



Fish Passage Center

Weekly Report #05 - 20

July 22, 2005

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Highlights:

- Precipitation has been below average over the first eighteen days of July at most Columbia Basin locations
- River flows at Lower Granite Dam have averaged 43.4 Kcfs between June 21-July 21 and 36.3 Kcfs last week
- River flows at McNary Dam have averaged 190.2 Kcfs July 1st through July 21st and 189.4 Kcfs last week.
- Outflows at Dworshak remain at 12.0 Kcfs for flow and temperature augmentation in the lower Snake River.
- Spill at The Dalles Dam averaged 39% of average daily flow as compared to the 40% specified in the Biological Opinion due to facility restrictions.
- Judge Redden's June 10, 2005 opinion in *NWF v. NMFS* granted the spill portion of the National Wildlife Federation's requested injunctive relief. Spill was initiated at Lower Granite, Little Goose and Lower Monumental dams on June 20, 2005. Spill at McNary Dam began on July 1. All other Lower Columbia River projects and Ice Harbor dam are implementing the Biological Opinion summer spill program.

Summary of Events:

Water Supply: Precipitation has been below average over the first eighteen days of July at most Columbia Basin locations. Of the sites in Table 1, only one recorded precipitation that was greater than average over the first eighteen days of July. Over the entire water year, precipitation remains slightly below average at most locations.

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

Location	Water Year 2005 July 1-18		Water Year 2005 October 1, 2004 to July 18, 2005	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.81	78	20.61	96
Snake River Above Ice Harbor	0.20	37	15.60	100
Columbia Above The Dalles	0.54	74	18.46	90
Kootenai	1.06	96	20.98	95
Clark Fork	0.21	31	12.75	86
Flathead	0.36	39	20.30	103
Pend Oreille/Spokane	0.79	99	25.00	89
Central Washington	0.06	27	6.49	79
Snake River Plain	0.02	7	12.01	121
Salmon/Boise/Payette	0.14	29	15.25	84
Clearwater	0.30	36	23.71	86
SW Washington Cascades/Cowlitz	0.90	111	49.07	74
Willamette Valley	0.29	60	39.71	70

Water Supply Forecasts have varied between the June Final and July Final Forecasts, some have increased and others have decreased. For example, forecasts at Libby and Hungry Horse have increased 7-8% with respect to average (between June Final and July Final), while Lower Granite and Dworshak have decreased 2-4%. Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs along with runoff volumes that actually occurred in 2001 for comparison. All forecasts are currently above the actual runoff volumes recorded in 2001.

Table 2. June Final and the July Final Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins along with 2001 actual runoff volumes over the same periods.

Location	June Final		July Final		Actual 2001
	% Average (1971-2000)	Probable Runoff Volume (Kaf)	% Average (1971-2000)	Probable Runoff Volume (Kaf)	Actual Runoff Volume (Kaf)
The Dalles (Jan-July)	74	79800	76	81200	58200
Grand Coulee (Jan-July)	84	53000	88	55500	37400
Libby Res. Inflow, MT (Jan-July)	85	5350	93	5860	3341
Hungry Horse Res. Inflow, MT (Jan-July)	75	1660	82	1820	1300
Lower Granite Res. Inflow (Apr- July)	68	14600	66	14200	10300
Brownlee Res. Inflow (Apr-July)	54	3410	54	3410	1970*
Dworshak Res. Inflow (Apr-July)	68	1800	64	1690	1470

The summer flow objective period began at Lower Granite Dam on June 21st, 2005 with a flow objective of 50 Kcfs. River flows at Lower Granite Dam have averaged 43.4 Kcfs between June 21-July 21 and 36.3 Kcfs last week.

The summer flow objective period began on July 1st, 2005 at McNary Dam with a flow objective of 200 Kcfs. River flows at McNary Dam have averaged 190.2 Kcfs July 1st through July 21st and 189.4 Kcfs last week.

Grand Coulee Reservoir is currently at an elevation of 1287.4 feet (July 21st, 2005 midnight) and has drafted 0.4 feet in the last week. Grand Coulee is projected to draft to elevation 1278 feet by the end of August.

The Libby Reservoir is currently at an elevation of 2455.0 feet (7-21-05). Outflows at Libby have been decreased from near 24 Kcfs to 19.2 Kcfs, and inflows are 14.5 Kcfs. Libby is projected to draft to elevation 2439 feet by the end of August.

Hungry Horse is currently at an elevation of 3555.1 feet (July 21st, 2005 midnight) and has drafted 2.1 feet in the last week. Outflows at Hungry Horse are currently 7.1 Kcfs. Hungry Horse is projected to draft to elevation 3540 feet by the end of August.

Dworshak is currently an elevation of 1583.8 feet (July 21st, 2005 midnight). Outflows at Dworshak have been 12.0 Kcfs for flow and temperature augmentation in the lower Snake River.

The Brownlee Reservoir was at an elevation of 2063.0 feet on July 21st, 2005 with outflows ranging between 9.2 and 15.3 Kcfs over the last week.

Spill: Judge Redden's June 10, 2005 opinion in *NWF v. NMFS* granted the spill portion of the National Wildlife Federation's requested injunctive relief. Spill in excess of flow necessary to operate one unit at each Snake River project at the low end of the 1% efficiency range is to occur on a 24-hour basis. Spill started at Lower Granite, Little Goose, Lower Monumental, and Ice Harbor dams on June 20. Spill began at McNary Dam on July 1. Spill is being provided in such a way as to meet the court order and at the same time accommodate planned research projects. Spill will be limited when necessary so as not exceed the state water quality waiver standards.

Spill in excess of hydraulic capacity is occurring at Dworshak Dam as outflow was increased to 12 Kcfs for flow augmentation and temperature control. Spill at Lower Granite Dam and Ice Harbor Dams is being provided to the gas cap, except for days when the RSW is being tested. Spill at Little Goose Dam was changed from gas cap spill to gas cap spill during nighttime hours and was further reduced to 30% of instantaneous flow during daytime hours. This change was made to address concerns regarding adult passage at this project. Shortly after spill began on June 20th, the adult passage numbers declined at Little Goose Dam. This spill change is designed to allow adult fish to pass more easily. At Lower Monumental Dam spill was originally limited because of concerns regarding total dissolved gas production at this project. Consequently, spill began at 11.5 Kcfs instantaneous flow and has been adjusted according to the total dissolved gas levels and is averaging near 20 Kcfs. Spill averaged 59% of daily average flows at Lower Granite, 41% of daily average flows at Little Goose, 57% of daily average flows at Lower Monumental and 60% of daily average flows at Ice Harbor over the past week.

Biological Opinion summer spill at the lower Columbia River projects and the court ordered spill at McNary Dam are in place. Spill at McNary Dam averaged 71% of daily average flow. Spill at John Day Dam averaged 30% of daily average flow. Spill at John Day is now changed from the spring-time pattern of 60% of river flow during nighttime

hours, to 30% of river flow on a 24-hour basis. Spill at The Dalles Dam is being provided via fixed spill gate openings (dogged off) and variable gate operations of spillbays 1 and 2. This past week volumes have averaged less (39%) than the 40% specified in the Biological Opinion but is closer than it has been most of the season. Spill at Bonneville Dam averaged 51% of average daily flow over the past week.

A few fish were observed with minor signs of gas bubble trauma in the monitoring program over the past week in the federal hydrosystem and at Rock Island Dam.

Smolt Monitoring: Passage indices for subyearling Chinook were lower again this week at most SMP sites. Numbers of spring migrants continued to decrease again this week at all SMP sites.

At Lower Granite Dam in the Lower Snake River the subyearling Chinook average passage index dropped to 750 per day this week compared to 1,500 the previous week. Indices for spring migrants were down again this week as well. Based on PIT-tag data the collection efficiency at Lower Granite since spill began is roughly 20% so that the index is well below the true total numbers of fish passing in spill.

At Little Goose Dam the subyearling Chinook indices were up the past few weeks as spill was reduced at the site. The reduction in spill, implemented to improve adult fish passage, resulted in increased turbine operation and therefore increased collection of juvenile fish. The subyearling collection at the site has decreased, but not by much, indicating that good numbers of subyearlings are still passing in the Lower Snake River.

In the Mid-Columbia, at Rock Island Dam, subyearling indices were down this week, with the weekly average index of 170 compared to 450 last week. Spring migrants were not captured over the past week at the site.

At McNary Dam indices for subyearlings were lower than last week, but still high. The average index fell to 22,000 per day compared to

60,000 per day last week. The continued high indices reflect the release of 10 million smolts from Ringold and Priest Rapids hatcheries three weeks ago, as well as wild Hanford fish passing the project. Based on PIT-tag data, significant numbers of fish marked in the Hanford Reach have already begun passing the dam. Summer spill operations, as ordered by Judge Redden began July 1, and resulted in decrease collection of fish at the project as spill was increased. We estimate collection efficiency, based on PIT-tagged fish at approximately 20% compared to 50% during summer operations without spill.

John Day Dam and Bonneville Dam saw declining subyearling indices this past week, and indices continued to decline for all spring migrants. At John Day Dam the index for subyearling chinook averaged 34,000 this week compared to 58,000 last week, while at Bonneville Dam the subyearling index averaged 20,000 this past week down from 39,000 last week.

Hatchery Releases - The Zone Release Report below summarizes releases of juvenile salmonids (species) from State, Federal or Tribal hatcheries or acclimation ponds for the 2005 migration. For the 2005 migration season, approximately 83.7 million juvenile fish were released from hatcheries in the river systems located above Bonneville Dam. These totals will be updated and finalized throughout the year. There are no hatchery releases scheduled for the upcoming two weeks.

Hatchery Zone Release Report

	Friday 22-Jul-2005			
	Snake River	Mid-Columbia	Lower Columbia	Total Release
Fall Chinook	4,907,703	12,449,054	21,567,139	38,923,896
Spring Chinook	9,440,350	5,112,676	5,194,338	19,747,364
Summer Chinook	2,348,012	3,377,964		5,725,976
Coho	816,300	1,868,096	5,149,846	7,834,242
Sockeye	209,046	592,459		801,505
Summer Steelhead	8,887,764	1,167,754	533,735	10,589,253
Winter Steelhead			115,453	115,453
Total	26,609,175	24,568,003	32,560,511	83,737,689

Adult Fish Passage -At Bonneville Dam, counts of summer Chinook averaged 888 fish per day for the week ending July 21; about equal to the previous week's daily average count of 858. The season total is now 74,166, about 84.5% and 146.5% of the respective 2004 and 10-year average. The peak daily count was 1,054 on July 16, with the low count of 588 on July 19th. The adult summer Chinook count at The Dalles Dam was 63,093, about 85.1% of the Bonneville passage total through July 21. About 57,000 summer Chinook have passed McNary Dam with the majority (51,100) moving upstream into the Mid-Columbia River. Daily counts at Priest Rapids ranged between 400 and 1,200 during the past week. The Rock Island count was approaching 42,000 with 30,000 or 70+% of these fish continuing upstream past Rocky Reach Dam. About 8,400 summer Chinook have been counted past Ice Harbor Dam with approximately 6,400 of these summer migrants counted at Lower Granite Dam.

The number of Jack summer Chinook salmon is reduced from the 2004 and 10-year average counts as most of the projects to date with the Bonneville jack Chinook count of 4,151 in 2005; 12,227 in 2004; and 6,672 for the 10-year average. The Ice Harbor count of jack Chinook salmon is: 913 for 2005; 2,913 for 2004; and 1,716 for the 10-year average to date. The jack summer Chinook salmon count at Priest Rapids is now 1,653 for 2005; 4,713 for 2004; and 1,165 for the 10-year average.

At Bonneville Dam, steelhead counts again increased throughout the week with the average count of 2,619 per day, about 1,000 greater per day than the previous week. Through July 21, the steelhead run at Bonneville totaled 50,423, about 74% and 92.1% of the respective 2004 and 10-year average counts. The daily counts at the Dalles Dam ranged between 900-1,300 for the week with the cumulative steelhead count through July 21 of 23,626. About 47% of the steelhead counted at Bonneville have passed The Dalles Dam. Through July 21, 13,490 steelhead have been tallied at McNary Dam with about 6,000 counted into the Snake River (Ice Harbor). The cumulative count at Priest Rapids Dam is 876.

Most projects have steelhead counts that are less than the 2004 and 10-year average counts to date.

Adult sockeye salmon passage at Bonneville Dam decreased to average 418 per day through the week with the count at Bonneville through July 21 at 71,657, about 58.5% and 135% of the respective 2004 and 10-year average count. About 69,900 of the adult sockeye have been counted at Priest Rapids Dam with 63,200 (count through July 20) now above Rock Island Dam. One major spawning site for the sockeye is Lake Wenatchee with the other major site at Lake Osoyoos (Okanogan basin). The count of sockeye past Rocky Reach and Wells dams will be comprised of the Osoyoos sockeye while the number of sockeye destined for the Lake Wenatchee will be the approximate difference between the Rock Island count minus the Rocky Reach count. The sockeye salmon count at Rocky Reach is about 44,900 so in 2005, the greatest majority of the sockeye will be destined for the Lake Osoyoos/Okanogan River basin rather than the Lake Wenatchee system. The Snake River sockeye salmon remain less than 20 at any of the Snake River dams.

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/08/05	143.2	0.2	146.3	0.0	157.7	10.0	156.5	12.4	157.9	28.1	168.1	8.7	176.6	103.3
07/09/05	121.4	0.2	121.0	0.0	124.0	10.0	124.1	12.6	125.4	27.3	118.8	9.1	121.1	70.6
07/10/05	113.9	0.2	109.8	0.0	119.0	9.0	115.5	12.3	120.8	27.1	127.4	8.8	131.4	77.1
07/11/05	151.3	0.0	150.8	0.0	156.0	10.0	143.3	13.3	145.7	30.2	140.2	6.6	143.3	83.3
07/12/05	143.1	0.2	141.3	0.0	148.4	10.0	151.8	11.4	147.9	28.1	152.7	2.2	157.4	92.2
07/13/05	149.3	0.2	149.7	0.0	156.0	10.0	159.5	12.4	154.0	28.1	153.5	1.8	155.4	90.6
07/14/05	154.8	0.5	155.2	0.0	159.9	10.1	155.6	13.6	159.2	30.5	159.0	2.3	160.1	93.5
07/15/05	153.1	0.2	150.4	0.0	157.9	10.0	153.8	13.3	157.7	30.2	166.1	26.5	163.3	95.5
07/16/05	137.2	0.2	141.9	0.0	146.9	9.4	152.1	10.4	145.3	22.3	157.5	26.8	157.8	92.0
07/17/05	106.3	0.2	113.1	0.0	116.2	8.2	118.1	8.7	122.0	18.6	133.6	24.4	130.5	75.6
07/18/05	147.8	0.3	140.8	0.0	148.5	18.8	143.1	12.9	143.1	30.0	154.4	24.9	150.8	88.3
07/19/05	140.6	0.1	134.1	0.0	138.2	9.5	133.1	12.9	131.9	28.9	133.5	21.7	134.9	79.4
07/20/05	136.3	0.3	134.3	0.0	143.8	10.0	139.4	13.2	140.1	30.0	146.9	22.4	145.1	84.9
07/21/05	124.0	0.2	137.1	0.0	144.6	8.9	143.9	13.7	143.7	29.5	151.5	22.9	147.9	85.9

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

Date	Dworshak		Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/08/05	7.2	0.0	11.1	18.4	44.0	32.2	41.4	17.2	40.8	23.4	41.3	19.0
07/09/05	7.2	0.0	10.2	9.8	41.3	21.2	40.5	17.3	40.7	22.8	38.7	15.8
07/10/05	8.8	0.0	10.2	8.9	32.7	18.3	31.0	13.0	28.4	16.0	29.6	17.0
07/11/05	9.5	0.0	10.6	11.4	37.8	24.6	38.5	16.1	37.4	22.4	37.9	27.9
07/12/05	9.5	0.0	11.3	12.9	40.3	28.4	38.3	15.8	37.9	21.5	37.2	16.9
07/13/05	9.6	0.0	10.7	14.0	38.1	18.9	37.0	15.3	34.9	20.4	33.7	16.4
07/14/05	11.2	1.8	10.2	10.1	40.9	27.1	40.3	16.9	38.8	22.8	39.0	15.8
07/15/05	11.9	2.4	9.6	13.3	33.7	17.9	33.4	13.7	32.7	20.0	33.2	15.8
07/16/05	11.9	2.3	9.9	12.6	37.6	18.9	38.9	16.5	37.9	21.8	39.5	26.0
07/17/05	11.9	2.3	9.2	9.0	36.3	24.1	34.9	15.4	31.1	16.9	30.2	19.8
07/18/05	11.9	2.3	9.8	13.1	33.0	17.7	34.2	13.5	34.1	17.7	38.1	28.0
07/19/05	12.0	2.4	9.6	14.2	38.1	25.9	34.7	14.4	34.2	18.6	31.9	21.7
07/20/05	12.0	2.4	9.3	14.3	37.0	19.9	36.3	14.6	34.0	20.5	36.0	18.1
07/21/05	---	---	---	---	38.5	25.5	37.4	15.5	37.2	21.4	33.7	15.8

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		
07/08/05	207.1	151.9	181.4	53.6	172.4	69.3	196.3	94.5	0.0	90.3
07/09/05	197.7	143.0	189.0	56.8	187.6	73.4	180.9	95.0	1.1	73.3
07/10/05	172.8	117.9	165.7	49.5	164.4	64.0	175.7	92.0	2.1	70.2
07/11/05	186.6	131.6	170.1	52.0	168.8	67.4	178.4	92.3	2.5	72.1
07/12/05	198.8	144.0	166.4	49.8	165.2	64.5	174.6	89.3	0.0	73.8
07/13/05	188.5	133.0	176.3	53.2	171.7	66.6	175.7	88.4	1.1	74.7
07/14/05	201.6	147.1	196.6	59.3	188.8	72.1	192.5	94.8	5.2	81.0
07/15/05	214.4	159.3	205.8	62.5	199.4	74.6	209.8	96.9	11.2	90.2
07/16/05	203.0	147.9	192.2	57.9	186.2	72.4	197.4	97.1	3.0	85.8
07/17/05	198.6	143.0	188.8	55.5	187.7	75.3	190.8	96.0	9.2	74.1
07/18/05	178.4	123.0	172.3	51.2	162.4	61.9	173.4	90.9	1.0	70.0
07/19/05	170.9	115.6	152.8	46.3	156.0	61.3	168.3	86.6	0.0	70.2
07/20/05	166.8	112.3	148.9	45.0	143.2	58.7	156.0	84.3	0.0	60.2
07/21/05	193.9	139.2	180.2	54.2	172.9	66.3	167.2	83.8	2.4	69.5

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
Little Goose Dam											
	07/14/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/17/05	Chinook + Steelhead	56	2	1	1.78%	0.00%	1	0	0	0
	07/21/05	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Lower Monumental Dam											
	07/15/05	Chinook + Steelhead	44	0	0	0.00%	0.00%	0	0	0	0
	07/18/05	Chinook + Steelhead	24	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	07/14/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/18/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/21/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	07/12/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/16/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/19/05	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	07/18/05	Chinook + Steelhead	75	1	1	1.33%	0.00%	1	0	0	0
	07/21/05	Chinook + Steelhead	100	1	1	1.00%	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>
7/8	---	---	---	0	113	114	115	24	114	114	114	24	110	111	113	17	111	111	111	24
7/9	---	---	---	0	113	113	114	24	114	114	115	24	110	111	113	24	111	111	112	24
7/10	---	---	---	0	113	114	118	24	114	114	114	24	111	111	113	24	110	110	111	24
7/11	---	---	---	0	112	113	114	24	114	114	114	24	110	110	112	13	110	111	111	24
7/12	---	---	---	0	112	113	113	24	113	114	114	24	110	110	114	10	110	110	111	24
7/13	---	---	---	0	112	113	114	24	113	113	114	16	110	110	112	9	110	110	110	18
7/14	---	---	---	0	112	113	114	22	113	113	114	23	109	109	111	8	110	110	111	21
7/15	---	---	---	0	112	113	114	24	113	113	114	15	110	110	112	15	111	111	111	24
7/16	---	---	---	0	112	113	113	24	113	114	114	24	110	111	113	23	110	111	111	24
7/17	---	---	---	0	112	112	113	24	113	113	113	24	109	109	113	14	110	110	110	24
7/18	---	---	---	0	113	113	115	24	113	114	115	24	110	110	113	9	111	112	112	23
7/19	---	---	---	0	113	113	114	23	113	114	114	24	110	110	112	5	112	112	113	24
7/20	---	---	---	0	112	113	114	24	113	113	113	24	110	110	111	7	111	111	111	24
7/21	---	---	---	0	112	113	114	24	112	112	113	24	109	109	110	7	111	111	112	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>
7/8	111	111	112	20	109	110	111	24	111	112	112	24	112	112	112	24	112	112	113	24
7/9	112	112	113	23	109	109	109	24	111	111	113	24	112	112	112	24	112	112	112	24
7/10	111	112	113	24	110	110	112	24	111	112	112	24	112	112	112	24	111	111	111	24
7/11	110	111	112	24	109	110	110	24	111	111	112	24	112	112	112	24	111	112	113	24
7/12	111	112	112	23	110	110	110	24	111	111	112	24	111	112	112	24	111	112	112	24
7/13	110	110	112	15	109	110	110	22	111	111	112	22	110	110	110	24	110	111	111	24
7/14	110	110	112	17	109	109	110	20	111	111	111	20	110	111	112	22	111	112	113	22
7/15	111	111	112	23	110	110	111	24	111	112	112	24	111	112	112	24	112	113	113	24
7/16	111	112	113	23	109	110	110	23	111	111	111	23	110	110	111	24	111	111	111	24
7/17	110	110	111	17	109	110	111	24	111	111	112	24	109	110	111	24	110	111	111	24
7/18	112	112	112	10	110	110	111	24	113	114	116	24	111	112	113	24	112	113	113	24
7/19	111	112	112	16	110	111	111	24	112	113	115	24	112	112	112	24	112	113	113	24
7/20	111	111	111	17	110	111	111	24	112	112	113	24	112	113	113	24	113	114	114	24
7/21	111	111	112	24	110	110	110	24	111	112	112	24	111	112	113	24	112	113	113	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>		
	<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>		<u>High</u>	<u>Avg</u>		<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>
7/8	111	111	112	24	116	117	117	24	---	---	---	0	---	---	---	0	---	---	---	0
7/9	111	112	112	24	117	118	118	24	---	---	---	0	---	---	---	0	---	---	---	0
7/10	111	111	112	24	115	116	117	24	---	---	---	0	---	---	---	0	---	---	---	0
7/11	111	111	112	24	116	117	117	24	---	---	---	0	---	---	---	0	---	---	---	0
7/12	111	111	112	24	116	117	119	24	---	---	---	0	---	---	---	0	---	---	---	0
7/13	111	111	111	24	116	117	119	24	---	---	---	0	---	---	---	0	---	---	---	0
7/14	111	111	112	22	116	117	118	22	---	---	---	0	---	---	---	0	---	---	---	0
7/15	112	112	113	24	117	117	118	24	---	---	---	0	---	---	---	0	---	---	---	0
7/16	111	112	112	24	115	116	116	24	---	---	---	0	---	---	---	0	---	---	---	0
7/17	110	111	111	24	114	115	115	24	---	---	---	0	---	---	---	0	---	---	---	0
7/18	111	112	112	24	117	117	118	24	---	---	---	0	---	---	---	0	---	---	---	0
7/19	112	112	113	24	117	118	120	24	---	---	---	0	---	---	---	0	---	---	---	0
7/20	112	113	113	24	118	119	121	23	---	---	---	0	---	---	---	0	---	---	---	0
7/21	112	113	113	24	118	118	120	24	---	---	---	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>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/8	---	---	---	0	111	111	113	24	100	101	101	24	102	103	104	24	103	105	106	24
7/9	---	---	---	0	110	111	112	24	99	100	100	24	101	101	103	24	102	103	105	24
7/10	---	---	---	0	110	111	112	24	100	100	100	24	101	101	102	24	102	103	104	24
7/11	---	---	---	0	111	112	112	24	100	100	100	24	101	102	103	24	103	105	107	24
7/12	---	---	---	0	112	113	114	24	99	100	100	24	101	103	104	24	103	105	106	24
7/13	---	---	---	0	111	111	112	13	99	99	100	13	100	100	102	13	102	102	104	13
7/14	---	---	---	0	111	113	113	23	101	102	102	23	102	104	105	23	103	105	107	23
7/15	---	---	---	0	112	113	114	20	101	102	103	24	103	104	106	20	103	105	106	24
7/16	---	---	---	0	111	111	112	24	101	101	102	24	103	104	105	24	102	103	104	24
7/17	---	---	---	0	110	111	112	24	101	101	101	24	102	104	104	24	101	103	104	24
7/18	---	---	---	0	111	112	112	24	102	103	103	24	104	105	107	24	102	104	105	24
7/19	---	---	---	0	111	112	113	24	103	103	103	24	104	106	107	24	102	103	105	24
7/20	---	---	---	0	111	112	113	24	102	103	103	24	104	105	106	24	102	103	104	24
7/21	---	---	---	0	112	113	114	24	102	103	103	24	104	106	107	24	102	104	105	24

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>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/8	103	105	106	24	104	104	105	24	117	118	119	24	109	110	110	24	111	114	117	24
7/9	101	103	104	24	106	107	108	24	112	113	116	24	108	109	109	24	111	114	117	24
7/10	102	103	104	24	106	107	108	24	113	113	113	24	108	108	108	24	110	113	115	24
7/11	103	105	107	24	108	110	112	24	115	117	118	24	108	108	108	24	111	114	116	24
7/12	103	105	107	24	105	106	109	24	116	117	118	24	108	108	109	24	111	114	116	24
7/13	101	101	104	13	101	101	103	13	112	112	113	13	109	109	109	13	111	111	115	13
7/14	103	105	107	23	108	112	116	23	115	117	117	23	110	111	112	23	111	113	117	23
7/15	103	105	107	20	111	112	113	24	112	113	113	24	110	111	111	20	111	113	117	20
7/16	103	105	106	24	108	109	110	24	112	112	113	24	110	110	112	24	111	114	116	24
7/17	103	106	107	24	108	110	111	24	115	117	118	24	110	111	111	24	112	114	117	24
7/18	104	106	108	24	110	111	112	24	112	113	113	23	111	111	112	24	111	113	116	24
7/19	105	107	108	24	108	109	110	24	115	117	118	24	111	111	111	24	111	113	115	24
7/20	104	106	108	24	107	107	108	24	113	114	115	24	109	110	111	24	110	112	115	24
7/21	104	107	109	24	108	109	111	24	115	116	116	24	109	110	111	24	111	113	116	24

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>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#	<u>24 h</u>	<u>12 h</u>	#		
	Avg	Avg		High	Avg		Avg	High		Avg	Avg		High	Avg		Avg	High		Avg	Avg
7/8	110	110	110	24	119	119	120	24	113	114	114	24	113	113	114	24	109	110	112	24
7/9	108	108	109	24	119	120	120	24	111	111	111	24	112	113	114	24	107	108	110	24
7/10	108	109	109	24	115	117	119	24	111	111	111	24	112	113	114	24	109	111	113	24
7/11	109	109	109	24	119	120	120	24	111	111	111	24	113	113	114	24	110	112	114	24
7/12	108	108	109	24	118	119	120	24	110	110	112	24	112	112	113	24	109	110	111	24
7/13	108	108	108	13	116	116	117	13	111	111	111	13	111	111	112	13	108	108	111	13
7/14	109	109	110	23	119	120	121	23	112	112	113	23	112	113	114	23	109	111	113	23
7/15	109	110	110	20	118	119	119	20	113	114	114	20	112	113	114	24	111	113	115	24
7/16	109	110	110	24	118	119	119	24	113	114	114	24	113	114	114	24	111	113	113	24
7/17	110	110	111	24	116	118	120	24	113	114	115	24	112	113	113	24	110	111	113	24
7/18	111	111	111	24	117	119	120	24	114	115	116	24	113	114	116	24	113	116	119	24
7/19	109	110	110	24	116	118	119	24	114	114	114	24	111	113	114	24	113	115	116	24
7/20	110	111	112	24	118	119	119	24	114	114	114	24	113	114	114	24	113	116	117	24
7/21	111	111	112	24	118	119	120	24	114	114	115	24	113	113	115	24	113	115	115	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr				
7/8	109	110	110	24	118	119	119	24	106	107	107	23	114	116	117	24	107	107	108	23
7/9	107	108	108	24	117	118	118	24	107	108	108	23	114	114	115	24	107	108	108	23
7/10	109	109	109	24	116	117	117	24	107	107	107	23	113	114	114	24	108	108	108	23
7/11	109	110	110	24	117	117	118	24	106	106	107	23	114	114	116	24	108	108	108	23
7/12	109	109	110	24	117	118	119	24	105	105	106	23	114	115	116	24	107	107	108	23
7/13	110	110	110	13	117	117	117	13	105	105	105	15	115	115	117	13	105	105	106	15
7/14	110	110	111	23	118	118	118	23	106	107	108	23	116	117	117	23	107	108	109	23
7/15	112	112	113	24	118	119	120	19	108	108	109	23	116	117	118	24	109	109	110	23
7/16	111	112	112	24	118	118	119	24	107	107	107	23	115	116	117	24	106	107	108	23
7/17	111	111	112	24	117	118	119	24	107	107	110	23	114	114	115	24	107	108	109	23
7/18	112	112	113	24	117	117	118	24	109	109	110	23	114	115	116	24	109	109	110	23
7/19	112	113	114	24	117	117	118	24	109	109	109	23	113	113	114	24	108	108	109	23
7/20	112	112	112	24	117	117	118	24	108	108	108	23	112	112	113	24	106	106	106	23
7/21	112	112	113	24	118	118	118	24	108	108	109	23	113	114	116	24	107	108	110	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			<u>Bonneville</u>			<u>Warrendale</u>			<u>CamasWashougal</u>			<u>Cascade Island</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>	<u>24h</u>	<u>12h</u>	<u>#</u>					
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr				
7/8	113	113	113	24	107	107	107	23	114	117	121	23	112	113	115	24	115	116	120	17
7/9	113	113	114	24	107	107	108	23	115	117	121	23	110	113	116	24	115	115	119	17
7/10	113	113	114	24	108	109	109	23	115	116	118	23	111	113	115	24	115	116	120	17
7/11	113	114	114	24	108	108	109	23	115	117	119	23	112	114	116	24	115	116	120	17
7/12	112	113	113	24	108	108	108	23	115	117	120	23	111	112	115	20	115	115	118	17
7/13	111	111	112	12	106	106	107	15	114	115	116	15	109	109	112	12	114	114	114	5
7/14	113	114	115	23	106	107	108	23	115	116	120	23	112	115	118	23	115	115	120	16
7/15	115	115	115	24	109	109	110	23	116	117	121	19	112	115	118	24	116	116	119	17
7/16	113	113	114	24	108	108	109	23	115	116	120	23	111	113	116	24	115	116	120	17
7/17	114	115	115	24	107	108	108	23	116	118	121	23	111	113	115	24	115	116	120	17
7/18	114	115	115	24	110	110	111	23	116	117	119	23	113	115	118	24	115	116	120	17
7/19	113	114	114	24	108	109	110	23	115	117	119	23	112	114	115	24	115	115	117	17
7/20	112	112	112	24	106	106	107	23	115	115	117	23	111	113	114	24	115	115	117	17
7/21	113	114	115	24	106	107	107	23	115	116	116	23	112	114	116	24	115	115	118	17

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.

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

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/currentsmptsubmitdata.asp>

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)
07/08/2005	---	---	---	---	0	139	45	0	186	0	17
07/09/2005 *	---	---	---	---	11	69	297	0	308	107	168
07/10/2005	---	---	---	---	0	181	32	2	0	410	45
07/11/2005	---	---	---	---	0	70	58	0	0	300	95
07/12/2005	---	---	---	---	16	117	40	2	0	324	16
07/13/2005	---	---	---	---	0	653	45	0	0	32	43
07/14/2005	---	---	---	---	0	463	38	0	0	412	0
07/15/2005 *	---	---	---	---	0	35	113	0	0	0	22
07/16/2005 *	---	---	---	---	0	53	269	0	0	144	0
07/17/2005 *	---	---	---	---	0	10	120	0	0	0	43
07/18/2005	---	---	---	---	0	27	54	0	0	0	0
07/19/2005	---	---	---	---	2	31	18	0	0	0	0
07/20/2005	---	---	---	---	0	0	0	0	0	32	0
07/21/2005	---	---	---	---	0	24	14	0	0	29	0
<hr/>											
Total:	0	0	0	0	29	1,872	1,143	4	494	1,790	449
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	2	134	82	0	35	128	32
YTD	43,641	42,892	5,792	1,810	5,673,854	2,477,030	706,687	14,793	1,226,403	1,409,307	1,527,229

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)
07/08/2005	---	---	---	---	2,049	1,931	1,651	499	91,167	58,858	46,881
07/09/2005 *	---	---	---	---	2,004	3,201	2,922	592	164,418	60,379	65,852
07/10/2005	---	---	---	---	1,924	2,751	432	437	54,519	54,937	37,600
07/11/2005	---	---	---	---	1,648	1,463	492	366	36,919	60,821	28,544
07/12/2005	---	---	---	---	1,938	2,719	1,448	595	32,671	61,769	22,190
07/13/2005	---	---	---	---	950	9,450	1,068	321	20,526	58,487	41,511
07/14/2005	---	---	---	---	324	9,058	1,323	344	20,857	48,861	28,570
07/15/2005 *	---	---	---	---	1,087	3,448	2,994	209	41,169	60,256	28,543
07/16/2005 *	---	---	---	---	869	3,073	3,427	166	51,325	43,196	32,949
07/17/2005 *	---	---	---	---	589	1,693	1,612	96	24,479	34,911	25,517
07/18/2005	---	---	---	---	785	2,260	974	177	14,577	48,422	8,103
07/19/2005	---	---	---	---	487	2,793	335	124	12,274	25,778	17,060
07/20/2005	---	---	---	---	710	1,185	399	178	5,435	16,451	19,438
07/21/2005	---	---	---	---	700	1,267	772	242	7,022	11,554	6,872
<hr/>											
Total:	0	0	0	0	16,064	46,292	19,849	4,346	577,358	644,680	409,630
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	1,147	3,307	1,418	310	41,240	46,049	29,259
YTD	0	86	1,224	1,152	1,737,834	1,268,985	200,296	19,272	6,683,265	1,968,798	3,705,939

Two-Week Summary of Passage Indices

Date	COMBINED COHO											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/08/2005	---	---	---	---	0	0	2	2	0	41	0	
07/09/2005	*	---	---	---	0	0	0	3	103	36	84	
07/10/2005	---	---	---	---	0	0	2	3	0	0	0	
07/11/2005	---	---	---	---	0	0	3	12	0	0	0	
07/12/2005	---	---	---	---	0	3	0	8	0	0	0	
07/13/2005	---	---	---	---	0	4	3	8	0	63	71	
07/14/2005	---	---	---	---	0	0	3	11	0	0	0	
07/15/2005	*	---	---	---	0	17	2	2	0	191	0	
07/16/2005	*	---	---	---	0	5	11	7	0	0	111	
07/17/2005	*	---	---	---	0	0	0	4	0	0	43	
07/18/2005	---	---	---	---	0	0	0	3	0	142	0	
07/19/2005	---	---	---	---	0	0	0	2	18	72	0	
07/20/2005	---	---	---	---	0	0	0	1	16	0	0	
07/21/2005	---	---	---	---	0	0	3	4	0	0	0	
<hr/>												
Total:	0	0	0	0	0	29	29	70	137	545	309	
# Days:	0	0	0	0	14	14	14	14	14	14	14	
Average:	0	0	0	0	0	2	2	5	10	39	22	
YTD	0	0	0	110	305,059	191,731	24,356	37,172	103,673	192,204	771,241	

Date	COMBINED STEELHEAD											
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/08/2005	---	---	---	---	38	48	7	2	0	41	17	
07/09/2005	*	---	---	---	19	42	2	4	0	40	15	
07/10/2005	---	---	---	---	25	40	2	0	0	36	22	
07/11/2005	---	---	---	---	7	13	0	8	67	47	24	
07/12/2005	---	---	---	---	0	20	9	3	0	0	0	
07/13/2005	---	---	---	---	0	7	3	0	0	0	28	
07/14/2005	---	---	---	---	8	17	0	0	0	36	0	
07/15/2005	*	---	---	---	0	14	14	0	61	253	22	
07/16/2005	*	---	---	---	4	16	22	3	0	0	0	
07/17/2005	*	---	---	---	6	15	17	1	0	0	43	
07/18/2005	---	---	---	---	0	38	14	0	0	0	0	
07/19/2005	---	---	---	---	2	10	0	0	0	0	0	
07/20/2005	---	---	---	---	3	10	7	1	0	0	0	
07/21/2005	---	---	---	---	0	14	6	0	0	15	0	
<hr/>												
Total:	0	0	0	0	112	304	103	22	128	468	171	
# Days:	0	0	0	0	14	14	14	14	14	14	14	
Average:	0	0	0	0	8	22	7	2	9	33	12	
YTD	3,754	36,684	2,454	7,263	5,935,674	2,922,018	675,467	15,963	196,378	525,478	186,428	

Two-Week Summary of Passage Indices

Date	COMBINED SOCKEYE										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/08/2005	---	---	---	---	0	5	0	15	0	0	17
07/09/2005	*	---	---	---	0	5	0	3	0	1	0
07/10/2005	---	---	---	---	6	5	0	5	0	0	0
07/11/2005	---	---	---	---	0	0	0	14	0	96	0
07/12/2005	---	---	---	---	0	3	0	17	0	36	16
07/13/2005	---	---	---	---	0	18	0	6	0	0	43
07/14/2005	---	---	---	---	0	17	3	3	0	0	16
07/15/2005	*	---	---	---	0	0	0	2	20	0	22
07/16/2005	*	---	---	---	0	11	0	18	61	0	0
07/17/2005	*	---	---	---	0	10	0	4	0	0	0
07/18/2005	---	---	---	---	3	11	0	3	0	0	0
07/19/2005	---	---	---	---	0	7	0	3	0	0	0
07/20/2005	---	---	---	---	0	5	0	7	32	0	0
07/21/2005	---	---	---	---	2	0	0	3	0	15	0

Total:	0	0	0	0	11	97	3	103	113	148	114
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	1	7	0	7	8	11	8
YTD	115	0	0	263	38,431	41,451	8,213	1,891	103,557	84,046	41,840

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

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

Definitions for Smolt Index Counts

- WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts
- IMN (Collection) = Imnaha River Trap : Collection Counts
- GRN (Collection) = Grande Ronde River Trap : Collection Counts
- LEW (Collection) = Snake River Trap at Lewiston : Collection Counts
- LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$
- MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$
- BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts
 $\text{Passage Index} = \text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

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.

Two Week Transportation Summary

Source: Fish Passage Center

Updated: 7/22/05 9:22 AM

07/09/05 TO 07/22/05

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	5,916	9			5 42	5,972
	Sum of NumberBarged	4,956	9			3 39	5,007
	Sum of NumberBypassed	835	0			0 0	835
	Sum of Numbertrucked	0	0			0 0	0
	Sum of SampleMorts	49	0			1 2	52
	Sum of FacilityMorts	33	0			1 1	35
	Sum of ResearchMorts	43	0			0 0	43
	Sum of TotalProjectMorts	125	0			2 3	130
LGS	Sum of NumberCollected	26,724	1,082		17	56 176	28,055
	Sum of NumberBarged	26,592	1,074		16	55 168	27,905
	Sum of NumberBypassed	29	2		1	0 0	32
	Sum of Numbertrucked	0	0		0	0 0	0
	Sum of SampleMorts	48	2		0	1 4	55
	Sum of FacilityMorts	55	4		1	0 4	64
	Sum of ResearchMorts	0	0		0	0 0	0
	Sum of TotalProjectMorts	103	6		1	1 8	119
LMN	Sum of NumberCollected	8,084	467		11	1 43	8,606
	Sum of NumberBarged	6,667	459		11	1 38	7,176
	Sum of NumberBypassed	1,304	0		0	0 4	1,308
	Sum of Numbertrucked	0	0		0	0 0	0
	Sum of SampleMorts	53	0		0	0 0	53
	Sum of FacilityMorts	60	8		0	0 1	69
	Sum of ResearchMorts	0	0		0	0 0	0
	Sum of TotalProjectMorts	113	8		0	0 1	122
MCN	Sum of NumberCollected	150,467	125		35	30 35	150,692
	Sum of NumberBarged	170,070	130		34	18 32	170,284
	Sum of NumberBypassed	1,601	0		0	0 0	1,601
	Sum of Numbertrucked	0	0		0	0 0	0
	Sum of SampleMorts	111	0		0	0 0	111
	Sum of FacilityMorts	2,472	17		1	12 2	2,504
	Sum of ResearchMorts	103	0		0	0 1	104
	Sum of TotalProjectMorts	2,686	17		1	12 3	2,719
Total Sum of NumberCollected		191,191	1,683		63	92 296	193,325
Total Sum of NumberBarged		208,285	1,672		61	77 277	210,372
Total Sum of NumberBypassed		3,769	2		1	0 4	3,776
Total Sum of Numbertrucked		0	0		0	0 0	0
Total Sum of SampleMorts		261	2		0	2 6	271
Total Sum of FacilityMorts		2,620	29		2	13 8	2,672
Total Sum of ResearchMorts		146	0		0	0 1	147
Total Sum of TotalProjectMorts		3,027	31		2	15 15	3,090

YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/22/05 9:22 AM

TO: 07/22/05

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	1,570,736	5,537,383	286,007	31,619	5,590,768	13,016,513
	Sum of NumberBarged	1,544,725	5,235,733	257,640	30,284	5,094,000	12,162,382
	Sum of NumberBypassed	13,093	278,605	26,286	490	448,421	766,895
	Sum of NumberTrucked	404	8,883	871	487	43,015	53,660
	Sum of SampleMorts	430	453	16	16	70	985
	Sum of FacilityMorts	11,991	13,606	1,194	342	5,260	32,393
	Sum of ResearchMorts	93	103	0	0	2	198
	Sum of TotalProjectMorts	12,514	14,162	1,210	358	5,332	33,576
LGS	Sum of NumberCollected	1,186,023	2,452,306	186,012	38,857	2,857,349	6,720,547
	Sum of NumberBarged	1,130,394	2,016,900	151,280	37,808	2,277,070	5,613,452
	Sum of NumberBypassed	50,449	428,573	34,636	938	571,464	1,086,060
	Sum of NumberTrucked	1,856	238	10	47	362	2,513
	Sum of SampleMorts	170	128	12	5	71	386
	Sum of FacilityMorts	3,154	6,447	75	59	8,382	18,117
	Sum of ResearchMorts	0	20	0	0	0	20
	Sum of TotalProjectMorts	3,324	6,595	87	64	8,453	18,523
LMN	Sum of NumberCollected	174,291	670,828	21,556	7,343	614,096	1,488,114
	Sum of NumberBarged	166,421	511,981	17,033	7,155	456,607	1,159,197
	Sum of NumberBypassed	7,447	145,571	4,521	99	154,900	312,538
	Sum of NumberTrucked	0	12,712	0	60	2,235	15,007
	Sum of SampleMorts	121	40	0	3	26	190
	Sum of FacilityMorts	302	524	2	26	328	1,182
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	423	564	2	29	354	1,372
MCN	Sum of NumberCollected	4,147,327	722,354	61,215	60,042	119,411	5,110,349
	Sum of NumberBarged	2,827,408	17,123	924	1,063	5,462	2,851,980
	Sum of NumberBypassed	1,293,923	702,217	60,102	58,589	113,558	2,228,389
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	477	120	8	18	8	631
	Sum of FacilityMorts	23,406	2,818	175	360	380	27,139
	Sum of ResearchMorts	128	76	6	12	3	225
	Sum of TotalProjectMorts	24,011	3,014	189	390	391	27,995
Total Sum of NumberCollected		7,078,377	9,382,871	554,790	137,861	9,181,624	26,335,523
Total Sum of NumberBarged		5,668,948	7,781,737	426,877	76,310	7,833,139	21,787,011
Total Sum of NumberBypassed		1,364,912	1,554,966	125,545	60,116	1,288,343	4,393,882
Total Sum of NumberTrucked		2,260	21,833	881	594	45,612	71,180
Total Sum of SampleMorts		1,198	741	36	42	175	2,192
Total Sum of FacilityMorts		38,853	23,395	1,446	787	14,350	78,831
Total Sum of ResearchMorts		221	199	6	12	5	443
Total Sum of TotalProjectMorts		40,272	24,335	1,488	841	14,530	81,466

Cumulative Adult Passage at Mainstem Dams Through: 07/21

DAM	Spring Chinook						Summer Chinook						Fall Chinook					
	2005		2004		10-Yr Avg.		2005		2004		10-Yr Avg.		2005		2004		10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	74,038	4,288	170,152	8,885	145,297	8,221	74,166	4,151	87,768	12,227	50,610	6,672	0	0	0	0	0	0
TDA	60,956	3,209	130,240	7,717	99,119	5,946	63,093	2,986	75,095	7,766	43,057	4,603	0	0	0	0	0	0
JDA	55,877	2,715	112,153	6,367	82,666	4,703	56,610	4,321	67,790	9,478	39,861	4,279	0	0	0	0	0	0
MCN	51,857	3,201	107,497	7,682	76,092	4,941	57,279	2,486	59,352	7,638	38,149	4,111	0	0	0	0	0	0
IHR	28,040	1,267	77,106	4,646	51,680	3,159	8,431	913	12,728	2,913	9,957	1,761	0	0	0	0	0	0
LMN	25,783	1,002	71,578	3,785	49,507	2,979	7,894	703	10,247	2,148	9,434	1,419	0	0	0	0	0	0
LGS	23,961	929	62,458	3,404	47,589	3,042	6,608	841	8,966	2,178	8,178	1,661	0	0	0	0	0	0
LWG	25,409	1,191	70,742	4,482	47,410	3,274	6,371	947	8,486	2,387	8,286	1,781	0	0	0	0	0	0
PRD	14,148	515	13,521	1,020	15,454	477	51,134	1,653	55,492	4,713	29,954	1,165	0	0	0	0	0	0
RIS	11,908	476	10,918	958	12,149	699	41,835	1,834	48,575	3,515	24,943	2,470	0	0	0	0	0	0
RRH	4,568	417	4,365	734	4,426	242	29,629	1,356	29,791	5,197	15,843	1,398	0	0	0	0	0	0
WEL	4,897	99	4,615	178	3,006	190	17,049	244	17,860	591	9,306	383	0	0	0	0	0	0
WFA	35,234	1,178	95,997	742	n/a	n/a	---	---	---	---	---	---	0	0	0	0	n/a	n/a

DAM	Coho						Sockeye			Steelhead			
	2005		2004		10-Yr Avg.		10-Yr Avg.			10-Yr			Wild
	Adult	Jack	Adult	Jack	Adult	Jack	2005	2004	Avg.	2005	2004	Avg.	2005
BON	0	-1	0	0	1	0	71,657	122,551	53,050	50,423	68,126	54,751	22,152
TDA	2	0	0	0	0	0	60,573	106,954	43,884	23,626	27,622	26,349	12,378
JDA	5	-12	0	0	1	0	63,774	112,591	47,263	18,213	24,059	20,838	7,162
MCN	0	0	0	0	0	0	61,347	89,040	40,406	13,490	14,935	13,180	5,148
IHR	0	0	0	0	0	0	17	90	24	5,774	8,563	6,944	2,007
LMN	0	0	2	0	0	0	16	65	28	5,679	6,433	6,083	1,885
LGS	0	0	0	0	0	0	9	80	32	3,318	4,399	4,353	1,193
LWG	0	0	0	0	0	0	10	110	32	6,715	9,790	7,988	2,249
PRD	0	1	0	0	1	0	69,910	122,396	49,195	876	2,473	1,016	n/a
RIS	2	0	0	0	1	0	63,209	101,307	42,128	722	1,767	651	627
RRH	0	0	0	0	1	0	44,928	75,665	27,558	645	1,555	461	571
WEL	0	0	0	0	0	0	38,644	66,548	23,989	183	507	158	145
WFA	0	0	0	0	n/a	n/a	0	0	n/a	18,797	43,159	n/a	n/a

WFA is through 07/17, RIS, & RRH are through 7/20, WEL is through 07/19. LGR is missing 6/12.

IHR chinook jack were counted as coho jack for 5/23, 5/24, 6/9 - it is corrected in our database.

On July 2 a shad was seen at RRH.

*PRD is not posting wild steelhead numbers.

These numbers were collected from USACE, Grant PUD, Douglas PUD, Chelan PUD, ODFW and DART.

Wild steelhead numbers are included in the total. Wild Steelhead are defined as unclipped fish.

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

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

Page last updated on: 07/22/05

BON counts from January 1, 2005 to March 14, 2005 (our traditional counts begin March 15):

Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
15	0	256	-74

