



# Fish Passage Center

## Weekly Report #08 - 19

July 11, 2008

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### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 70% and 147% of average at individual sub-basins over the first 23 days of June. Precipitation above The Dalles has been 107% of average over June. Over the entire water year, precipitation has generally been near or above average.

**Table 1. Summary of June 1-23 precipitation and cumulative October through June precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2008 June 1-23		Water Year 2008 October 1, 2007 to June 23, 2008	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	2.06	113	19.98	100
Snake River Above Ice Harbor	1.03	92	14.91	101
Columbia Above The Dalles	1.47	107	19.43	101
Kootenai	1.92	102	18.62	91
Clark Fork	1.84	124	14.66	107
Flathead	2.57	127	18.62	102
Pend Oreille/ Spokane	1.99	119	27.10	101
Central Washington	0.41	83	5.67	73
Snake River Plain	0.51	70	7.69	82
Salmon/Boise/ Payette	0.94	83	17.37	100
Clearwater	2.80	147	27.25	104
SW Washington Cascades/Cowlitz	2.78	123	60.36	93
Willamette Valley	1.68	98	56.88	103

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. Water Supply Forecasts increased at all but two locations (Libby and Brownlee) between the June Final and July Final forecasts with Dworshak showing the biggest change by increasing 18% from the June Final to July Final forecast. The current forecast (July Final) at The Dalles between January and July is 101000 Kaf (94% of average).

**Table 2. June Final and July Final Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.**

Location	June Final		July Final	
	% Average (1971- 2000)	Probable Runoff Volume (Kaf)	% Average (1971- 2000)	Probable Runoff Volume (Kaf)
The Dalles (Jan-July)	92	98200	94	101000
Grand Coulee (Jan-July)	95	59800	97	61300
Libby Res. Inflow, MT (Jan-July)	93	5840	90	5700
Hungry Horse Res. Inflow, MT (Jan-July)	99	2200	108	2410
Lower Granite Res. Inflow (Apr- July)	102	21900	106	22900
Brownlee Res. Inflow (Apr-July)	76	4780	68	4270
Dworshak Res. Inflow (Apr-July)	109	2880	127	3370

The Biological Opinion spring flow periods have ended in the lower Snake River (Lower Granite), mid Columbia (Priest Rapids) and lower (McNary) Columbia River. The spring flow objectives this spring were 100 Kcfs at Lower Granite, 260 Kcfs at McNary, and 135 Kcfs at Priest Rapids. Over the spring period, flows averaged 98.4 Kcfs at Lower Granite, 286.7 Kcfs at McNary, and 167.6 Kcfs at Priest Rapids.

The summer Biological Opinion flow at Lower Granite Dam is determined by the June Final Water Supply Forecast and is 52.5 Kcfs this year. Flows at Lower Granite Dam averaged 99.3 Kcfs between June 21<sup>st</sup>, 2008 and July 10<sup>th</sup>, 2008. Flows at Lower Granite averaged 74.8 Kcfs last week.

The summer Biological Opinion flow at McNary Dam is 200 Kcfs and began on July 1, 2008. Flows at McNary Dam have averaged 283.5 Kcfs over the first ten days of the summer flow period.

Grand Coulee Reservoir is at 1288.1 feet (7-10-08) and has refilled 2.8 feet over the last week. Grand Coulee is currently 1.9 feet from full (1290 feet). Outflows at Grand Coulee have ranged between 135.6 and 175.1 Kcfs over the last week. Inflows last week have ranged between 168.9 Kcfs and 195.4 Kcfs.

The Libby Reservoir is currently at elevation 2444.5 feet (7-10-08) and refilled 1.9 feet last week. Libby is 14.5 feet from full (2459 feet). Outflows at Libby are currently 17 Kcfs. Inflows at Libby have ranged between 19 Kcfs and 30.3 Kcfs over the last week. The State of Montana submitted SOR 2008 MT-2 to the Technical Management Team (TMT) on July 2, 2008. The TMT discussed that 2008 operations should be a “roll over” of operations that occurred at Libby in 2007 according to the 2008 Fish Operating Plan. In 2007, a flat flow (July through August) was decided upon that would reach the 20 foot draft at Libby (2439 ft) by the end of August. This week all TMT members agreed to implement a flat outflow from Libby Dam that is estimated to reach the 2439 foot elevation by August 31<sup>st</sup>, 2008. The COE has estimated that a flow of 13 Kcfs from Libby will lead to the 20 ft draft by the end of August. The COE is planning on reducing flows this weekend to the 13 Kcfs level.

Hungry Horse is currently at an elevation of 3559.4 ft (7-10-08) and has refilled 0.9 feet last week. Hungry Horse is currently 0.6 feet from full (3560 ft). Outflows were 5.3–11.3 Kcfs last week; inflows ranged between 6.3 Kcfs and 13.4 Kcfs last week. The State of Montana submitted SOR 2008 MT-2 to the Technical Management Team (TMT) on July 2, 2008. The TMT discussed that 2008 operations should be a “roll over” of operations that occurred at Hungry Horse in 2007 according to the 2008 Fish Operating Plan. In 2007, a flat flow (July through August) was decided upon that would reach the 20 foot draft at Hungry Horse (3540 ft) by the end of August. This week all TMT members agreed to implement a flat outflow from Hungry Horse Dam that is estimated to reach the 3540 foot elevation

by August 31<sup>st</sup>, 2008. Next week, the BOR will estimate a flow from Hungry Horse that will lead to the 20 ft draft by the end of August.

Dworshak is currently at an elevation of 1599.5 feet (7-10-08) and has held steady last week. Dworshak is currently only 0.5 feet from full (1600 feet). Outflows at Dworshak have been reduced to approximately 9.5 Kcfs (full powerhouse) over the last several days. Dworshak inflows have ranged between 7.0 and 15.1 Kcfs last week.

The Brownlee Reservoir is at an elevation of 2071.0 feet (July 10<sup>th</sup>, 2008), and has drafted 2.0 feet last week. Brownlee is currently 6.0 feet from full (2077 feet). Outflows at Brownlee Dam have been 8.6 to 17.5 Kcfs over the last week. Inflows at Brownlee Dam have been 9.7 to 11.9 Kcfs over the last week.

**Spill:** The spring spill period in the Snake River ended on June 20<sup>th</sup> and the summer spill season was initiated on June 21, 2008. The Court Order calls for the following spill levels at the Federal Snake River Projects:

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	30%/30% vs 45 Kcfs/Gas Cap Study

As Columbia and Snake River flow recedes the hydrosystem has been able to implement the Court Ordered spill program. Dworshak Dam outflow exceeded hydraulic capacity earlier this past week, but was reduced to powerhouse capacity as inflow receded. Flow has decreased to less than the limited powerhouse capacity at Lower Granite Dam, and the project has been spilling to the Court Order. Little Goose Dam has spilled 30% of daily flow over the past week. At Lower Monumental Dam summer spill of 17 Kcfs is being met. Spill at Ice Harbor Dam has generally met the court ordered levels of 45 Kcfs daytime spill and gas cap nighttime spill alternating with 30% instantaneous spill.

Court ordered spring spill at the lower Columbia projects ended on June 30, 2008. Summer spill was initiated on July 1, 2008. The Court Order calls for the following summer spill levels at the Federal Lower Columbia River Projects:

Project	Day/Night Spill
McNary	60%/60% vs 40%/40%
John Day	30%/30% vs 40%/40% test days
The Dalles	40%/40%
Bonneville	85 Kcfs/Gas Cap

Summer spill at McNary was initiated on June 21, 2008 to facilitate the conduct of a research study comparing spill levels of 40%/40% versus 60%/60%. The project generally met the Court ordered spill this past week of 40%/40% versus 60%/60% spill. At John Day Dam spill has generally met the 30% of daily average flow, but was less consistent meeting the 40% of daily average flow. Spill at The Dalles Dam met the Court Order spill of 40%. The summer spill levels at Bonneville Dam of 85 Kcfs during daytime hours and gas cap spill at night were initiated on June 21, 2008 to facilitate the conduct of research at this project. The spill levels were restricted to 85 Kcfs from 1600 hours on July 4 to 2300 hours on July 7 based on earlier readings of TDG that had exceeded the gas waiver limits. Since then the project has spilled the 85/gas cap, with the nighttime gas cap limited to about 100 Kcfs. System-wide it appears that TDG is back under the waiver limits, with the exception of a few excursions at forebay monitors due to environmental variables.

Gas bubble trauma (GBT) monitoring at Lower Granite Dam has concluded for the year. Sampling has occurred at all other Snake River monitoring sites, Rock Island Dam in the Mid Columbia, and at McNary and Bonneville dams in the lower Columbia. Only one fish (out of 100 sampled) was detected with minor signs of GBT in their non paired fins this past week at Rock Island Dam.

**Smolt Monitoring:** Spring migrant indices continued to decrease throughout the hydrosystem over the past week, while subyearling Chinook numbers have continued to increase in the Lower Columbia but decrease at Snake River transport sites.

At Snake River SMP sites the daily passage indices for yearling Chinook and steelhead continued to decline. Yearling Chinook indices at Little Goose and Lower Monumental dams have been below 300 per day over most of the past week, while at Lower Granite Dam the daily indices averaged about 300 fish-about half of last weeks numbers. Steelhead indices

dropped to below 500 per day this past week. Indices for subyearling Chinook continued to rise over the weekend and into the early portion of the week. This daily average passage index over the past week is nearly 10,000 fish per day. On July 5th the subyearling index at Granite rose to 17,000 but has dropped ever since.

The COE had proposed spill operations to pass debris at Little Goose and Lower Monumental dams this week but, so far, those operations have not taken place. Until these operations occur they will continue to flush orifices on shorter intervals to insure debris does not plug them again.

Subyearling migrants predominate in the Columbia River also. Very few yearling Chinook and steelhead were seen at Rock Island Dam over the past week. Subyearling Chinook indices at Rock Island Dam increased slightly over the past week. Subyearling Chinook indices around 370 fish per day this week compared to indices of about 270 fish per day last week.

At the lower Columbia River dams indices for all spring migrants were down, while subyearling Chinook indices continued to increase. At McNary the subyearling Chinook index rose to 238,146 on July 8—the highest daily number this year. Indices averaged nearly 160,000 per day in the four complete samples taken at McNary Dam over the past week.

At Bonneville Dam the subyearling Chinook passage indices averaged about 63,500 per day over the past week, with the index reaching 74,000 on July 10.

**Hatchery Release:**

**Snake River Zone:** The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. Releases of spring Chinook parr to the Selway and Wallowa rivers continued this week. In all, approximately 300,000 spring Chinook parr will be released to the Selway River. This release began on July 1<sup>st</sup> and is expected to end on or around July 15<sup>th</sup>. The release of spring Chinook parr to the Wallowa River began in mid-June and is also expected to end on or around July 15<sup>th</sup>. In all, approximately 56,000 parr were scheduled for this release. All spring Chinook parr being released this year are not expected to out-migrate until spring 2009 and are unmarked. There are no releases to this zone scheduled over the next two weeks.

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. There were no releases of juvenile salmonids to the Mid-Columbia river zone this week. Furthermore, no releases are scheduled for this zone over the next two weeks.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were no scheduled releases of juvenile salmonids to this zone this week and no releases are scheduled over the next two weeks.

**Adult Fish Passage:**

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam have ranged between 611 and 1,032 adult summer Chinook in the last week. The 2008 summer Chinook count of 66,163 is about 1.74 times greater than the 2007 and 1.16 times greater than the 10 year average. The summer Chinook jack count of 10,098 had 359 fewer fish than the 2007 count and 1.51 times greater than the 10 year average to date. The adult summer Chinook count total at The Dalles Dam was 53,956, about 81.5% of the Bonneville passage total to date. A total of 42,260 summer Chinook have passed McNary Dam. The adult summer Chinook count total at Lower Granite Dam in the Snake River was 19,006 as of July 8<sup>th</sup>. The 2008 adult summer Chinook count at Rock Island Dam in the upper Columbia was 17,164 with daily totals ranging from 1,183 to 1,627.

As of July 9<sup>th</sup>, 31,077 steelhead had passed Bonneville Dam. The 2008 count was 1.73 times greater than the 2007 count of 17,880 and 1.12 times greater than the 10 year average. The 2008 wild steelhead count at Bonneville Dam was 12,163 fish. The daily steelhead counts at The Dalles Dam ranged between 751 and 992 for the week with a cumulative count of 13,054. About 42% of the steelhead counted at Bonneville Dam had passed The Dalles Dam. The majority of the 7,349 steelhead at McNary Dam have moved up into the Snake River with the cumulative count at Ice Harbor now at 5,139 for the season. The cumulative count at Priest Rapids Dam was at 1,310 for the season as of July 7<sup>th</sup>.

As of July 8<sup>th</sup> at Bonneville Dam, the adult Shad count was 2,091,664 which was about 82.2% of the 2007 count of 2,543,921 and only 68.3% the 10 year average count of 3,058,851. The 2008 Bonneville

Dam sockeye count of 209,592 increased about 9.28 times compared to the 2007 count and increased approximately 3.82 times compared to the 10 year average. A total of 153,679 adult sockeye have been counted at Priest Rapids Dam so far this season. Two of the major spawning sites for sockeye in the upper Columbia river zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). To date, only 418 sockeye have been counted at Ice Harbor Dam in the Snake River.



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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
06/27/2008	209.9	16.3	209.8	29.4	226.7	55.3	224.5	48.1	231.1	42.9	254.1	136.3	243.1	86.0
06/28/2008	196.6	12.2	192.0	11.0	206.7	36.5	206.6	35.7	213.5	44.7	231.8	102.9	221.8	60.0
06/29/2008	180.7	0.1	173.6	0.0	187.3	24.6	186.5	24.5	195.6	43.1	210.8	77.6	203.1	41.7
06/30/2008	181.0	1.1	188.8	0.0	204.7	37.9	202.8	37.7	209.3	44.5	221.9	94.2	208.7	50.6
07/01/2008	185.9	6.6	184.6	14.7	197.3	34.4	195.2	32.9	203.2	40.1	220.2	92.4	209.4	55.3
07/02/2008	175.8	0.1	170.8	0.0	184.7	25.1	185.6	34.2	196.7	40.2	213.1	79.1	205.5	49.2
07/03/2008	170.0	0.1	170.4	0.0	178.7	34.3	178.6	40.6	186.0	39.2	199.3	64.4	194.1	39.7
07/04/2008	145.9	0.1	152.4	0.0	162.5	41.9	165.2	37.6	177.7	33.0	188.8	59.5	180.3	42.1
07/05/2008	154.3	0.1	154.9	0.0	165.7	24.9	164.8	33.1	172.6	32.6	181.4	51.1	177.4	36.4
07/06/2008	154.5	0.1	153.8	0.0	162.0	21.6	159.7	13.7	168.7	32.3	178.7	48.8	171.5	31.0
07/07/2008	175.1	0.1	172.2	0.0	183.3	25.9	182.4	39.9	186.9	43.1	196.4	59.7	188.7	33.6
07/08/2008	175.1	0.1	172.4	0.0	180.6	35.0	179.4	24.1	185.4	39.6	197.3	57.7	191.2	40.4
07/09/2008	145.8	0.1	158.5	0.0	170.1	30.0	170.5	18.7	175.6	33.3	190.5	62.0	186.1	32.2
07/10/2008	135.6	0.1	139.2	0.0	150.4	22.6	155.7	22.1	157.5	33.1	158.3	32.4	157.8	24.5

**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
06/27/2008	8.5	1.1	13.2	13.6	101.7	34.6	97.9	37.7	97.7	35.7	104.0	70.9
06/28/2008	9.6	1.4	13.0	16.1	100.2	28.8	97.8	29.5	98.6	18.2	103.9	69.6
06/29/2008	11.0	1.5	12.9	18.1	103.5	18.3	101.7	29.5	101.1	17.3	104.2	44.6
06/30/2008	15.1	5.6	12.0	18.1	107.0	21.1	109.3	37.2	103.0	16.1	105.4	32.5
07/01/2008	16.3	6.7	13.1	15.3	104.6	23.5	101.3	29.2	102.7	14.8	105.7	63.6
07/02/2008	16.0	6.5	12.3	16.6	102.1	18.3	98.5	28.4	100.4	14.6	105.4	65.7
07/03/2008	14.7	5.1	12.0	16.1	96.6	18.3	92.9	23.8	92.4	16.4	97.1	63.6
07/04/2008	13.6	4.1	11.9	12.4	87.9	18.3	85.3	25.7	85.0	17.4	90.3	59.3
07/05/2008	12.9	3.4	10.6	11.1	80.8	18.3	78.5	23.9	77.6	17.6	80.6	33.9
07/06/2008	11.0	1.5	11.1	9.6	73.0	18.2	70.9	21.1	68.3	17.5	71.7	21.5
07/07/2008	9.4	0.0	11.2	14.6	66.8	18.3	66.1	19.8	64.9	17.4	67.9	20.4
07/08/2008	9.5	0.0	11.0	14.4	66.9	18.4	67.2	20.9	65.1	17.1	67.9	20.3
07/09/2008	9.5	0.0	10.1	17.4	63.9	18.4	63.6	18.9	60.8	17.5	63.7	45.4
07/10/2008	9.5	0.0	---	---	62.2	18.2	61.2	18.4	60.1	17.5	63.6	50.0

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
06/27/2008	354.4	183.1	357.2	136.2	345.7	143.7	372.5	155.0	77.4	128.7
06/28/2008	338.0	174.9	341.1	133.7	323.9	142.1	346.0	132.8	77.1	124.6
06/29/2008	320.6	155.0	324.6	121.9	321.4	126.4	330.9	118.3	77.2	124.0
06/30/2008	324.1	153.6	320.8	114.2	305.7	116.9	326.8	118.9	75.6	121.1
07/01/2008	321.7	154.0	308.2	101.7	295.2	123.2	305.9	104.1	66.0	124.4
07/02/2008	326.8	150.6	320.7	96.3	308.6	119.6	322.6	118.7	66.9	125.6
07/03/2008	328.9	159.9	319.3	110.4	313.3	123.4	327.3	114.4	77.4	124.1
07/04/2008	289.9	162.8	283.1	113.8	282.6	112.6	316.1	100.0	78.1	126.6
07/05/2008	267.2	119.3	265.3	85.3	259.0	104.0	289.4	84.5	76.1	117.4
07/06/2008	264.5	106.3	246.6	73.6	237.1	94.8	250.7	84.6	56.6	98.1
07/07/2008	275.1	147.8	281.3	84.5	265.5	106.2	272.0	85.5	63.9	111.2
07/08/2008	272.6	161.7	254.5	76.8	246.3	98.4	268.9	90.4	53.5	113.6
07/09/2008	262.3	127.8	260.3	97.7	254.9	102.1	265.8	88.4	55.4	110.6
07/10/2008	255.8	105.4	231.8	93.0	224.9	89.7	241.4	88.7	41.5	99.8

## Gas Bubble Trauma Monitoring Results from Representative Sites on the Snake River and Columbia River

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>Little Goose Dam</b>											
	07/01/08	Chinook + Steelhead	25	0	0	0.00%	0.00%	0	0	0	0
	07/08/08	Chinook + Steelhead	92	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	06/30/08	Chinook + Steelhead	28	0	0	0.00%	0.00%	0	0	0	0
	07/06/08	Chinook + Steelhead	71	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	07/03/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/07/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	07/01/08	Chinook + Steelhead	103	0	0	0.00%	0.00%	0	0	0	0
	07/05/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/08/08	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	06/30/08	Chinook + Steelhead	50	0	0	0.00%	0.00%	0	0	0	0
	07/07/08	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	07/10/08	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0

### Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	6/27/2008		to		07/10/08				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2009	300,000	07-01-08	07-15-08	Selway River	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH0	SP	2009	56,207	06-15-08	07-15-08	Lostine River	Wallowa River
<b>Nez Perce Tribe Total</b>					<b>356,207</b>				
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2008	2,000,000	07-03-08	07-03-08	Little White Salmon River	Little White Salmon River
<b>U.S. Fish and Wildlife Service Total</b>					<b>2,000,000</b>				
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2008	398,000	07-03-08	07-03-08	Turtle Rock Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Turtle Rock Hatchery	CH0	SU	2008	450,000	07-03-08	07-03-08	Turtle Rock Hatchery	Mid-Columbia River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>848,000</b>				
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2008	12,000	04-28-08	06-30-08	Cle Elum Lake	Yakima River
<b>Yakama Tribe Total</b>					<b>12,000</b>				
<b>Grand Total</b>					<b>3,216,207</b>				

### Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	7/11/2008		to		7/24/2008				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Nez Perce Tribe	Clearwater Hatchery	CH1	SP	2009	300,000	07-01-08	07-15-08	Selway River	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH0	SP	2009	56,207	06-15-08	07-15-08	Lostine River	Wallowa River
<b>Nez Perce Tribe Total</b>					<b>356,207</b>				
<b>Grand Total</b>					<b>356,207</b>				

## 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>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
6/27	104	105	106	24	126	127	128	24	119	119	120	24	116	117	118	24	116	116	117	24
6/28	104	105	105	24	125	126	128	22	120	120	120	24	117	118	119	22	117	118	118	24
6/29	105	105	106	24	124	125	126	23	120	120	121	24	117	119	119	23	117	118	119	24
6/30	105	106	106	24	123	124	124	21	120	121	121	24	117	118	119	21	117	118	118	24
7/1	106	107	107	24	122	123	124	23	121	121	122	24	118	119	120	23	117	118	118	24
7/2	106	107	107	24	122	123	124	21	120	121	121	24	117	118	119	21	117	118	119	24
7/3	106	106	107	24	122	123	123	24	121	121	122	24	118	119	120	24	118	118	119	24
7/4	107	107	107	24	122	123	124	20	121	121	122	24	116	118	119	20	117	117	118	24
7/5	106	106	107	24	123	124	125	23	120	121	121	24	116	117	118	23	117	117	117	24
7/6	106	106	107	24	123	124	125	23	120	121	121	24	117	118	119	23	117	117	117	24
7/7	106	107	107	24	122	123	123	22	120	120	120	24	117	118	119	22	116	117	117	24
7/8	106	106	107	24	121	122	122	23	120	120	120	24	116	118	118	23	117	117	117	24
7/9	107	107	107	24	121	122	122	21	120	121	121	24	117	117	119	21	117	117	117	24
7/10	107	108	108	24	120	120	121	21	121	121	121	24	116	117	118	21	116	117	117	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>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
6/27	114	115	116	24	---	---	---	0	120	121	124	24	118	120	121	24	120	121	123	24
6/28	115	116	117	24	---	---	---	0	119	120	120	24	120	121	121	24	120	121	122	24
6/29	116	117	117	24	---	---	---	0	120	120	121	24	119	119	120	24	119	119	120	24
6/30	116	117	117	24	---	---	---	0	112	120	121	24	118	118	118	24	119	119	120	24
7/1	115	116	116	24	---	---	---	0	95	95	95	6	118	119	119	24	118	119	119	23
7/2	116	117	117	24	118	118	118	13	118	120	122	14	119	120	122	24	119	120	122	24
7/3	117	117	118	24	118	118	119	24	121	123	125	24	119	120	122	24	120	121	122	24
7/4	116	117	117	24	117	117	118	24	124	127	132	24	118	119	119	24	119	120	122	24
7/5	116	116	117	24	116	116	117	24	119	120	123	24	119	120	121	24	120	121	125	24
7/6	116	116	116	24	116	116	117	24	119	120	123	24	118	120	121	24	118	119	121	24
7/7	115	116	116	24	116	117	117	24	119	120	121	24	116	117	117	24	117	118	119	24
7/8	116	116	117	24	116	117	117	24	121	124	134	24	116	116	117	24	117	117	118	24
7/9	116	116	117	24	117	117	117	22	122	124	132	22	117	118	120	24	118	118	120	24
7/10	115	116	117	24	116	117	117	24	119	120	122	24	120	122	123	24	120	123	124	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>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	
6/27	119	119	121	24	121	123	125	24	114	115	116	24	126	128	128	24	123	126	128	24
6/28	120	121	122	24	124	125	126	24	116	118	121	22	122	123	128	24	125	127	128	24
6/29	119	119	120	24	122	124	124	24	119	121	123	24	121	121	125	24	121	123	126	24
6/30	118	119	120	24	121	122	123	24	119	120	121	24	122	124	125	24	121	123	125	24
7/1	118	119	119	24	121	122	122	24	118	118	119	24	122	126	129	24	122	124	127	24
7/2	118	118	119	24	121	121	122	24	118	119	120	24	121	123	127	24	123	126	127	24
7/3	119	120	121	24	122	123	124	24	118	119	122	24	120	121	125	24	120	121	124	24
7/4	118	119	120	24	121	122	122	24	116	117	118	24	119	121	126	24	117	118	122	24
7/5	119	120	121	24	121	122	124	24	115	116	116	24	117	117	119	24	116	117	119	24
7/6	117	118	119	24	120	121	122	24	115	115	115	24	118	119	129	24	116	117	120	24
7/7	116	118	118	24	121	123	123	24	115	115	117	24	117	118	121	24	115	116	117	24
7/8	117	117	117	24	121	122	122	24	114	115	116	24	117	118	123	24	115	117	119	24
7/9	118	118	119	24	121	122	122	24	115	116	117	24	118	119	121	24	115	117	118	24
7/10	118	120	122	24	122	124	125	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>Clwrtr-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>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/27	124	125	127	24	116	117	118	24	102	104	106	24	103	103	104	24	105	105	106	24
6/28	124	125	126	24	118	119	120	24	104	107	109	24	103	104	104	24	105	106	106	24
6/29	121	122	124	24	118	119	119	24	102	102	102	24	103	104	105	24	105	105	106	24
6/30	121	123	124	24	116	117	118	24	111	113	113	24	105	106	107	24	104	105	106	24
7/1	122	123	124	24	116	117	117	24	113	114	115	24	105	106	107	24	104	104	104	24
7/2	123	124	125	24	117	118	119	24	112	114	115	24	105	106	107	24	104	105	105	24
7/3	121	121	123	24	117	118	118	24	110	110	111	24	105	105	106	24	104	105	106	24
7/4	119	120	121	24	114	115	116	24	107	108	109	24	103	104	104	24	103	103	104	24
7/5	118	119	120	24	113	114	115	24	105	106	106	24	103	104	104	24	103	104	105	24
7/6	117	118	120	24	113	114	115	24	102	103	103	24	102	103	104	24	103	104	105	24
7/7	116	117	118	24	112	114	114	24	101	101	102	24	102	103	103	24	103	104	104	24
7/8	118	119	121	24	112	114	114	24	101	102	102	24	102	103	103	24	103	104	105	24
7/9	117	118	119	24	114	115	115	24	102	102	102	24	102	103	104	24	103	104	105	24
7/10	---	---	---	0	112	113	114	24	102	103	103	24	102	103	104	24	103	103	104	24

### Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clwrtr-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>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/27	103	103	104	24	105	105	105	24	113	118	123	24	117	117	118	24	121	121	125	24
6/28	103	104	105	24	105	105	105	24	113	116	117	24	115	115	116	24	115	115	117	24
6/29	103	104	105	24	105	105	106	24	108	108	108	24	115	116	116	24	115	115	115	24
6/30	103	105	106	24	105	106	106	24	110	111	114	24	114	114	115	24	115	117	117	24
7/1	104	104	105	24	105	105	105	24	110	113	116	24	110	111	112	24	113	114	114	24
7/2	105	106	107	24	105	105	105	24	108	108	109	24	109	109	109	24	118	119	119	24
7/3	105	106	106	24	105	105	106	24	108	109	109	24	110	111	111	24	117	118	119	24
7/4	103	104	104	24	105	105	106	24	108	108	109	24	108	108	110	24	112	112	113	24
7/5	103	104	105	24	104	104	104	24	108	108	109	24	107	107	107	24	111	112	112	24
7/6	103	104	105	24	103	103	103	24	108	108	109	24	106	106	107	24	111	111	111	24
7/7	102	104	105	24	102	102	102	24	108	109	109	24	106	106	107	24	111	111	112	24
7/8	102	104	105	24	102	103	103	24	109	109	111	24	106	107	107	24	113	115	134	24
7/9	103	104	105	24	103	103	103	24	109	109	110	24	108	108	108	24	110	111	112	24
7/10	102	104	105	24	102	103	103	24	109	109	110	24	108	108	109	24	111	111	112	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>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>					
	<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>		<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/27	119	120	121	24	118	119	122	24	118	118	118	24	118	119	120	24	---	---	---	0
6/28	121	122	123	24	119	120	120	24	119	119	120	24	118	118	119	24	---	---	---	0
6/29	119	120	122	24	119	119	120	24	119	120	120	24	118	119	119	24	---	---	---	0
6/30	117	117	118	24	118	119	120	24	119	120	120	24	118	118	119	24	---	---	---	0
7/1	116	117	117	24	119	119	120	24	117	117	119	24	118	119	119	24	---	---	---	0
7/2	116	116	118	24	119	119	119	24	116	116	116	24	118	119	120	24	---	---	---	0
7/3	115	116	117	24	117	118	118	24	116	117	117	24	118	119	120	24	---	---	---	0
7/4	116	116	117	24	116	117	118	24	115	115	116	24	117	117	119	24	---	---	---	0
7/5	113	114	115	24	115	116	120	24	114	114	114	24	115	116	116	24	---	---	---	0
7/6	111	112	112	24	115	115	116	24	114	114	114	24	115	115	116	24	---	---	---	0
7/7	111	111	111	24	113	114	115	24	113	113	114	24	115	115	116	24	---	---	---	0
7/8	110	110	110	24	113	114	115	24	113	113	113	24	115	115	115	24	---	---	---	0
7/9	110	111	111	24	114	114	116	24	114	114	114	24	115	116	117	24	---	---	---	0
7/10	112	113	114	24	114	114	116	24	114	114	115	24	115	115	117	24	---	---	---	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 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>High</u>	<u>#</u>
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	AVG	High	hr
6/27	114	115	116	24	120	120	120	24	112	113	114	24	119	119	119	24	113	115	116	24
6/28	116	117	118	24	119	119	120	24	113	114	114	24	118	119	119	24	116	117	118	24
6/29	118	119	120	24	118	119	119	24	114	115	116	24	118	119	119	24	115	116	116	24
6/30	119	119	120	24	118	118	119	24	117	118	118	24	118	119	119	24	115	116	117	24
7/1	117	117	118	24	118	119	119	24	117	117	118	24	117	117	117	24	115	115	116	24
7/2	116	117	117	24	118	119	119	24	117	117	118	24	117	118	119	24	116	117	117	24
7/3	117	117	117	24	118	119	119	24	116	116	117	24	117	118	118	24	114	115	116	24
7/4	117	117	117	24	118	118	118	24	114	115	115	24	117	117	118	24	113	113	114	24
7/5	115	115	116	24	115	116	116	24	112	113	113	24	115	116	116	24	113	113	114	24
7/6	113	114	114	24	114	115	115	24	110	111	111	24	114	115	115	24	111	111	112	24
7/7	113	113	114	24	117	118	119	24	109	110	110	24	116	117	117	24	110	111	112	24
7/8	113	113	114	24	118	119	120	24	110	110	111	24	115	117	117	24	111	112	113	24
7/9	114	114	115	24	117	117	117	8	111	112	112	24	117	118	119	24	113	113	114	24
7/10	114	114	114	24	114	114	115	13	111	111	111	24	115	116	117	24	111	112	114	24

### 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>High</u>	<u>#</u>
	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
6/27	118	119	119	24	114	115	117	24	---	---	---	0	116	118	119	24	124	124	124	24
6/28	120	120	121	24	117	118	120	24	---	---	---	0	117	117	117	24	124	125	125	24
6/29	119	119	119	24	120	120	121	24	---	---	---	0	118	119	120	24	122	124	125	24
6/30	119	119	119	24	117	117	118	24	---	---	---	0	118	118	119	24	121	123	124	24
7/1	119	119	119	24	114	114	115	24	---	---	---	0	115	115	116	24	120	121	122	24
7/2	119	119	120	24	116	116	117	24	---	---	---	0	115	116	117	24	121	122	124	24
7/3	118	118	119	24	115	116	116	24	---	---	---	0	116	117	118	24	122	123	124	24
7/4	116	117	117	24	113	113	114	24	---	---	---	0	114	115	115	24	119	121	122	24
7/5	117	118	118	24	113	113	114	24	---	---	---	0	113	113	113	24	118	119	119	24
7/6	115	116	116	24	112	113	113	24	---	---	---	0	112	113	113	24	117	118	118	24
7/7	115	116	117	24	110	111	112	24	---	---	---	0	112	113	114	24	118	118	119	24
7/8	116	117	117	24	112	113	114	24	---	---	---	0	112	113	115	24	118	119	120	24
7/9	117	117	118	24	115	115	115	24	---	---	---	0	114	116	117	24	118	119	120	24
7/10	115	116	116	24	112	113	114	24	---	---	---	0	112	113	114	24	117	118	120	24

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 7/11/2008 8:36

### 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/currentsmppsubmitdata.asp>

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)
06/27/2008 *	---	---	---	---	468	377	55	2	---	2,047	1,602
06/28/2008	---	---	---	---	346	193	114	2	1,275	244	656
06/29/2008 *	---	---	---	---	1,054	631	301	0	---	837	553
06/30/2008 *	---	---	---	---	647	486	218	2	0	424	523
07/01/2008 *	---	---	---	---	607	422	124	2	---	576	85
07/02/2008 *	---	---	---	---	643	184	126	9	654	503	507
07/03/2008 *	---	---	---	---	541	440	106	4	---	91	512
07/04/2008	---	---	---	---	409	438	106	0	581	1,513	514
07/05/2008 *	---	---	---	---	408	323	84	2	---	237	120
07/06/2008	---	---	---	---	549	287	133	2	1,018	84	183
07/07/2008 *	---	---	---	---	270	143	72	0	---	90	0
07/08/2008 *	---	---	---	---	0	216	28	0	247	286	238
07/09/2008 *	---	---	---	---	111	76	14	6	---	577	0
07/10/2008 *	---	---	---	---	99	107	0	0	366	237	471
07/11/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,152</b>	<b>4,323</b>	<b>1,481</b>	<b>31</b>	<b>4,141</b>	<b>7,746</b>	<b>5,964</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>439</b>	<b>309</b>	<b>106</b>	<b>2</b>	<b>592</b>	<b>553</b>	<b>426</b>
<b>YTD</b>	<b>56,037</b>	<b>78,597</b>	<b>19,672</b>	<b>13,632</b>	<b>3,386,253</b>	<b>2,743,165</b>	<b>1,971,217</b>	<b>22,405</b>	<b>1,359,675</b>	<b>1,693,103</b>	<b>1,290,536</b>

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)
06/27/2008 *	---	---	---	---	5,126	16,149	5,393	213	---	59,030	53,120
06/28/2008	---	---	---	---	5,183	11,497	5,234	134	97,322	33,439	51,261
06/29/2008 *	---	---	---	---	7,161	15,922	4,246	225	---	31,699	71,485
06/30/2008 *	---	---	---	---	5,375	10,589	2,647	205	196	29,734	58,291
07/01/2008 *	---	---	---	---	6,151	13,873	3,421	207	---	48,384	45,229
07/02/2008 *	---	---	---	---	11,518	12,369	3,760	444	63,485	46,108	37,310
07/03/2008 *	---	---	---	---	12,914	20,620	4,527	466	---	50,411	54,681
07/04/2008	---	---	---	---	12,100	13,402	4,022	294	135,574	66,716	64,108
07/05/2008 *	---	---	---	---	17,392	18,826	3,384	356	---	36,419	56,861
07/06/2008	---	---	---	---	14,580	11,748	3,053	336	166,804	50,453	51,628
07/07/2008 *	---	---	---	---	11,024	15,974	2,175	413	---	49,793	55,034
07/08/2008 *	---	---	---	---	5,680	23,135	2,295	339	238,146	64,305	69,140
07/09/2008 *	---	---	---	---	4,217	13,720	2,572	435	---	60,707	74,049
07/10/2008 *	---	---	---	---	4,635	12,635	1,829	464	86,186	71,531	73,766
07/11/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123,056</b>	<b>210,459</b>	<b>48,558</b>	<b>4,531</b>	<b>787,713</b>	<b>698,729</b>	<b>815,963</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,790</b>	<b>15,033</b>	<b>3,468</b>	<b>324</b>	<b>112,530</b>	<b>49,909</b>	<b>58,283</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>119</b>	<b>613,950</b>	<b>972,238</b>	<b>307,664</b>	<b>9,269</b>	<b>1,340,088</b>	<b>1,095,858</b>	<b>3,189,129</b>

Two-Week Summary of Passage Indices

COMBINED COHO											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/27/2008 *	---	---	---	---	0	0	0	25	---	166	355
06/28/2008	---	---	---	---	0	0	0	29	0	114	189
06/29/2008 *	---	---	---	---	0	0	0	31	---	87	174
06/30/2008 *	---	---	---	---	0	0	0	25	0	85	131
07/01/2008 *	---	---	---	---	13	0	0	21	---	175	258
07/02/2008 *	---	---	---	---	0	0	4	20	0	336	410
07/03/2008 *	---	---	---	---	0	0	7	26	---	91	256
07/04/2008	---	---	---	---	0	0	0	2	775	213	257
07/05/2008 *	---	---	---	---	0	0	0	5	---	0	240
07/06/2008	---	---	---	---	0	0	0	21	170	0	61
07/07/2008 *	---	---	---	---	0	0	0	8	---	179	0
07/08/2008 *	---	---	---	---	0	0	0	18	247	96	60
07/09/2008 *	---	---	---	---	0	0	0	15	---	0	57
07/10/2008 *	---	---	---	---	0	0	0	6	0	0	0
07/11/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>11</b>	<b>252</b>	<b>1,192</b>	<b>1,542</b>	<b>2,448</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>18</b>	<b>170</b>	<b>110</b>	<b>175</b>
<b>YTD</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>326</b>	<b>96,253</b>	<b>166,060</b>	<b>142,692</b>	<b>52,135</b>	<b>169,359</b>	<b>362,537</b>	<b>358,479</b>

COMBINED STEELHEAD											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/27/2008 *	---	---	---	---	725	1,052	191	38	---	84	267
06/28/2008	---	---	---	---	456	823	114	61	212	228	93
06/29/2008 *	---	---	---	---	694	789	65	49	---	166	11
06/30/2008 *	---	---	---	---	709	740	52	37	0	254	131
07/01/2008 *	---	---	---	---	388	489	35	30	---	175	345
07/02/2008 *	---	---	---	---	457	323	78	20	0	0	48
07/03/2008 *	---	---	---	---	283	743	32	22	---	0	0
07/04/2008	---	---	---	---	446	438	37	22	0	0	0
07/05/2008 *	---	---	---	---	230	251	15	20	---	0	120
07/06/2008	---	---	---	---	157	108	0	30	0	0	122
07/07/2008 *	---	---	---	---	27	179	0	13	---	0	0
07/08/2008 *	---	---	---	---	56	144	14	17	0	205	298
07/09/2008 *	---	---	---	---	0	268	0	13	---	144	0
07/10/2008 *	---	---	---	---	14	214	14	8	183	0	0
07/11/2008	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,642</b>	<b>6,561</b>	<b>647</b>	<b>380</b>	<b>395</b>	<b>1,256</b>	<b>1,435</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>332</b>	<b>469</b>	<b>46</b>	<b>27</b>	<b>56</b>	<b>90</b>	<b>103</b>
<b>YTD</b>	<b>4,565</b>	<b>22,292</b>	<b>5,891</b>	<b>10,708</b>	<b>3,239,423</b>	<b>3,693,609</b>	<b>1,546,135</b>	<b>22,695</b>	<b>507,149</b>	<b>1,132,932</b>	<b>449,979</b>

## Two-Week Summary of Passage Indices

Date	<b>COMBINED SOCKEYE</b>										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
06/27/2008 *	---	---	---	---	0	94	0	34	---	0	88
06/28/2008	---	---	---	---	0	36	0	49	0	453	93
06/29/2008 *	---	---	---	---	0	0	4	12	---	0	174
06/30/2008 *	---	---	---	---	0	0	0	41	0	424	0
07/01/2008 *	---	---	---	---	0	0	0	23	---	175	170
07/02/2008 *	---	---	---	---	0	35	0	31	0	0	121
07/03/2008 *	---	---	---	---	12	3	4	35	---	180	128
07/04/2008	---	---	---	---	37	0	0	18	194	213	128
07/05/2008 *	---	---	---	---	0	0	0	20	---	118	120
07/06/2008	---	---	---	---	26	0	0	15	0	0	183
07/07/2008 *	---	---	---	---	0	0	0	25	---	90	125
07/08/2008 *	---	---	---	---	0	0	0	18	0	96	60
07/09/2008 *	---	---	---	---	0	0	0	11	---	0	0
07/10/2008 *	---	---	---	---	0	0	0	9	0	0	236
07/11/2008	---	---	---	---	---	---	---	---	---	---	---
<hr/>											
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>168</b>	<b>8</b>	<b>341</b>	<b>194</b>	<b>1,749</b>	<b>1,626</b>
<b># Days:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>12</b>	<b>1</b>	<b>24</b>	<b>28</b>	<b>125</b>	<b>116</b>
<b>YTD</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>24,709</b>	<b>36,540</b>	<b>45,480</b>	<b>38,900</b>	<b>222,647</b>	<b>331,815</b>	<b>142,320</b>

\* 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

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)}

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.

## Two Week Transportation Summary

Source: Fish Passage Center

Updated:

7/11/08 8:38 AM

		06/27/08	TO	07/11/08			
		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	94,630	4,740	10	60	3,530	102,970
	Sum of NumberBarged	92,237	4,708	10	59	3,521	100,535
	Sum of NumberBypassed	853	0	0	0	5	858
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	41	4	0	1	0	46
	Sum of FacilityMorts	199	28	0	0	4	231
	Sum of ResearchMorts	1,300	0	0	0	0	1,300
	Sum of TotalProjectMorts	1,540	32	0	1	4	1,577
<b>LGS</b>	Sum of NumberCollected	146,280	3,009		112	4,534	153,935
	Sum of NumberBarged	145,056	2,996		110	4,520	152,682
	Sum of NumberBypassed	386	0		0	0	386
	Sum of Numbertrucked	0	0		0	0	0
	Sum of SampleMorts	33	0		0	1	34
	Sum of FacilityMorts	805	13		2	13	833
	Sum of ResearchMorts	0	0		0	0	0
	Sum of TotalProjectMorts	838	13		2	14	867
<b>LMN</b>	Sum of NumberCollected	37,901	1,193	9	6	498	39,607
	Sum of NumberBarged	37,698	1,176	9	6	367	39,256
	Sum of NumberBypassed	113	12	0	0	128	253
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	12	3	0	0	1	16
	Sum of FacilityMorts	78	2	0	0	2	82
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	90	5	0	0	3	98
<b>MCN</b>	Sum of NumberCollected	385,981	2,126	568	92	200	388,967
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	385,881	2,126	568	92	200	388,867
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	25	0	0	0	0	25
	Sum of FacilityMorts	75	0	0	0	0	75
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	100	0	0	0	0	100
Total Sum of NumberCollected		664,792	11,068	587	270	8,762	685,479
Total Sum of NumberBarged		274,991	8,880	19	175	8,408	292,473
Total Sum of NumberBypassed		387,233	2,138	568	92	333	390,364
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		111	7	0	1	2	121
Total Sum of FacilityMorts		1,157	43	0	2	19	1,221
Total Sum of ResearchMorts		1,300	0	0	0	0	1,300
Total Sum of TotalProjectMorts		2,568	50	0	3	21	2,642



### YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/11/08 8:38 AM

TO: 07/11/08

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	347,058	2,307,915	62,989	12,049	2,071,946	4,801,957
	Sum of NumberBarged	338,617	1,876,302	61,095	11,588	1,693,180	3,980,782
	Sum of NumberBypassed	2,580	425,949	1,848	424	377,930	808,731
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	168	147	2	3	47	367
	Sum of FacilityMorts	1,373	2,728	44	34	789	4,968
	Sum of ResearchMorts	4,320	2,789	0	0	0	7,109
	Sum of TotalProjectMorts	5,861	5,664	46	37	836	12,444
<b>LGS</b>	Sum of NumberCollected	634,772	1,706,773	95,840	21,784	2,308,938	4,768,107
	Sum of NumberBarged	627,766	1,313,988	93,070	21,695	1,589,728	3,646,247
	Sum of NumberBypassed	5,418	389,296	2,765	67	718,741	1,116,287
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	85	40	1	3	13	142
	Sum of FacilityMorts	1,503	3,449	4	19	456	5,431
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1,588	3,489	5	22	469	5,573
<b>LMN</b>	Sum of NumberCollected	227,479	1,216,335	83,198	28,104	957,104	2,512,220
	Sum of NumberBarged	225,134	276,255	9,246	10,128	230,227	750,990
	Sum of NumberBypassed	1,993	940,234	73,949	17,975	726,648	1,760,799
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	35	39	0	0	22	96
	Sum of FacilityMorts	317	798	3	1	207	1,326
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	352	837	3	1	229	1,422
<b>MCN</b>	Sum of NumberCollected	644,478	751,955	78,620	102,148	276,844	1,854,045
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	644,010	751,126	78,558	102,005	276,584	1,852,283
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	75	112	3	22	25	237
	Sum of FacilityMorts	375	653	56	110	213	1,407
	Sum of ResearchMorts	18	58	3	5	20	104
	Sum of TotalProjectMorts	468	823	62	137	258	1,748
Total Sum of NumberCollected		1,853,787	5,982,978	320,647	164,085	5,614,832	13,936,329
Total Sum of NumberBarged		1,191,517	3,466,545	163,411	43,411	3,513,135	8,378,019
Total Sum of NumberBypassed		654,001	2,506,605	157,120	120,471	2,099,903	5,538,100
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		363	338	6	28	107	842
Total Sum of FacilityMorts		3,568	7,628	107	164	1,665	13,132
Total Sum of ResearchMorts		4,338	2,847	3	5	20	7,213
Total Sum of TotalProjectMorts		8,269	10,813	116	197	1,792	21,187

Cumulative Adult Passage at Mainstem Dams Through: 07/10

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.		2008		2007		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	07/09	125545	17552	67482	16860	151523	9831	66163	10098	37901	10457	56720	6658	0	0	0	0	0	0
TDA	07/09	95440	15801	53524	15567	106828	7522	53956	10216	30731	8579	47848	4703	0	0	0	0	0	0
JDA	07/09	81771	14925	44005	13864	89148	6122	51853	11428	27163	7678	43797	4407	0	0	0	0	0	0
MCN	07/08	68085	12133	39497	12393	82136	6227	42260	9461	22037	5711	38434	3734	0	0	0	0	0	0
IHR	07/08	53142	7757	28380	7371	54980	3897	21539	4828	5973	1824	10173	1699	0	0	0	0	0	0
LMN	07/08	54512	6885	28397	7102	52688	3599	23838	2503	8123	1069	9680	1311	0	0	0	0	0	0
LGS	07/08	50401	7805	23960	7227	50024	3685	18874	4352	5530	2095	7802	1583	0	0	0	0	0	0
LGR	07/08	50146	10946	22905	9085	50643	4197	19006	4523	5066	2133	7549	1611	0	0	0	0	0	0
PRD	07/07	12173	620	6708	489	17360	563	20625	759	14949	481	24459	822	0	0	0	0	0	0
RIS	07/09	12490	1119	5572	2066	13979	962	17164	1043	13198	2365	21422	1748	0	0	0	0	0	0
RRH	07/09	4065	371	2424	920	5404	397	9232	492	7662	1051	11924	818	0	0	0	0	0	0
WEL	07/06	2708	426	2041	752	3980	281	2820	51	2052	228	4294	155	0	0	0	0	0	0
WFA	07/03	11897	243	21805	208	-	-	0	0	0	0	-	-	0	0	0	0	-	-

DAM	Coho						Sockeye			Steelhead			
	2008		2007		10-Yr Avg.		2008	2007	10-Yr Avg.	10-Yr			Wild 2008
	Adult	Jack	Adult	Jack	Adult	Jack				2008	2007	Avg.	
BON	0	0	0	0	0	0	209592	22579	54743	31077	17880	27633	12163
TDA	0	0	0	0	0	0	173937	17508	45850	13054	7564	12553	5364
JDA	-1	0	1	0	0	0	185218	21613	48948	14470	8301	12595	5315
MCN	0	0	0	0	0	0	138309	15593	38191	7349	4983	6875	2364
IHR	-1	0	0	0	0	0	418	46	31	5139	3903	4325	1598
LMN	0	0	0	0	0	0	495	30	24	5758	4111	3860	2155
LGS	0	0	0	0	0	0	389	19	27	3338	2942	3230	1227
LGR	0	0	0	0	0	0	408	24	23	8266	11128	8191	2634
PRD	0	1	0	1	1	0	153679	15196	38311	1310	156	351	0
RIS	0	0	0	0	1	0	137523	16421	32071	1031	170	308	439
RRH	0	0	0	0	1	0	105277	10851	20230	1124	263	290	461
WEL	0	0	0	0	0	0	45142	4242	10532	392	77	52	252
WFA	0	0	2	0	-	-	0	0	-	16978	16778	-	-

BON and LGR have switched to video counts so the data is delayed.

\*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: 07/11/08

BON counts from January 1, 2008 to March 14, 2008 (our traditional counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2008	42	0	578	278
2007	22	0	1,677	517