Dworshak reservoir refilled 14.3 feet. Outflows at Dworshak have varied between 1.70 and 10.0 Kcfs, in an attempt to meet BiOp flow objectives at Lower Granite. Currently (midnight, 5-29-02) Dworshak is at an elevation of 1547.9 feet AMSL; 52.1 feet below the full pool elevation of 1600 feet AMSL.

Over the past week, the Brownlee reservoir continued to refill at a minimal rate, increasing only 0.8 feet from 5-24-02 to 5-29-02. Currently (midnight, 5-29-02), Brownlee was at an elevation of 2076.1 feet AMSL; 0.9 feet below its full pool elevation of

3526.7 feet AMSL; 33.3 feet below its full pool elevation of 3560.0 feet AMSL.

Flows along the Columbia River have increased over the past week and are projected to continue to be high over the upcoming week.

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. The flow objectives are intended to represent averages over the designated time periods. From April 3rd to May 29th, 2002, outflows at Lower Granite have averaged 76.3 Kcfs; from April 10th to May 29th, 2002, outflows at McNary have averaged 234.6 Kcfs; from April 10th to May 29th, 2002, outflows at Priest Rapids have averaged 152.8 Kcfs. Therefore, to date, flow objectives are only being met at Priest Rapids. Over the week from May 24th to 29th, 2002 flows have averaged 95.2 Kcfs at Lower Granite, 263.1 Kcfs at McNary, and 162.0 Kcfs at Priest Rapids. On a weekly basis, BiOp flow objectives are being met at both Priest Rapids and McNary. Lower Granite has been operating close to the BiOp flow objectives.

Over the last week (5-24-02 to 5-30-02), operations have varied along the reservoirs on the Upper Snake River. Currently, as of May 30th, 2002, the entire Upper Snake River System is at 61% of capacity (61% last week). Individually, American Falls is at 71% of capacity (73% last week), Palisades is at 47% of capacity (47% last week), Jackson Lake is at 52% of capacity (45% last week), Island Park is at 95% of capacity (96% last week), Lake Walcott is at 98% of capacity (101% last week), Milner is at 94% of capacity (97% last week), and Grassy Lake is at 87% of capacity (81% last week).

Spill: No spill occurred at Dworshak Dam over the past week. Testing of the RSW at Lower Granite Dam continues with alternating spill levels. Spill has averaged 27% of daily flows this past week. At Little Goose Dam the 12-hour spill levels have averaged 21% of average daily flow. Lower Monumental Dam continues to operate in alternating blocks of transportation for two days followed by one day of primary bypass. At Ice Harbor Dam spill is being implemented up to the daytime cap during daylight hours and to the TDG waiver limits during nighttime hours and has averaged 67% of daily flows over the past week.

Spill for fish passage is also being implemented in the lower Columbia River. Spill over the past week averaged 43% of average daily flow at McNary Dam, 30% of average daily flow at John Day Dam, 36% of average daily flow at The Dalles Dam and 43% of average daily flow at Bonneville Dam. Daytime spill tests continue at John Day and Bonneville dams. All Mid Columbia River projects are spilling at this time. The total dissolved gas levels at all federal and Mid Columbia hydroprojects are presently below the water quality waiver standards. A few fish were observed with minor signs of GBT this past week.

Smolt Monitoring: The yearling chinook numbers collected at Snake River basin Traps were down this week with a total of 661 collected at all SMP traps versus over 791 last week. The average daily collection for all traps combined decreased from 41 to 34. Steelhead numbers were down as well compared to the previous week with the average daily collection at all sites combined at 138 this week compared to 510 the previous week, with the largest numbers collected at the Imnaha Trap this past week. Subyearling chinook were captured in large numbers at the Snake River Trap in the past few days as supplementation fish were released in the Lower Snake River. The White Bird Trap is out for the season with the large amount of debris coming down the Salmon River causing damage to equipment and making the trap inoperable. The Snake Trap is operating intermittently also due to high debris loads in the Snake River as late snow

melt has occurred in the basin the past few days. As we reported last week for yearling chinook at Lower Granite Dam, we analyzed PIT-tag recaptures at Little Goose Dam in order to estimate collection efficiency at Lower Granite Dam during this season. We did a similar analysis of steelhead. Compared to the historic average that NMFS used for developing their projection of total collection 0.48, and which FPC used to develop the seasonal projection of total passage index, collection efficiency was probably lower than half that value. We estimated collection for steelhead near 0.2. Our analysis showed that early in the season the collection efficiency at Lower Granite appeared to be near the historic value, we estimated 0.49, but that fish passing the last week of April and later were collected at a much lower rate 0.1 to 0.14. And just as the lower than expected collection efficiency for chinook affected the seasonal projected passage index, steelhead passage appears more similar to preseason projections when the lower collection efficiency is used. Our new projection for steelhead passage index is 2.3 million, and presently the cumulative index is right at 2.3 million. Despite the adjustment, the steelhead migration still appears to have been delayed by lower flows this year, as early season passage indices would be inflated in comparison to late season indices because of the higher collection efficiency early in the season. The peak in steelhead migration appeared to occur last week at Lower Granite with an average daily index of 83,000, and is gradually decreasing, with 49,000 daily index this week. The passage index for migrant yearling chinook at Lower Granite decreased, averaging 9,000 per day this week versus 60,000 average last week. Sockeye numbers appear to be tapering off this week with the average daily index at 800 versus 4,600 last week. The first subyearling chinook are beginning to show up at Lower Granite Dam this week. At Little Goose the average daily index for chinook also declined from 98,000 last week to 20,000 this week. The steelhead index increased from 68,000 daily average last week to 51,000 this week. At Lower Monumental the project began sampling on 5/1 with samples collected two days and then no

sample the third day as fish are sent through primary bypass, so that indices are only available on those days when fish are being collected. Based on this sampling regime the daily average index for yearling chinook decreased, with the index down this week to 34,000 fish per day compared to 119,000, while steelhead indices were relatively steady, up about 3%, to about 75,000 fish per day compared to 73,000 average index last week. Rock Island Dam yearling chinook index was down 20% over the past week with the average daily index decreasing from 620 to 490. Steelhead numbers decreased this week from an average daily index of last week of 1,500 to 1,000. The sockeye numbers have increased at Rock Island Dam with 220 average daily index this week versus 101 last week. Coho passage has increased dramatically over the past week with an average daily index of 4,800 this week compared to 2,700 last week. In the lower Columbia, McNary saw a large numbers of juvenile migrants this past week, with an average index of 85,000 yearling chinook this week down from 142,000 last week. Steelhead numbers rose this week with an average daily index of 19,700 this week from 18,000 last week. Sockeye indices were down this week, with the average daily index of 16,000 compared to 59,000 per day last week. Subyearling chinook numbers were again up with an average index of 5,500 this week compared to 1,800 the previous week. Coho indices increased at McNary, with average daily index of 7,200 this week versus 2,500 last week. At John Day Dam passage index for yearling chinook averaged 57,000 per day this week compared to 60,000. Steelhead indices averaged 11,700 compared to 10,900 last week. Coho numbers decreased slightly from an average index of 2,800 this week versus about 2,900 per day last week, and sockeye average index dropped from 42,000 to 27,000 over the past week. At Bonneville Dam yearling chinook numbers increased 16% with average daily index this week of 104,000 versus 89,000 last week. While steelhead numbers rose to 36,000 per day versus 28,000 per day for last week. This week the subyearling chinook index averaged 3,300 com-

pared to 4,200 the previous week. Coho numbers dropped to 40% of last week with an average index of 41,000 versus 85,000 last week. The sockeye index decreased quite rapidly this week with daily average index of 21,000 versus 52,000 last week.

Hatchery Releases: For the past two weeks, approximately 5.9 million juvenile chinook, coho and steelhead were directly or volitionally released from State, Federal or Tribal facilities in the Columbia River basin. For the upcoming two weeks, about 20.4 million chinook are scheduled for release from hatcheries in the Columbia River basins.

Snake River -Subyearling fall chinook are being released volitionally from the same acclimation ponds as the yearling fall chinook, i.e., CPT Johns, Pittsburg Landing and Big Canyon (Clearwater) with a direct release from Lyons Ferry H also scheduled.

Mid-Columbia [above McNary Dam] -The subyearling summer and fall chinook release groups comprise almost 50% of the total hatchery production released in this River Zone. Just over ten million subyearling fall chinook are scheduled for release from Priest Rapids and Ringold Springs hatchery beginning in the first two weeks of June.

Lower Columbia [Bonneville Dam to McNary Dam]- About four million subyearling fall chinook will be released into the Klickitat River beginning June 1.

Adult Fish Passage: At Bonneville Dam the season total of 264,882 adult spring chinook for 2002 compares to 388,050 in 2001 and 103,204 for the 10-year average through May 30 with this year's total about 68% of the 2001 count and 257% of the 10-year average. At The Dalles Dam, 174,224 adult spring chinook have been counted, about 59% and 262% of the respective 2001 count and the ten-year average. The percentage of spring chinook adults tallied at Bonneville and then passing The Dalles Dam is 66% so far this sea-

son. A total of 112,989 adult spring chinook have been counted at McNary Dam with about 73,697 turning off into the Snake River (count at Ice Harbor Dam) and 53,711 counted at Lower Granite Dam. Adult spring chinook at Priest Rapids Dam totaled 32,816 through May 30. The 2002 counts are 68% and 254% of the respective 2001 and 10-year average. About 106,513 adult spring chinook of the 112,989 counted at McNary have been counted at upstream dams so far (near 94% of the McNary count). The count of jack spring chinook salmon at Bonneville Dam is 45.5% of the 2001 count, but 112% of the ten-year average through May 30.

New Item - PIT tag detections of adult fish are possible from Bonneville and McNary dams in the lower Columbia River and at Wells Dam in the upper Columbia River. The adult salmon can be detected at Lower Granite Dam on the Snake River. All PIT tag detections are centered at the PIT Tag Operations Center where they can be accessed on a database Web Site.

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											
	05/21/02	Yearling Chinook	48	0	0	0.00%	0.00%	0	0	0	0
	05/21/02	Steelhead	52	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	05/22/02	Yearling Chinook	62	0	0	0.00%	0.00%	0	0	0	0
	05/22/02	Steelhead	38	0	0	0.00%	0.00%	0	0	0	0
	05/29/02	Yearling Chinook	26	0	0	0.00%	0.00%	0	0	0	0
	05/29/02	Steelhead	74	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	05/27/02	Yearling Chinook	58	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Steelhead	42	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	05/23/02	Yearling Chinook	73	0	0	0.00%	0.00%	0	0	0	0
	05/23/02	Steelhead	27	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Yearling Chinook	85	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Steelhead	15	0	0	0.00%	0.00%	0	0	0	0
	05/30/02	Subyearling Chinook	18	0	0	0.00%	0.00%	0	0	0	0
	05/30/02	Yearling Chinook	59	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/23/02	Yearling Chinook	39	0	0	0.00%	0.00%	0	0	0	0
	05/23/02	Steelhead	21	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Yearling Chinook	92	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Steelhead	8	0	0	0.00%	0.00%	0	0	0	0
	05/30/02	Yearling Chinook	87	0	0	0.00%	0.00%	0	0	0	0
	05/30/02	Steelhead	13	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	05/23/02	Yearling Chinook	50	0	0	0.00%	0.00%	0	0	0	0
	05/23/02	Steelhead	50	0	0	0.00%	0.00%	0	0	0	0
	05/27/02	Yearling Chinook	50	1	1	2.00%	0.00%	1	0	0	0
	05/27/02	Steelhead	50	0	0	0.00%	0.00%	0	0	0	0
	05/30/02	Yearling Chinook	50	1	1	2.00%	0.00%	1	0	0	0
	05/30/02	Steelhead	50	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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/17	97	97	98	24	106	107	112	24	112	113	113	24	110	110	111	24	110	110	110	23			
5/18	97	97	97	24	107	107	107	24	112	113	113	24	110	111	112	24	110	111	111	23			
5/19	98	98	98	24	107	108	108	24	113	113	113	24	111	112	112	24	111	112	112	23			
5/20	98	98	99	24	109	110	111	24	112	112	113	21	111	111	112	24	111	111	112	23			
5/21	98	99	99	24	111	112	113	24	112	112	112	24	110	110	112	24	110	110	111	23			
5/22	99	100	100	22	113	114	114	24	111	111	112	21	109	110	111	24	109	110	110	23			
5/23	97	98	98	24	117	119	121	21	111	112	112	24	108	109	109	24	109	109	109	23			
5/24	97	97	97	24	126	127	128	24	112	112	112	24	109	109	110	24	109	110	110	23			
5/25	97	97	98	24	127	127	128	24	112	112	113	24	109	110	110	24	110	110	111	23			
5/26	96	97	97	24	127	128	128	24	112	112	112	24	109	110	110	24	110	110	111	23			
5/27	97	97	98	24	126	127	127	24	113	114	114	24	109	110	110	24	110	111	111	23			
5/28	98	99	99	24	126	126	127	24	113	114	114	24	110	110	111	24	110	110	110	23			
5/29	98	98	98	24	127	127	128	24	114	114	115	24	110	111	111	24	109	109	109	23			
5/30	99	99	104	16	127	127	127	13	114	114	115	13	109	109	110	12	109	109	110	15			

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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/17	111	111	112	23	109	109	110	21	111	111	111	21	109	110	110	23	111	112	113	23			
5/18	111	111	113	23	110	110	111	24	111	111	111	24	110	110	110	23	112	112	113	23			
5/19	112	113	113	23	110	111	111	24	111	112	112	24	110	111	111	24	111	112	113	24			
5/20	112	113	114	23	110	110	110	24	111	111	112	24	110	110	111	24	111	111	111	24			
5/21	111	112	113	23	109	109	110	23	110	111	111	23	109	110	110	24	110	111	111	24			
5/22	111	112	113	23	108	109	109	24	110	110	110	24	108	108	109	24	109	110	110	24			
5/23	109	110	111	23	108	108	108	23	109	109	109	23	107	107	108	23	109	109	110	23			
5/24	110	110	111	23	109	109	109	24	110	110	110	24	108	109	109	24	110	110	111	24			
5/25	110	111	112	23	109	109	110	24	110	110	111	24	109	109	109	24	110	110	110	24			
5/26	110	111	111	23	109	109	110	22	110	111	112	22	109	109	109	24	110	110	110	23			
5/27	111	111	112	23	109	110	110	24	112	114	118	24	109	109	109	24	110	110	110	24			
5/28	110	111	112	23	109	109	110	22	111	112	115	22	110	111	112	24	112	113	114	22			
5/29	110	111	112	23	108	109	109	23	111	112	114	23	109	109	111	24	111	111	112	24			
5/30	110	110	112	15	107	107	108	15	109	109	111	15	110	110	113	16	111	112	113	16			

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>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High		<u>24 h</u>	<u>12 h</u>	High
	Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg			Avg	Avg	
5/17	112	112	112	23	116	117	118	23	113	114	114	24	115	115	116	24	114	115	116	24			
5/18	112	113	113	23	116	117	118	23	114	114	115	24	116	116	117	24	115	115	116	24			
5/19	112	112	112	24	116	116	117	24	116	118	120	24	115	116	117	24	116	116	117	24			
5/20	110	111	111	24	116	116	117	24	114	115	116	24	116	117	118	24	114	115	115	24			
5/21	110	110	110	24	116	118	123	24	112	113	113	24	114	115	116	24	113	114	116	24			
5/22	109	109	110	24	114	115	116	23	108	109	110	24	112	114	116	24	110	110	111	24			
5/23	109	109	110	23	114	115	115	23	---	---	---	0	---	---	---	0	---	---	---	0			
5/24	110	110	111	24	115	115	116	24	111	113	114	24	113	114	115	24	112	113	113	24			
5/25	111	111	111	24	115	115	115	24	113	114	116	24	114	115	115	24	113	114	115	24			
5/26	111	111	111	23	115	115	115	23	113	113	114	24	115	116	116	24	113	114	115	24			
5/27	110	111	111	24	115	115	115	24	---	---	---	0	---	---	---	0	---	---	---	0			
5/28	111	112	113	24	116	116	117	24	---	---	---	0	---	---	---	0	---	---	---	0			
5/29	111	111	112	24	116	117	117	24	---	---	---	0	---	---	---	0	---	---	---	0			
5/30	111	111	113	16	116	116	117	16	---	---	---	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	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwtr-Peck</u>			#	<u>Anatone</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>	
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr	
5/17	119	119	120	24	114	115	115	24	102	103	103	24	102	102	103	24	103	103	104	24
5/18	119	119	120	24	114	114	115	24	103	104	105	24	102	103	104	24	103	104	105	24
5/19	120	120	121	24	114	115	116	24	104	104	105	24	103	104	104	24	104	105	105	24
5/20	119	120	120	24	113	114	114	24	103	103	103	24	102	103	103	24	103	103	103	24
5/21	118	119	120	24	112	112	113	24	106	107	107	24	102	103	103	24	104	104	105	24
5/22	117	117	117	24	110	110	112	24	106	106	106	24	102	102	103	24	104	105	105	23
5/23	---	---	---	0	111	113	114	24	106	107	108	24	102	103	104	24	104	105	105	24
5/24	118	118	119	24	114	115	115	24	102	103	104	24	103	103	104	24	105	105	106	22
5/25	118	119	119	24	114	114	115	24	103	103	103	24	102	103	103	24	104	105	105	24
5/26	118	119	120	24	114	115	115	24	103	103	103	24	102	103	103	24	104	104	105	24
5/27	---	---	---	0	114	115	116	24	103	103	104	24	103	104	104	24	104	105	105	24
5/28	---	---	---	0	114	115	116	24	107	109	110	24	103	104	104	24	104	104	105	24
5/29	---	---	---	0	114	114	115	23	104	105	106	24	103	104	105	24	104	105	106	24
5/30	---	---	---	0	112	112	113	13	104	104	105	13	103	103	104	13	104	104	104	13

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwtr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose 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>	
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr	
5/17	102	103	104	24	104	105	106	24	109	114	118	24	110	111	112	24	114	119	120	24
5/18	102	104	105	24	105	105	107	24	111	118	119	24	112	112	113	24	115	119	120	24
5/19	102	104	104	24	105	105	105	24	111	114	119	24	113	113	115	24	116	119	120	24
5/20	101	101	101	24	104	104	104	24	112	115	117	24	109	110	111	24	113	117	120	24
5/21	101	102	102	24	102	103	103	24	116	116	117	24	109	110	111	24	113	116	116	24
5/22	101	101	102	24	101	101	101	24	116	116	117	24	106	107	108	24	110	115	116	24
5/23	102	102	103	24	102	102	103	24	114	116	117	24	108	109	109	24	112	116	116	24
5/24	102	103	104	24	104	105	106	24	112	112	113	24	111	112	114	24	114	117	118	24
5/25	102	102	103	24	105	105	107	24	111	115	118	24	114	115	116	24	116	118	119	24
5/26	102	102	103	24	106	106	107	24	113	119	120	24	111	111	112	23	114	116	117	24
5/27	102	103	104	24	106	107	109	24	111	114	120	24	111	112	115	24	114	117	117	24
5/28	101	102	103	24	104	104	105	24	111	111	111	24	111	112	112	24	114	116	117	24
5/29	101	102	102	24	103	104	104	24	117	119	119	24	111	112	113	24	113	115	117	24
5/30	101	101	101	13	103	103	104	13	120	120	123	12	108	108	109	13	112	112	115	13

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</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>	
	Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr		Avg	Avg	hr	
5/17	114	115	115	23	114	115	115	23	113	114	115	24	113	114	115	24	112	114	117	24
5/18	115	116	117	24	115	115	116	24	114	114	115	24	114	115	117	24	113	114	116	24
5/19	117	117	118	24	115	116	116	24	115	116	117	24	115	116	119	24	113	114	115	24
5/20	115	116	118	24	115	116	117	24	115	115	115	24	116	118	120	24	113	114	117	24
5/21	113	115	116	24	113	114	116	24	113	114	114	24	116	119	120	24	111	111	112	24
5/22	110	111	112	24	110	111	112	24	111	112	112	24	117	119	120	24	109	109	109	24
5/23	110	111	112	24	109	110	112	24	110	111	113	24	116	119	120	24	109	111	113	24
5/24	112	114	116	24	111	114	115	24	111	112	115	24	117	119	120	19	110	111	113	24
5/25	114	115	117	24	113	115	116	24	110	111	112	24	115	116	119	24	114	115	116	24
5/26	115	117	118	24	115	117	118	24	112	112	113	24	116	118	120	24	114	115	118	24
5/27	117	118	119	24	117	118	118	24	114	115	117	24	116	118	120	24	114	115	118	24
5/28	114	115	116	24	114	115	116	24	114	115	115	24	115	117	120	24	113	114	115	24
5/29	113	114	115	24	113	114	115	24	115	115	115	24	117	119	120	24	114	114	115	24
5/30	114	114	115	13	114	114	116	13	113	113	114	13	117	117	120	13	113	113	115	13

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>		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/17	114	114	116	24	116	118	119	24	111	112	113	23	115	118	119	24	113	114	115	23
5/18	113	113	114	24	116	118	119	24	111	111	112	23	116	118	118	24	114	116	117	23
5/19	115	116	117	24	116	118	119	24	113	114	115	23	117	118	119	24	112	113	116	23
5/20	114	114	114	24	116	119	120	24	113	114	114	23	118	119	120	24	111	112	112	22
5/21	112	113	114	24	117	119	120	24	112	112	113	23	119	119	120	24	110	110	111	23
5/22	109	109	110	24	116	119	119	24	109	109	110	23	114	119	120	24	108	109	109	23
5/23	110	111	112	24	117	119	120	24	108	108	109	23	113	119	119	24	110	112	116	18
5/24	112	114	115	24	117	120	121	24	108	109	110	23	113	119	120	24	111	114	117	23
5/25	113	114	115	24	118	119	121	23	108	108	109	23	113	118	119	24	111	114	116	23
5/26	114	115	116	24	117	118	119	24	110	110	111	23	118	119	120	24	112	116	117	23
5/27	115	115	117	24	117	119	120	23	113	114	114	23	118	119	120	24	111	112	114	23
5/28	114	115	116	23	119	121	123	24	114	115	115	23	120	120	121	24	112	113	114	23
5/29	114	114	115	24	118	120	123	24	115	115	115	23	120	120	121	24	113	113	114	23
5/30	113	113	114	13	117	117	119	13	114	114	115	15	117	118	119	13	112	112	113	15

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>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg
5/17	118	119	120	24	114	114	115	23	117	118	118	23	115	117	117	24
5/18	118	119	120	24	114	115	115	23	116	117	118	23	115	116	116	24
5/19	118	119	120	24	115	116	116	23	119	119	120	23	114	114	116	24
5/20	117	118	118	24	115	116	116	23	118	119	119	23	114	115	116	24
5/21	116	116	117	23	111	112	113	23	115	117	118	23	112	113	113	24
5/22	115	116	116	24	110	110	110	23	113	114	116	23	110	110	111	24
5/23	117	119	119	24	111	111	112	23	118	118	119	23	114	116	117	24
5/24	118	120	121	24	114	115	117	23	119	119	120	23	116	118	119	24
5/25	118	119	120	24	116	117	118	23	119	119	120	23	117	118	119	24
5/26	118	120	121	24	116	117	118	23	116	117	118	23	117	118	119	24
5/27	117	118	119	24	116	117	117	23	115	116	118	23	115	116	118	24
5/28	117	118	118	24	115	116	116	23	114	115	116	23	114	115	116	24
5/29	117	118	119	24	115	115	115	23	115	115	115	23	115	115	116	24
5/30	117	117	117	16	115	115	115	15	115	116	116	15	115	116	118	16

HATCHERY RELEASE SUMMARY LAST TWO WEEKS

Hatchery Release Summary

From: 5/17/02 to 5/30/02

Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Hagerman	ST	SU	2002	140,000	05-14-02	05-17-02	Yankee Fk (Salmon R)	Salmon River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	400,000	05-27-02*	06-04-02	Pittsburg Landing	Snake River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	05-27-02*	06-04-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	05-27-02*	06-04-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe Total					1,540,000				
ODFW	Irrigon	ST	SU	2002	125,000	05-08-02	05-23-02	Big Canyon Acclim.Pd	Grande Ronde River
ODFW Total					125,000				
Umatilla Tribe	Umatilla	CH0	FA	2002	300,000	05-20-02	05-31-02	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe	Umatilla	CH0	FA	2002	300,000	05-27-02	05-31-02	Umatilla R	Umatilla River
Umatilla Tribe Total					600,000				
Warm Spgs Tribe	Oak Springs	ST	WI	2002	30,000	05-01-02	05-17-02	E Fk Irrig Dist Sand Trap	Hood River
Warm Spgs Tribe	Oak Springs	ST	WI	2002	30,000	05-01-02	05-17-02	Parkdale Acclim Pd	Hood River
Warm Spgs Tribe Total					60,000				
WDFW	Lyons Ferry	CH0	FA	2002	200,000	05-27-02	06-13-02	Lyons Ferry H	Snake River
WDFW Total					200,000				
Yakima Tribe	Cle Elum	CH1	SP	2002	264,708	03-15-02	06-07-02	Easton Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	286,384	03-15-02	06-07-02	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	287,082	03-15-02	06-07-02	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CO	UN	2002	185,000	05-06-02	05-20-02	Cle Elem Slough	Yakama River
Yakima Tribe	Easton Pond	CO	UN	2002	209,000	05-06-02	05-20-02	Easton Pd	Yakama River
Yakima Tribe	Lost Creek	CO	UN	2002	185,000	05-06-02	05-20-02	Lost Creek Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2002	80,000	04-22-02	05-22-02	Prosser Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2002	1,700,000	05-20-02	06-01-02	Prosser Acclim Pd	Yakama River
Yakima Tribe	Stiles Pond	CO	UN	2002	209,000	05-06-02	05-20-02	Naches R	Yakama River
Yakima Tribe Total					3,406,174				
Grand Total					5,931,174				

*Based on downstream recoveries it is likely that one or more of these acclimation ponds began liberating fish before this date

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

HATCHERY RELEASE SUMMARY NEXT TWO WEEKS

Hatchery Release Summary

From:		5/31/02	to		6/13/02				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
IDFG	Oxbow-Idaho	CH0	FA	2002	197,000	06-02-02	06-07-02	Hells Canyon Dam	Snake River
IDFG Total					197,000				
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	400,000	05-27-02*	06-04-02	Pittsburg Landing	Snake River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	05-27-02*	06-04-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	05-27-02*	06-04-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	06-13-02	06-26-02	Big Canyon (Clearwater R)	Clearwater Rvr M F
Nez Perce Tribe	Lyons Ferry	CH0	FA	2002	500,000	06-13-02	06-26-02	Cpt John Acclim Pd	Snake River
Nez Perce Tribe Total					2,400,000				
Umatilla Tribe	Umatilla	CH0	FA	2002	300,000	05-20-02	05-31-02	Thornhollow Acclim Pd	Umatilla River
Umatilla Tribe	Umatilla	CH0	FA	2002	300,000	05-27-02	05-31-02	Umatilla R	Umatilla River
Umatilla Tribe Total					600,000				
WDFW	Klickitat	CH0	FA	2002	4,000,000	06-01-02	06-30-02	Klickitat H	Klickitat River
WDFW	Lyons Ferry	CH0	FA	2002	200,000	05-27-02	06-13-02	Lyons Ferry H	Snake River
WDFW	Priest Rapids	CH0	FA	2002	6,700,000	06-10-02	06-28-02	Priest Rapids H	Mid-Columbia River
WDFW	Ringold Springs	CH0	FA	2002	3,500,000	06-04-02	06-28-02	Ringold Springs H	Mid-Columbia River
WDFW Total					14,400,000				
Yakima Tribe	Cle Elum	CH1	SP	2002	264,708	03-15-02	06-07-02	Easton Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	286,384	03-15-02	06-07-02	Jack Creek Acclim Pd	Yakama River
Yakima Tribe	Cle Elum	CH1	SP	2002	287,082	03-15-02	06-07-02	Clark Flat Acclim Pd	Yakama River
Yakima Tribe	Prosser	CH0	FA	2002	1,700,000	05-20-02	06-01-02	Prosser Acclim Pd	Yakama River
Yakima Tribe Total					2,538,174				
Grand Total					20,135,174				

*Based on downstream recoveries it is likely that one or more of these acclimation ponds began liberating fish before this date.

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.

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

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/17/2002 *	11	22	17	6	46,052	53,387	71,322	595	135,134	70,193	40,975
05/18/2002 *	---	10	---	---	59,297	211,284	---	845	160,462	92,429	84,885
05/19/2002 *	---	26	---	---	89,531	94,341	120,154	697	149,319	61,558	75,494
05/20/2002 *	2	---	72	8	70,854	97,393	163,839	629	100,302	28,661	83,522
05/21/2002 *	---	---	155	95	67,684	46,009	---	776	122,648	40,728	88,373
05/22/2002 *	---	7	66	94	50,389	118,096	138,749	415	167,137	48,572	121,222
05/23/2002 *	---	6	24	170	33,090	68,169	102,884	365	158,511	79,098	131,152
05/24/2002 *	---	3	18	234	17,608	51,986	---	329	192,621	96,781	72,012
05/25/2002 *	---	---	---	---	19,209	26,974	40,571	315	98,361	91,726	127,998
05/26/2002 *	---	---	---	---	5,903	14,201	17,000	329	99,735	66,105	91,689
05/27/2002 *	0	---	0	25	4,707	11,957	---	524	84,074	28,118	136,936
05/28/2002 *	---	9	11	33	4,282	11,383	38,048	600	41,822	24,414	175,260
05/29/2002 *	2	2	42	180	3,827	12,623	38,606	706	38,873	52,870	62,039
05/30/2002 *	---	---	59	43	8,183	12,363	---	641	43,137	41,782	61,305
Total:	15	85	464	888	480,616	830,166	731,173	7,766	1,592,136	823,035	1,352,862
# Days:	4	8	10	10	14	14	9	14	14	14	14
Average:	4	11	46	89	34,330	59,298	81,241	555	113,724	58,788	96,633
YTD	38,199	28,591	7,906	7,706	2,321,252	2,736,179	2,114,768	23,319	3,332,177	1,821,985	2,921,480

COMBINED SUBYEARLING CHINOOK

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/17/2002 *	0	0	1	2	77	0	0	1	562	153	3,585
05/18/2002 *	---	0	---	---	0	0	---	1	757	81	3,900
05/19/2002 *	---	0	---	---	0	0	0	0	1,547	71	2,373
05/20/2002 *	0	---	0	4	0	0	0	0	2,121	222	3,471
05/21/2002 *	---	---	0	11	0	0	---	1	2,774	360	2,363
05/22/2002 *	---	0	1	14	0	0	0	4	2,328	350	4,862
05/23/2002 *	---	0	0	18	0	0	0	4	2,240	632	8,149
05/24/2002 *	---	0	2	4	0	0	---	3	3,087	519	4,982
05/25/2002 *	---	---	---	---	0	0	143	1	3,934	909	1,579
05/26/2002 *	---	---	---	---	0	0	200	0	5,970	584	4,005
05/27/2002 *	0	---	0	16	0	0	---	7	6,598	675	2,705
05/28/2002 *	---	0	1	25	63	0	0	9	4,946	751	3,730
05/29/2002 *	0	0	1	1,253	67	0	0	9	5,286	1,105	1,143
05/30/2002 *	---	---	3	1,207	79	0	---	6	8,690	1,569	4,871
Total:	0	0	9	2,554	286	0	343	46	50,840	7,981	51,718
# Days:	4	8	10	10	14	14	9	14	14	14	14
Average:	0	0	1	255	20	0	38	3	3,631	570	3,694
YTD	0	4	24	2,581	2,721	0	343	522	119,428	13,542	1,795,107

*The total, #days and average do not include the current day's data. *See sampling comments. <http://www.fpc.org/current daily/smpcomments.htm>. This means that one or more of the sites on this date had an incomplete or biased sample.

These data are preliminary and have been derived from various sources. For verification and/or origin of these data, contact the operators of the Fish Passage Data System at (503) 230-4099.

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

Two-Week Summary of Passage Indices

COMBINED COHO

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/17/2002 *	0	0	0	1	2,550	450	143	914	563	6,961	68,889
05/18/2002 *	---	0	---	---	2,076	458	---	1,214	1,665	2,614	90,849
05/19/2002 *	---	0	---	---	2,574	212	429	1,819	2,939	3,090	80,024
05/20/2002 *	0	---	0	6	6,579	1,171	286	2,107	1,818	1,391	70,506
05/21/2002 *	---	---	0	23	20,246	1,957	---	3,213	2,044	2,492	91,521
05/22/2002 *	---	0	0	12	13,636	4,391	1,881	4,257	2,661	1,695	93,347
05/23/2002 *	---	0	0	7	8,189	5,879	1,204	5,416	5,685	2,163	97,398
05/24/2002 *	---	0	0	4	5,310	8,092	---	4,930	5,085	2,335	57,841
05/25/2002 *	---	---	---	---	2,668	4,677	1,286	3,234	6,500	3,357	41,481
05/26/2002 *	---	---	---	---	2,108	1,535	1,200	3,421	11,413	407	33,633
05/27/2002 *	0	---	0	4	2,740	2,287	---	5,169	2,262	582	36,515
05/28/2002 *	---	0	0	0	3,211	2,096	1,647	5,567	4,487	2,314	55,257
05/29/2002 *	0	0	0	0	3,684	4,164	2,100	5,919	7,245	6,454	35,397
05/30/2002 *	---	---	0	10	4,648	8,853	---	5,507	13,117	3,875	30,043
Total:	0	0	0	67	80,219	46,222	10,176	52,687	67,484	39,730	882,701
# Days:	4	8	10	10	14	14	9	14	14	14	14
Average:	0	0	0	7	5,730	3,302	1,131	3,763	4,820	2,838	63,050
YTD	0	0	0	84	88,439	46,674	11,547	56,434	89,063	149,263	1,857,347

COMBINED STEELHEAD

Date	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2
	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/17/2002 *	20	1,294	4	264	19,472	7,500	29,352	607	10,694	6,408	10,244
05/18/2002 *	---	1,186	---	---	38,303	20,366	---	721	10,604	7,211	24,089
05/19/2002 *	---	3,065	---	---	68,650	36,200	34,173	696	11,672	9,799	33,433
05/20/2002 *	3	---	76	193	63,642	130,794	66,534	966	9,702	12,090	40,568
05/21/2002 *	---	---	389	1,598	71,378	116,247	---	1,381	19,465	11,223	33,794
05/22/2002 *	---	297	161	662	130,333	102,511	150,545	1,136	20,461	14,840	31,439
05/23/2002 *	---	229	62	654	188,682	63,007	84,272	1,465	44,115	15,122	24,446
05/24/2002 *	---	180	75	168	108,444	88,537	---	1,983	34,553	9,192	24,513
05/25/2002 *	---	---	---	---	93,971	90,228	137,999	1,443	20,529	8,431	16,593
05/26/2002 *	---	---	---	---	41,880	27,384	58,800	2,236	31,960	6,577	16,416
05/27/2002 *	0	---	0	52	24,099	55,219	---	879	11,125	6,201	45,646
05/28/2002 *	---	831	12	28	17,945	42,517	39,313	1,056	10,651	11,475	80,002
05/29/2002 *	0	650	73	115	18,209	32,887	65,085	973	10,791	29,006	40,344
05/30/2002 *	---	---	138	237	40,478	25,871	---	922	18,287	11,575	29,233
Total:	23	7,732	990	3,971	925,486	839,268	666,073	16,464	264,609	159,150	450,760
# Days:	4	8	10	10	14	14	9	14	14	14	14
Average:	6	967	99	397	66,106	59,948	74,008	1,176	18,901	11,368	32,197
YTD	2,833	30,947	3,409	11,585	2,300,702	1,874,819	1,154,508	23,519	627,127	435,315	882,423

Two-Week Summary of Passage Indices

COMBINED SOCKEYE

Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
05/17/2002 *	1	0	0	7	3,941	750	1,247	193	62,556	24,808	16,646
05/18/2002 *	---	0	---	---	3,944	1,493	---	102	73,589	36,657	36,936
05/19/2002 *	---	0	---	---	5,578	4,232	1,004	85	133,395	26,499	29,766
05/20/2002 *	0	---	0	40	3,669	2,540	3,869	95	55,319	26,409	36,229
05/21/2002 *	---	---	0	48	6,355	5,636	---	103	44,418	50,409	39,147
05/22/2002 *	---	0	0	23	4,232	6,358	2,599	86	28,950	56,474	80,383
05/23/2002 *	---	0	0	20	4,847	3,675	3,440	40	15,683	75,855	122,618
05/24/2002 *	---	0	0	6	2,236	2,943	---	62	25,786	74,311	58,605
05/25/2002 *	---	---	---	---	667	2,492	2,144	71	22,412	41,425	24,493
05/26/2002 *	---	---	---	---	562	1,539	1,600	115	28,798	23,431	17,618
05/27/2002 *	0	---	0	1	422	1,419	---	236	10,179	10,556	14,539
05/28/2002 *	---	0	0	2	567	1,429	549	491	8,153	13,070	12,204
05/29/2002 *	0	0	0	7	536	1,615	1,387	370	9,625	14,073	9,898
05/30/2002 *	---	---	0	20	516	1,621	---	253	10,457	13,671	11,774
Total:	1	0	0	174	38,072	37,742	17,839	2,302	529,320	487,648	510,856
# Days:	4	8	10	10	14	14	9	14	14	14	14
Average:	0	0	0	17	2,719	2,696	1,982	164	37,809	34,832	36,490
YTD	18	0	0	218	67,829	56,036	29,352	15,250	1,331,598	806,498	681,938

* See sampling comments

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

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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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Cumulative Adult Passage at Mainstem Dams Through: 05/30

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	Adult	Jack	
BON	264,882	6,288	388,050	13,802	103,204	5,577	0	0	0	0	0	0	0	0	0	0	0	0
TDA	172,424	3,446	295,526	9,223	66,486	3,694	0	0	0	0	0	0	0	0	0	0	0	0
JDA	131,310	2,073	253,300	5,641	55,281	2,830	0	0	0	0	0	0	0	0	0	0	0	0
MCN	112,989	2,991	240,873	5,509	50,030	2,585	0	0	0	0	0	0	0	0	0	0	0	0
IHR	73,697	1,334	154,634	2,270	28,796	1,457	0	0	0	0	0	0	0	0	0	0	0	0
LMN	62,249	918	160,573	1,255	27,688	1,419	0	0	0	0	0	0	0	0	0	0	0	0
LGS	59,688	932	153,116	2,103	25,853	1,428	0	0	0	0	0	0	0	0	0	0	0	0
LWG	53,711	1,141	147,087	1,753	23,889	1,210	0	0	0	0	0	0	0	0	0	0	0	0
PRD	32,816	159	47,927	817	12,897	264	0	0	0	0	0	0	0	0	0	0	0	0
RIS	19,989	682	36,649	1,283	9,176	311	0	0	0	0	0	0	0	0	0	0	0	0
RRH	7,979	43	15,061	354	2,798	71	0	0	0	0	0	0	0	0	0	0	0	0
WEL	4,736	4	8,987	387	1,413	65	0	0	0	0	0	0	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead			
	2002		2001		10-Yr Avg.		10-Yr			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2002	2001	Avg.	2002	2001	Avg.	2002
BON	0	0	0	0	0	0	1	10	7	6,188	5,849	4,273	1,773
TDA	0	0	0	0	0	0	0	6	3	2,664	1,311	1,311	1,007
JDA	0	0	0	0	0	0	0	1	1	8,245	2,449	3,006	3,069
MCN	0	0	0	0	0	0	0	2	1	4,792	1,753	1,895	1,868
IHR	0	0	0	0	0	0	0	0	0	4,515	1,436	2,057	1,274
LMN	1	0	0	0	0	0	0	0	0	5,084	1,725	2,080	2,111
LGS	0	0	0	0	0	0	0	0	0	6,170	1,990	1,314	2,528
LWG	0	0	0	0	0	0	0	0	0	12,424	5,750	4,795	3,396
PRD	0	0	0	0	0	0	0	51	26	40	23	21	**
RIS	1	0	0	0	0	0	0	5	2	78	60	78	47
RRH	8	0	0	0	0	0	2	0	0	185	97	74	80
WEL	0	0	0	0	0	0	0	0	0	64	30	24	50

THE COE IS EXPERIENCING PROBLEMS AND WAS UNABLE TO POST YESTERDAY'S DATA.

BON, TDA, JDA, MCN, IHR, LMN , LGS, and WEL are through 05/29; LGR is through 05/28.

RIS, RRH is through 05/29 and is from Chelan CO PUD.

PRD is through 5/30 and is from Grant CO PUD - note that the COE's chinook count is 2000 less than Grant's count.

**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

05/18/02 TO 05/31/02

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	200	334,955	54,925	26,075	631,244	1,047,399
	Sum of NumberBarged	149	317,815	51,963	25,079	585,141	980,147
	Sum of NumberBypassed	0	11,710	0	1	21,397	33,108
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	1	1,055	41	702	609	2,408
LGS	Sum of NumberCollected		616,631	37,114	29,426	656,325	1,339,496
	Sum of NumberBarged		606,029	29,738	27,920	634,397	1,298,084
	Sum of NumberBypassed		0	0	0	0	0
	Sum of Numbertrucked		0	0	0	0	0
	Sum of TotalProjectMortalities		378	53	174	533	1,138
LMN	Sum of NumberCollected	343	731,173	10,176	17,839	666,073	1,425,604
	Sum of NumberBarged	343	718,097	10,175	17,255	664,265	1,410,135
	Sum of NumberBypassed	0	10,145	0	0	67	10,212
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	0	2,931	1	584	1,741	5,257
MCN	Sum of NumberCollected	29,469	976,068	39,257	337,842	157,335	1,539,971
	Sum of NumberBarged	0	0	0	0	28	28
	Sum of NumberBypassed	29,460	975,593	39,252	337,493	157,200	1,538,998
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	9	475	5	349	107	945
Total Sum of NumberCollected		30,012	2,658,827	141,472	411,182	2,110,977	5,352,470
Total Sum of NumberBarged		492	1,641,941	91,876	70,254	1,883,831	3,688,394
Total Sum of NumberBypassed		29,460	997,448	39,252	337,494	178,664	1,582,318
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of TotalProjectMortalities		10	4,839	100	1,809	2,990	9,748

YTD Transportation Summary

TO: 05/31/02

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	1,783	1,444,825	60,082	45,386	1,514,083	3,066,159
	Sum of NumberBarged	1,675	1,394,763	57,093	43,550	1,431,547	2,928,628
	Sum of NumberBypassed	1	32,182	5	7	54,066	86,261
	Sum of NumberTrucked	29	9,847	20	343	3,383	13,622
	Sum of TotalProjectMortalities	28	3,658	43	1,193	990	5,912
LGS	Sum of NumberCollected		1,832,532	37,404	40,175	1,279,795	3,189,906
	Sum of NumberBarged		1,820,115	30,022	38,474	1,256,360	3,144,971
	Sum of NumberBypassed		0	0	0	0	0
	Sum of NumberTrucked		1,034	4	74	1,024	2,136
	Sum of TotalProjectMortalities		1,159	55	295	1,016	2,525
LMN	Sum of NumberCollected	343	2,114,768	11,547	29,352	1,154,508	3,310,518
	Sum of NumberBarged	343	2,028,328	11,545	28,551	1,147,922	3,216,689
	Sum of NumberBypassed	0	62,604	1	95	3,197	65,897
	Sum of NumberTrucked	0	20,104	0	13	356	20,473
	Sum of TotalProjectMortalities	0	3,732	1	693	3,033	7,459
MCN	Sum of NumberCollected	66,914	2,106,656	53,018	867,014	378,963	3,472,565
	Sum of NumberBarged	0	0	0	0	67	67
	Sum of NumberBypassed	66,877	2,105,751	53,010	866,206	378,689	3,470,533
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of TotalProjectMortalities	37	905	8	808	207	1,965
Total Sum of NumberCollected		69,040	7,498,781	162,051	981,927	4,327,349	13,039,148
Total Sum of NumberBarged		2,018	5,243,206	98,660	110,575	3,835,896	9,290,355
Total Sum of NumberBypassed		66,878	2,200,537	53,016	866,308	435,952	3,622,691
Total Sum of NumberTrucked		29	30,985	24	430	4,763	36,231
Total Sum of TotalProjectMortalities		65	9,454	107	2,989	5,246	17,861

