



Fish Passage Center

Weekly Report #10 - 20

July 30, 2010

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 19% and 76% of average at individual sub-basins over July. Precipitation above The Dalles has been 43% of average over July. Over the 2010 water year, precipitation has ranged between 84% and 102% of average.

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 2010 July 1-26		Water Year 2010 October 1, 2009 to July 26, 2010	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.83	55	19.28	88
Snake River Above Ice Harbor	0.20	26	15.32	97
Columbia Above The Dalles	0.45	43	19.35	93
Kootenai	0.83	52	19.07	84
Clark Fork	0.44	44	13.68	90
Flathead	1.01	76	20.60	102
Pend Oreille/ Spokane	0.52	45	26.87	95
Central Washington	0.06	19	8.47	102
Snake River Plain	0.11	22	9.05	90
Salmon/Boise/ Payette	0.19	28	17.77	97
Clearwater	0.27	22	26.69	95
SW Washington Cascades/ Cowlitz	0.31	26	61.59	92
Willamette Valley	0.21	30	53.25	94

Table 2 displays the June Final and July Final runoff volume forecasts for multiple reservoirs. The July Final Runoff Volume Forecasts remained similar to the June Final Forecasts at Upper Columbia locations; however increased between 11-18% relative to the June Final forecasts at Snake River locations. The current forecast at The Dalles between January and July is 81900 Kaf (76% 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)	69	74000	76	81900
Grand Coulee (Jan-July)	74	46400	76	47900
Libby Res. Inflow, MT (Apr-Aug)	71	4420	71	4440
Hungry Horse Res. Inflow, MT (Jan-July)	75	1660	81	1800
Lower Granite Res. Inflow (Apr- July)	68	14600	86	18600
Brownlee Res. Inflow (Apr-July)	58	3670	74	4680
Dworshak Res. Inflow (Apr-July)	63	1670	74	1950

* Denotes COE Forecast

The Summer Biological Opinion flow period began on June 21 in the lower Snake River (Lower Granite). According to the June Final Water Supply Forecast, the summer flow objective this summer is 50 Kcfs at Lower Granite, flows at Lower Granite Dam have averaged 60.7 Kcfs from June 21-July 29. Flows at Lower Granite have averaged 38.7 Kcfs over the last week.

The Summer Biological Opinion flow period began on July 1st at McNary Dam with a flow objective of 200 Kcfs. Flows from July 1st to July 29th averaged 189.3 Kcfs and 156.8 Kcfs last week.

Grand Coulee Reservoir is at 1287.0 feet (7-29-10) and drafted 1.4 feet over the last week. The end of August draft elevation at Grand Coulee is 1277.3 feet. Outflows at Grand Coulee have ranged between 82.3 and 106.2 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2441.6 feet (7-29-10) and has refilled 1.1 feet last week. Outflows at Libby Dam have been 7.0 Kcfs.

Hungry Horse is currently at an elevation of 3556.6 feet (7-29-10) and has drafted 1.2 ft last week. Outflows at Hungry Horse are currently 4.3 Kcfs.

Dworshak is currently at an elevation of 1575.6 feet (7-29-10) and has drafted approximately 8.2 feet last week. Outflows from Dworshak are currently 12 Kcfs and are expected to remain at this level through early next week.

The Brownlee Reservoir was at an elevation of 2062.9 feet on July 29th, 2010 drafting 3.6 feet last week. Over the last week, outflows at Brownlee have ranged between 10.9-15.0 Kcfs.

Spill:

On June 21st the Snake projects transitioned to the summer spill program. The following table shows the planned operations for summer 2010.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	June 21-July 13: 30%/30% vs. 45 Kcfs/Gas Cap July 13-August 31: 45 Kcfs/Gas Cap (approximate Gas Cap range = 75-95 Kcfs)

Spill at Dworshak Dam began on July 15th, as the outflow at the project was increased above hydraulic capacity for flow augmentation and temperature control. Spill levels at Lower Granite and Little Goose dams were managed to their respective planned summer levels. At Lower Monumental Dam daytime spill levels exceeded the court ordered 17 Kcfs due to planned double testing between July 26th and 30th. The Ice Harbor simulated test of 30% spill versus 45 Kcfs during daytime hours and gas cap spill during nighttime hours ended July 13th. After that, spill at Ice Harbor reverted back to the 45Kcfs/gas cap level. However, due to low flows spill is presently occurring as all flow in excess of that needed to operate one turbine unit at this project.

Summer spill programs at McNary and Bonneville dams were initiated on June 21st and at John Day and The Dalles dams on July 1st. The following table shows the planned operations for summer 2010.

Project	Day/Night Spill
McNary	50%/50%
John Day	Testing (July 1-July 22): 30%/30% vs. 40%/40% Post-Testing (July 23-August 31): 30%/30%
The Dalles	40%/40%
Bonneville	Testing (June 16-July 20): 85 Kcfs/121 Kcfs vs. 95 Kcfs/95 Kcfs Post-Testing (July 21-August 31): 75 Kcfs/Gas Cap

The planned spill level of 50% of instantaneous flows was met at McNary Dam this week. At John Day Dam the spill test ended and spill occurred as 30% of instantaneous flow. The planned spill levels of 40% were met at The Dalles Dam over the past week. Spill at Bonneville Dam is supposed to be to the 75Kcfs/gas cap spill levels. However, upon completion of the spill test the COE reverted to using the Camas/Washougal gage to manage spill, resulting in a lowered gas cap spill level. The TDG at the Camas/Washougal station is highly influenced by temperature and biological activity, and this gage is not a required point of compliance for TDG monitoring.

Total dissolved gas levels have been below the States' water quality waiver levels throughout the lower Snake and lower Columbia hydrosystem over the past

week, with the exception of the Camas/Washougal gage.

At present, GBT monitoring is being implemented at Little Goose, Lower Monumental, McNary, Bonneville and Rock Island dams. Two fish (2.6%) were observed with Rank 1 signs of GBT at Little Goose Dam this past week.

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. There were no releases of juvenile salmonids scheduled for this zone this week. Furthermore, there are no releases of juvenile salmonids scheduled for this zone 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 scheduled for this zone this week. Furthermore, there are no releases of juvenile salmonids 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 releases of juvenile salmonids scheduled for this zone this week. There are also no releases of juvenile salmonids scheduled for this zone over the next two weeks.

Adult Fish Passage:

Daily passage numbers at Bonneville Dam ranged between 376 and 582 adult summer Chinook in the last week. The 2010 summer Chinook count of 96927 is about 1.19 times greater than the 2009 count and 1.19 times greater than the 10 year average. The 2010 Bonneville Dam summer Chinook jack count of 15478 is only about 41.6% of the 2009 count. However, the 2010 Bonneville Dam summer Chinook jack count is about 1.18 times greater than the 10 year average count. At McNary Dam 63974 adult summer Chinook have been counted. The 2010 McNary adult summer Chinook is about 1.14 times greater than the 2009 count and about 1.07 times greater than the 10 average. The 2010 summer Chinook jack count of 7673 is about 36.9% of the 2009 count and 89.9% of the 10 year average. The adult summer Chinook count at Lower Granite Dam in the Snake River of 28031 is about 2 times greater than the 2009 count and 2.35 times greater than the 10 year average. The Lower Granite summer Chinook jack count of 5090 is about 32.1% of the 2009 count, while being 1.24 times greater

than the 10 year average.

The Bonneville Dam 2010 steelhead count of 178809 is about 1.53 times greater than the 2009 count of 117408. The 2010 steelhead count is about 1.69 times greater than of the 10 year average of 105946. In the Snake River, this year's Lower Granite steelhead count of 19419 is about 1.30 times greater than the 2009 count and about 1.64 times greater than the 10 year average count of 11819. The 2010 LGR wild steelhead count as of July 29th was 7718. The 2010 Rock Island Dam adult steelhead count of 3042 is about 2.70 times greater than the 2009 count and 2 times greater than the 10 year average. At Willamette Falls Dam, the 2010 count for steelhead was 27434, as of July 26th. This year's steelhead count is about 1.63 times greater than the 2009 count of 16784 at Willamette Falls Dam for the same date range.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 36 and 121 last week. The 2010 adult sockeye count at Bonneville Dam of 386308 is about 2.17 times greater than the 2009 count and about 4.1 times greater than the 10 year average. The 2010 adult sockeye count at McNary Dam of 278445 is about 2.29 times greater than the 2009 count and 4 times greater than the 10 year average. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River zone at Ice Harbor Dam, the 2010 adult sockeye count of 1284 is about 1.48 times greater than the 2009 count of 865 and about 7.34 times greater than the 10 year average count of 175. The Lower Granite Dam 2010 adult sockeye count of 1990 is about 1.69 times greater than the 2009 count of 1179 and 8.22 times greater than the 10 year average of 242.

As of July 29th at Bonneville Dam, the adult Shad count was 1041147 which was about 75.8% of the 2009 count of 1373014 and about 33.7% of the 10 year average count of 3088477.

Smolt Monitoring:

Subyearling Chinook predominate at all SMP sampling sites as small numbers of spring migrants continue to be collected. Subyearling Chinook passage indices continued to decrease at all sites except Lower Monumental Dam.

At Lower Granite Dam passage indices for all smolts decreased over the past week. Subyearling Chinook are the primary species passing, but small numbers of all spring migrants were collected during the last week. Subyearling Chinook passage indices

peaked on June 5 at 115,000. The average daily subyearling index fell to 2,400 per day this week compared to a daily average of 4,100 last week. Passage indices at Little Goose Dam followed a similar pattern, while at Lower Monumental Dam the average index was up to 5,400 this week compared to 3,200 last week.

At Rock Island Dam subyearling summer migrants predominated in the sample over the past month. Passage indices for subyearlings were lower than last week with the daily index averaging 220 this week compared to about 430 per day last week.

At McNary Dam subyearling Chinook predominated over the past week. Indices for subyearling Chinook averaged 21,000 per day this week compared to 41,000 per day average last week. John Day Dam is on limited sampling due to temperatures in excess of 70 degrees F measured in the forebay of the dam. Bonneville Dam continued normal sampling with temperatures hovering just below the 70 degree mark. Bonneville Dam subyearling Chinook passage indices decreased from 57,000 per day last week to 15,000 per day this week.

Hatchery Releases Last Two Weeks

There were no hatchery releases from 07/16/10-7/29/10.

Hatchery Releases Next Two Weeks

There are no hatchery releases planned from 07/30/10-8/13/10.

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
07/16/2010	99.7	0.2	101.6	0.0	112.2	8.6	112.0	10.7	115.6	27.3	132.7	19.6	132.2	26.7
07/17/2010	90.8	0.2	93.7	0.0	106.1	8.6	107.0	8.6	113.1	21.2	119.3	19.2	116.7	26.7
07/18/2010	72.8	0.2	66.0	0.0	81.5	7.3	91.1	7.9	100.3	20.9	133.0	18.4	133.7	25.3
07/19/2010	105.2	0.2	107.6	0.0	113.5	8.6	109.5	10.0	113.8	23.9	115.5	16.6	114.5	22.3
07/20/2010	108.0	0.2	112.1	0.0	112.8	8.2	111.3	10.0	115.4	26.0	102.2	16.2	95.3	24.4
07/21/2010	115.8	0.2	117.3	0.0	117.1	8.3	115.4	9.4	119.6	25.1	116.9	19.0	110.6	26.4
07/22/2010	105.4	0.2	105.1	0.0	112.4	7.2	117.2	9.4	122.9	24.1	130.3	19.5	127.6	27.0
07/23/2010	95.0	0.2	95.7	0.0	105.0	7.8	104.6	9.5	110.8	25.1	121.9	18.9	121.0	26.5
07/24/2010	82.3	0.3	84.0	0.0	95.0	7.2	97.2	7.1	103.0	18.2	116.4	18.5	114.4	25.6
07/25/2010	89.5	0.2	85.1	0.0	87.0	6.4	84.2	7.5	89.1	18.6	88.4	18.1	83.6	24.9
07/26/2010	106.2	0.1	105.1	0.0	106.7	7.8	104.1	9.8	107.4	21.4	109.2	18.4	106.1	25.5
07/27/2010	101.9	0.2	113.9	0.0	114.9	8.4	110.3	8.3	112.2	22.7	106.6	19.0	100.6	26.5
07/28/2010	93.2	0.2	88.1	0.0	98.1	5.9	102.6	8.3	110.5	21.5	130.3	19.0	130.0	26.4
07/29/2010	93.7	0.2	92.7	0.0	97.6	8.1	99.3	7.3	101.6	20.1	110.9	18.2	110.9	25.5

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

Date	Dworshak		Brownlee Canyon		Hells Granite		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
07/16/2010	10.9	1.4	12.2	18.0	48.3	18.7	45.7	13.7	42.6	17.3	43.0	32.4		
07/17/2010	10.9	1.3	11.3	15.4	47.3	18.7	47.3	14.1	46.0	16.9	48.6	38.4		
07/18/2010	10.9	1.3	9.9	14.1	43.8	18.7	43.1	12.9	40.3	17.4	40.2	30.0		
07/19/2010	12.1	2.5	9.4	15.5	43.6	18.6	44.0	13.2	44.0	17.3	46.1	36.1		
07/20/2010	12.1	2.4	9.5	15.5	45.6	18.7	43.9	13.1	40.4	17.4	43.2	33.5		
07/21/2010	12.0	2.4	9.2	17.1	44.9	18.7	45.8	13.7	45.2	17.0	47.0	37.0		
07/22/2010	11.9	2.2	8.5	12.5	42.7	18.7	40.5	12.2	36.7	17.4	36.0	26.0		
07/23/2010	12.0	2.3	8.5	11.5	38.0	18.7	37.3	11.2	36.5	17.0	39.6	29.9		
07/24/2010	13.6	4.0	9.1	11.7	38.6	18.6	38.2	11.5	36.9	17.4	38.2	28.3		
07/25/2010	13.4	3.8	8.5	11.7	39.5	18.8	38.9	11.6	37.0	17.1	38.4	28.4		
07/26/2010	13.5	3.8	9.2	13.4	38.5	18.7	39.2	11.8	38.2	26.2	39.2	29.3		
07/27/2010	13.3	3.6	9.4	14.9	39.9	18.6	39.3	11.8	37.3	21.5	38.3	28.4		
07/28/2010	11.9	2.2	9.2	13.1	40.2	18.7	40.8	12.2	39.4	23.0	38.4	28.3		
07/29/2010	12.0	2.2	---	---	36.5	18.6	36.3	10.8	33.9	22.5	36.2	26.4		

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
07/16/2010	196.0	98.1	181.5	54.5	170.4	68.5	194.0	99.7	0.0	81.9
07/17/2010	174.9	87.4	172.4	65.1	162.9	64.8	174.8	89.9	0.0	72.6
07/18/2010	169.3	83.8	157.0	62.7	144.9	58.0	156.0	94.7	0.0	49.0
07/19/2010	177.1	88.8	190.4	76.0	179.1	70.7	179.4	99.9	16.8	50.3
07/20/2010	160.6	80.7	146.4	58.6	138.8	55.5	164.4	94.9	4.5	52.6
07/21/2010	154.0	77.4	144.6	46.8	135.3	54.0	153.3	82.9	0.0	58.0
07/22/2010	154.5	77.0	138.2	41.4	134.5	54.0	140.3	88.5	0.0	39.4
07/23/2010	175.5	87.6	172.1	51.6	164.4	65.6	174.8	88.3	5.5	68.6
07/24/2010	160.9	79.7	162.6	49.0	156.3	62.9	168.6	88.2	2.8	65.1
07/25/2010	145.7	72.9	133.9	40.2	129.8	51.8	149.8	88.0	0.0	49.4
07/26/2010	143.2	70.9	134.4	40.3	127.5	51.1	136.3	86.1	0.0	37.9
07/27/2010	149.7	74.9	125.9	37.9	118.5	47.3	130.2	80.9	0.0	37.0
07/28/2010	163.4	81.1	164.3	49.1	155.9	62.1	165.3	79.9	0.0	73.0
07/29/2010	159.4	79.8	152.5	45.9	145.6	58.1	164.9	82.6	2.6	67.3

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											
	07/19/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/28/10	Chinook + Steelhead	78	2	2	2.58%	0.00%	2	0	0	0
Lower Monumental Dam											
	07/21/10	Chinook + Steelhead	88	0	0	0.00%	0.00%	0	0	0	0
	07/28/10	Chinook + Steelhead	93	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	07/19/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/22/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/28/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	07/20/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/24/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/27/10	Chinook + Steelhead	42	0	0	0.00%	0.00%	0	0	0	0
McLary Dam											
	07/20/10	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/23/10	Chinook + Steelhead	51	0	0	0.00%	0.00%	0	0	0	0
	07/27/10	Chinook + Steelhead	50	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	Hungry H. Dnst				Boundary				Grand Coulee				Grand C. Tlwr				Chief Joseph			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/16	106.1	106.3	106.6	24	111.4	112.3	113.0	22	114.5	115.4	115.9	24	112.8	113.3	113.8	22	112.4	113.0	113.4	24
7/17	105.8	106.2	106.3	23	110.7	111.5	112.4	23	114.4	114.7	115.0	24	112.7	113.4	113.9	23	112.4	112.8	113.3	24
7/18	106.6	107.0	107.4	24	110.6	111.5	112.3	23	113.7	113.9	114.4	24	112.6	113.4	114.4	23	112.6	113.0	113.5	24
7/19	106.3	106.5	106.6	24	109.8	110.4	111.5	23	113.8	114.3	114.7	24	113.1	113.9	114.6	23	112.5	113.2	113.5	24
7/20	105.7	106.0	106.3	23	108.9	109.5	110.5	21	113.8	114.1	114.4	24	113.1	113.6	114.3	21	112.7	112.9	113.2	24
7/21	106.4	106.8	107.1	24	109.2	110.2	110.8	23	113.8	114.3	114.7	24	112.9	113.8	114.5	23	113.3	113.6	114.0	24
7/22	106.5	106.8	107.1	24	109.0	109.4	110.1	23	113.6	113.7	114.0	24	113.3	114.5	116.2	23	112.5	113.0	113.6	24
7/23	105.9	106.0	106.2	24	108.4	109.1	109.5	22	113.1	113.2	113.4	24	112.3	113.0	114.4	22	111.3	111.8	112.2	24
7/24	106.0	106.6	107.0	24	108.6	109.6	110.2	22	112.7	113.2	113.8	24	112.1	113.1	113.9	22	111.9	112.5	112.7	24
7/25	106.6	107.1	107.5	24	110.0	111.0	111.8	23	113.3	113.6	114.0	24	112.9	114.1	115.0	23	112.3	112.7	112.9	24
7/26	107.1	107.5	108.0	24	110.6	111.4	111.8	22	113.5	113.8	114.0	24	113.6	114.2	115.0	22	113.0	113.5	113.6	24
7/27	106.4	106.7	107.0	22	110.3	110.8	111.3	19	112.8	113.1	113.5	24	112.8	113.1	113.5	19	112.5	112.7	113.1	24
7/28	106.1	106.3	106.5	24	109.6	110.1	110.8	22	111.4	111.9	112.4	24	112.6	113.4	114.6	22	111.6	112.1	112.7	24
7/29	106.0	106.2	106.4	24	109.5	109.9	110.4	22	109.9	111.2	111.8	24	111.1	111.9	112.4	22	110.8	111.4	111.8	24

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	Chief J. Dnst				Wells				Wells Dwnstrm				Rocky Reach				Rocky R. Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/16	112.4	112.8	113.7	24	111.9	112.8	113.7	24	113.2	114.4	114.8	24	114.2	114.6	115.2	24	113.8	114.8	115.8	24
7/17	112.6	112.9	113.7	24	112.2	113.4	114.0	24	113.5	114.5	114.9	24	111.9	112.1	112.8	24	112.3	113.0	113.8	24
7/18	112.7	113.7	115.9	24	112.4	113.2	113.9	24	113.5	114.3	114.8	24	111.9	112.2	112.7	24	111.8	112.6	113.3	24
7/19	111.9	112.8	113.7	24	112.1	112.8	113.2	24	113.0	114.0	114.4	24	111.7	112.2	112.4	24	112.7	114.1	114.8	24
7/20	112.4	112.9	114.0	24	112.4	113.4	114.5	24	113.5	114.5	115.3	24	112.3	112.6	113.0	24	113.1	114.3	115.0	24
7/21	112.4	113.3	114.8	24	112.8	113.7	114.6	24	114.0	115.1	115.7	24	112.5	112.8	113.2	24	113.0	113.9	114.5	24
7/22	112.0	112.8	113.8	24	113.0	113.8	114.4	24	114.2	114.9	115.5	24	112.8	113.1	113.2	24	113.1	113.8	114.8	24
7/23	110.7	111.9	113.5	24	110.7	111.2	111.7	24	112.3	113.0	113.4	24	111.2	111.4	111.7	24	112.0	113.0	113.9	24
7/24	111.9	112.8	114.4	24	111.4	112.6	113.1	24	112.3	113.5	114.1	24	111.8	112.5	112.9	24	111.8	112.7	113.4	24
7/25	112.6	113.5	114.5	24	112.5	113.5	114.2	23	113.2	114.4	115.1	23	112.9	113.6	114.4	24	112.1	113.2	114.2	24
7/26	113.1	113.5	113.8	24	113.1	114.1	114.6	24	114.4	116.0	117.0	24	112.5	113.1	113.4	24	112.8	114.2	115.0	24
7/27	112.7	113.5	114.0	24	112.9	113.5	114.5	24	114.7	115.5	116.0	24	112.5	112.6	112.8	24	112.3	113.2	113.8	24
7/28	112.0	113.0	114.3	24	112.2	113.0	113.7	24	113.8	114.2	114.6	24	112.3	112.6	113.3	24	112.0	112.7	113.2	24
7/29	111.1	112.1	112.9	24	111.7	112.5	112.8	24	113.7	114.7	115.4	24	112.5	113.0	113.4	24	111.9	112.9	113.3	24

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	Rock Island				Rock I. Tlwr				Wanapum				Wanapum Tlwr				Priest Rapids			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
7/16	111.9	113.2	114.1	24	115.7	116.6	117.0	24	111.6	112.3	112.9	24	113.1	113.6	114.9	24	111.8	112.3	113.0	24
7/17	111.4	111.9	113.0	24	115.2	115.7	116.6	24	111.4	112.1	112.8	24	112.7	113.1	113.6	24	110.7	111.6	112.5	24
7/18	110.0	110.7	111.0	24	113.8	114.3	115.3	24	111.3	111.8	112.2	24	112.7	113.1	114.5	24	110.9	111.5	112.7	24
7/19	110.1	111.2	112.3	24	112.7	113.9	114.8	24	110.8	111.9	112.6	24	111.6	112.0	112.6	24	109.9	110.7	111.2	24
7/20	111.3	112.1	112.9	24	114.5	115.0	115.7	24	112.2	113.9	115.0	24	112.8	113.2	113.5	24	111.5	112.7	113.1	24
7/21	111.5	112.2	112.8	24	114.9	115.5	115.9	24	112.7	114.1	115.5	34	113.3	113.9	114.6	34	112.7	113.7	114.3	34
7/22	111.1	111.4	112.0	24	114.9	115.3	116.1	24	110.4	111.1	111.7	24	112.2	113.0	114.2	24	111.0	111.9	112.5	24
7/23	110.1	111.0	111.8	24	114.3	114.9	115.4	24	109.3	111.0	112.0	24	110.9	111.4	112.5	24	108.5	109.6	110.6	24
7/24	110.6	111.3	112.0	24	113.7	114.2	114.7	24	111.3	112.1	112.6	24	112.6	112.9	113.4	24	111.1	111.9	112.4	24
7/25	111.4	112.0	112.4	24	114.7	115.0	115.6	24	111.2	112.1	113.0	24	113.6	114.3	115.0	24	112.1	112.9	114.3	24
7/26	111.6	112.2	112.6	24	114.9	115.3	115.9	24	112.7	114.2	115.8	24	113.6	113.8	114.1	24	112.0	113.2	114.4	24
7/27	111.1	111.4	112.2	24	114.6	115.1	115.8	24	111.5	112.1	112.7	24	113.7	114.2	114.7	24	112.2	112.7	113.9	24
7/28	111.1	111.6	112.1	24	114.3	114.8	116.1	24	111.9	112.5	113.5	24	113.2	113.5	115.1	24	112.6	112.9	113.4	24
7/29	111.0	111.7	112.5	24	114.4	115.2	116.5	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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/16	112.9	113.2	113.7	24	111.5	112.3	113.2	24	100.9	101.2	101.5	24	102.1	103.2	104.1	24	102.8	103.6	104.3	24
7/17	111.6	112.0	112.3	24	110.1	110.7	111.0	24	100.7	100.9	101.2	24	101.9	103.1	103.9	24	102.4	103.4	104.2	24
7/18	111.8	112.1	112.4	24	109.0	109.9	110.5	24	100.7	101.0	101.3	24	102.0	103.1	104.0	24	102.3	103.2	104.0	24
7/19	111.3	111.7	112.1	24	108.8	109.7	110.3	24	104.6	104.8	105.1	24	103.9	105.2	106.0	24	102.1	103.2	104.1	24
7/20	111.8	112.8	113.0	24	109.3	110.1	110.5	24	104.8	105.2	105.4	24	104.3	105.6	106.4	24	102.5	103.8	104.6	24
7/21	112.9	113.9	114.4	34	109.7	110.7	111.2	24	104.4	104.8	105.1	24	104.4	105.7	106.6	24	102.8	103.8	104.9	24
7/22	112.7	113.2	113.4	24	109.7	110.3	110.8	24	103.6	104.0	104.4	24	104.0	105.2	106.1	24	102.8	103.9	104.9	24
7/23	110.2	110.7	110.9	24	107.5	108.4	108.8	24	103.3	103.7	104.2	24	103.8	104.9	105.9	24	102.4	103.7	104.8	24
7/24	111.8	112.6	112.9	24	108.5	109.6	110.1	24	108.7	109.1	109.8	24	107.3	108.4	109.2	24	102.8	104.4	105.7	24
7/25	112.5	112.8	113.0	24	109.6	110.7	111.0	24	108.5	109.2	109.5	24	107.5	108.9	109.8	24	103.1	104.7	105.9	24
7/26	112.5	113.2	113.6	24	110.4	111.1	111.6	24	108.9	109.4	109.6	24	107.8	109.1	109.7	24	103.0	104.3	105.7	24
7/27	112.1	112.9	113.4	24	108.4	109.1	109.8	24	108.2	108.4	108.9	24	106.8	107.2	107.9	24	101.6	102.4	103.2	24
7/28	113.7	114.0	114.4	24	107.3	107.7	108.3	24	103.7	104.0	104.7	24	104.1	105.1	106.1	24	101.8	102.7	103.9	24
7/29	---	---	---	0	108.6	110.2	110.9	24	140.2	177.1	979.8	24	104.1	105.6	106.4	24	102.9	104.5	105.9	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>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/16	103.5	105.3	106.6	22	100.1	100.5	100.8	24	114.1	114.4	114.8	24	107.8	108.1	109.1	24	112.3	112.7	112.9	24
7/17	103.0	105.2	106.6	24	101.1	101.9	103.0	24	113.9	114.5	114.9	24	109.2	110.0	110.7	24	112.8	113.1	113.4	24
7/18	102.7	104.9	106.1	23	102.5	102.8	103.3	24	115.0	115.2	115.5	24	110.3	110.5	110.8	24	113.1	113.5	113.8	24
7/19	102.7	105.2	106.4	24	102.2	102.5	102.9	24	115.0	115.2	115.5	24	110.1	110.4	111.0	24	112.6	113.1	113.7	24
7/20	103.6	105.8	106.9	24	102.6	103.3	103.8	24	115.0	115.3	115.6	24	110.2	110.8	111.3	24	112.6	113.2	113.5	24
7/21	104.3	106.8	108.2	24	102.9	103.1	103.4	24	115.1	115.6	117.1	24	109.8	110.0	110.7	24	112.5	112.9	113.4	24
7/22	104.1	106.1	107.4	24	102.5	102.7	102.8	24	115.2	115.4	115.6	24	110.8	111.3	112.0	24	112.4	112.8	113.0	24
7/23	104.0	106.3	107.9	24	102.2	102.4	102.5	24	116.0	116.3	116.8	24	109.5	109.9	110.8	24	112.4	112.6	113.0	24
7/24	105.1	108.1	109.8	24	102.9	103.1	103.3	24	115.9	116.2	116.6	24	109.6	110.1	110.7	24	112.4	112.8	113.7	24
7/25	105.8	108.2	109.7	24	103.2	103.7	104.3	24	116.0	116.2	117.2	24	108.8	109.3	109.5	24	112.6	113.2	113.6	24
7/26	105.9	108.1	109.6	24	103.0	103.5	103.7	24	115.8	116.2	116.9	24	109.5	109.7	110.1	24	112.4	113.0	113.3	24
7/27	104.1	105.2	106.3	24	102.2	102.6	103.0	24	115.3	115.6	116.0	24	109.6	110.2	111.2	24	111.5	111.8	112.4	24
7/28	104.1	105.6	107.1	24	103.4	103.9	104.6	24	115.0	115.3	115.5	24	110.1	110.7	111.4	24	111.6	112.2	112.9	24
7/29	104.0	106.6	108.1	24	104.0	104.4	104.8	24	115.6	115.9	116.2	24	111.7	112.1	112.4	24	111.3	111.6	111.9	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>High</u>	<u>#</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>		
7/16	109.9	110.3	110.5	24	116.1	116.4	116.9	24	111.6	111.9	112.2	24	113.8	114.4	115.1	24	---	---	---	0
7/17	110.2	110.6	110.9	24	115.8	116.3	116.5	24	112.5	112.9	113.4	24	113.9	114.4	115.0	24	---	---	---	0
7/18	110.0	110.2	110.4	24	116.1	116.3	116.9	24	112.6	112.7	112.9	24	113.9	114.6	115.1	24	---	---	---	0
7/19	109.3	109.6	109.7	24	115.7	116.1	116.4	24	111.5	111.6	112.1	24	113.5	113.9	114.5	24	---	---	---	0
7/20	109.6	109.8	110.2	24	116.1	116.4	116.9	24	111.9	112.1	112.4	24	114.1	114.4	115.1	24	---	---	---	0
7/21	110.6	111.0	111.6	24	116.1	116.8	118.1	24	112.3	112.5	112.8	24	113.8	114.2	114.8	24	---	---	---	0
7/22	110.8	110.9	111.2	24	115.8	116.1	116.9	24	112.5	112.7	112.8	24	114.0	114.4	114.8	24	---	---	---	0
7/23	110.1	110.4	110.8	24	115.8	116.1	116.3	24	111.3	111.5	112.1	24	114.3	114.8	115.4	24	---	---	---	0
7/24	109.6	109.8	109.9	24	116.1	116.4	116.7	24	111.6	112.1	112.8	24	114.3	114.8	115.3	24	---	---	---	0
7/25	109.6	109.7	109.9	24	115.8	116.2	116.4	24	111.9	112.1	112.4	24	114.3	115.0	115.5	24	---	---	---	0
7/26	110.6	111.5	112.4	24	117.2	118.2	118.9	24	112.7	113.2	113.8	24	114.1	114.6	115.2	24	---	---	---	0
7/27	111.5	111.9	112.2	24	117.7	119.0	120.3	24	113.6	114.0	114.8	24	113.6	113.8	114.2	24	---	---	---	0
7/28	111.4	111.8	112.3	24	117.8	119.2	120.0	24	113.7	114.0	114.4	24	113.2	113.5	113.9	24	---	---	---	0
7/29	110.4	110.6	110.8	24	117.5	118.9	119.2	24	113.1	113.3	113.5	24	113.7	114.3	114.7	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>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	<u>24h</u>		<u>12h</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>	
7/16	109.3	109.5	109.7	24	116.7	117.0	117.3	24	105.1	105.3	105.6	24	113.6	113.9	114.1	24	107.9	108.7	110.0	24
7/17	109.2	109.6	110.1	24	116.0	116.5	117.0	24	104.1	104.3	104.5	24	113.2	113.7	113.9	24	105.9	106.1	106.4	24
7/18	110.0	110.3	110.5	24	116.1	117.0	117.4	24	103.9	104.2	104.6	24	113.4	113.7	114.7	24	106.5	106.8	107.0	24
7/19	109.0	109.3	109.6	24	116.1	116.7	116.9	24	105.0	106.0	106.4	24	114.4	115.4	116.6	24	106.1	107.0	108.6	24
7/20	109.1	109.4	110.1	24	115.9	116.5	116.7	24	106.0	106.3	106.5	24	112.5	113.3	113.9	24	109.5	109.8	110.1	24
7/21	108.9	109.3	110.3	24	116.4	116.8	117.1	24	105.8	106.1	106.9	24	114.3	115.2	115.7	24	109.5	109.8	110.1	24
7/22	108.9	109.1	109.3	24	116.0	116.5	116.8	24	105.0	105.3	105.7	24	114.5	114.7	115.1	24	107.1	108.1	108.8	24
7/23	108.1	108.4	108.9	24	116.6	117.0	117.1	24	104.2	104.6	105.2	24	115.4	115.9	117.2	24	105.0	105.9	106.7	24
7/24	108.3	108.6	109.2	24	116.0	116.8	117.6	24	105.6	106.0	107.1	24	115.4	116.1	120.0	24	108.3	108.8	109.0	24
7/25	108.7	109.4	109.9	24	115.8	116.4	116.7	24	107.9	108.2	108.6	24	115.0	115.3	115.6	24	109.1	109.4	109.7	24
7/26	109.7	110.4	110.9	24	116.3	117.5	118.0	24	107.9	108.4	108.8	24	115.0	115.5	115.9	24	108.0	108.4	108.8	24
7/27	110.4	110.8	111.7	24	116.5	117.4	117.6	24	107.6	108.0	108.3	24	114.6	115.4	115.7	24	107.2	107.4	107.7	24
7/28	109.5	110.0	111.3	24	116.1	117.1	117.5	24	107.3	107.5	107.7	24	115.4	115.8	116.2	24	107.6	108.1	108.4	24
7/29	107.9	108.2	108.4	24	116.4	117.0	117.2	24	107.4	107.6	107.9	24	115.1	115.7	116.1	24	108.2	108.6	109.0	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>24 h</u>		<u>12 h</u>		#	<u>24h</u>		<u>12h</u>		#	<u>24h</u>		<u>12h</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>	
7/16	114.4	114.9	115.5	24	109.9	110.4	111.3	24	114.7	115.2	115.7	24	112.4	113.5	114.4	24	116.6	117.0	118.2	24
7/17	113.2	113.5	113.7	24	107.3	107.6	108.3	24	112.9	113.1	113.4	24	110.5	111.4	112.2	24	115.1	115.7	117.8	24
7/18	112.8	113.1	113.5	24	105.6	105.9	106.4	24	113.8	114.6	116.5	24	110.2	112.0	113.9	24	115.3	116.4	118.2	24
7/19	113.1	113.9	114.2	24	104.8	105.1	105.4	24	114.4	115.3	115.8	24	111.3	113.6	115.3	24	116.8	117.4	118.3	24
7/20	114.5	115.3	115.8	24	105.8	106.5	106.7	24	113.4	114.6	115.1	24	110.6	111.5	113.1	24	116.8	117.1	117.2	24
7/21	114.6	115.1	115.6	24	106.5	106.9	107.1	24	114.4	114.6	114.8	24	112.1	113.5	114.6	24	115.0	115.9	117.5	24
7/22	113.6	113.9	114.6	24	106.0	106.1	106.6	24	115.3	116.1	117.5	24	111.6	112.9	113.9	24	114.8	116.1	118.4	24
7/23	113.0	113.6	114.1	24	106.2	107.2	107.9	24	114.8	115.7	117.0	24	112.8	115.1	117.1	24	115.6	116.4	118.1	24
7/24	114.9	115.8	116.8	24	109.0	110.6	111.6	24	116.0	116.8	118.0	24	113.4	116.1	118.1	24	116.2	116.7	118.0	24
7/25	114.9	115.2	115.7	24	111.9	112.4	112.7	24	117.0	117.4	118.2	24	114.3	116.6	118.2	24	117.2	117.8	118.2	24
7/26	114.2	114.8	115.4	24	110.5	110.9	111.3	24	117.0	117.4	117.9	24	115.6	117.4	118.5	24	119.0	119.5	119.8	24
7/27	113.5	114.1	114.6	24	108.6	109.0	109.8	24	116.0	116.6	117.0	24	114.6	115.6	116.2	24	120.1	120.4	120.7	24
7/28	114.2	114.7	115.2	24	107.2	107.5	107.9	24	114.0	114.7	115.7	24	113.0	113.7	114.3	24	117.0	119.7	120.9	24
7/29	114.6	115.2	115.8	24	107.0	107.5	107.8	24	113.9	114.4	114.8	24	110.6	112.3	113.5	24	115.2	116.2	118.9	24

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 7/30/2010 8:31

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>

Date	COMBINED YEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/16/2010	---	---	---	---	16	7	25	0	0	0	0
07/17/2010	---	---	---	---	0	0	98	0	102	0	215
07/18/2010	---	---	---	---	0	11	54	0	0	0	0
07/19/2010	---	---	---	---	0	0	118	0	0	0	0
07/20/2010	---	---	---	---	0	1	53	0	103	0	0
07/21/2010	---	---	---	---	0	0	115	1	52	0	0
07/22/2010	---	---	---	---	18	1	88	0	0	0	0
07/23/2010	---	---	---	---	0	1	96	0	0	0	0
07/24/2010	---	---	---	---	0	0	115	0	0	0	0
07/25/2010	---	---	---	---	0	6	152	0	41	0	0
07/26/2010	---	---	---	---	10	3	217	0	0	0	0
07/27/2010	---	---	---	---	10	0	33	0	0	0	0
07/28/2010	---	---	---	---	0	0	26	0	0	0	0
07/29/2010	---	---	---	---	0	3	81	0	41	0	0
07/30/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	54	33	1,271	1	339	0	215
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	4	2	91	0	24	0	15
YTD	56,130	80,004	27,916	7,995	2,452,564	1,260,475	451,814	11,799	2,093,821	1,034,554	2,302,148

Date	COMBINED SUBYEARLING CHINOOK										
	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/16/2010	---	---	---	---	5,361	2,636	2,381	320	52,990	26,794	77,010
07/17/2010	---	---	---	---	2,754	2,809	3,165	222	63,736	24,885	78,524
07/18/2010	---	---	---	---	2,988	3,940	1,682	348	39,605	17,253	51,160
07/19/2010	---	---	---	---	3,099	2,884	3,435	339	32,954	19,345	54,290
07/20/2010	---	---	---	---	4,090	3,252	1,342	938	43,253	18,983	47,549
07/21/2010	---	---	---	---	5,823	4,608	4,773	499	27,018	16,648	38,883
07/22/2010	---	---	---	---	4,773	3,872	5,828	355	28,046	23,093	51,764
07/23/2010	---	---	---	---	2,208	3,966	2,228	256	23,321	19,454	18,161
07/24/2010	---	---	---	---	2,482	1,380	4,183	142	32,266	24,428	22,190
07/25/2010	---	---	---	---	3,014	1,720	5,710	157	31,495	21,465	24,341
07/26/2010	---	---	---	---	2,313	2,027	8,516	170	0	20,400	13,548
07/27/2010	---	---	---	---	1,847	1,479	4,911	220	19,302	15,344	6,662
07/28/2010	---	---	---	---	1,563	2,267	3,927	271	12,409	16,040	9,205
07/29/2010	---	---	---	---	3,573	5,415	8,171	330	8,598	17,134	12,853
07/30/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	45,888	42,255	60,252	4,567	414,993	281,266	506,140
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	3,278	3,018	4,304	326	29,642	20,090	36,153
YTD	0	42	28	1,275	999,256	1,271,732	757,451	16,321	3,418,426	2,195,731	5,005,352

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)
07/16/2010	---	---	---	---	0	0	6	10	0	0	0
07/17/2010	---	---	---	---	0	0	0	7	0	0	0
07/18/2010	---	---	---	---	17	0	0	22	0	0	0
07/19/2010	---	---	---	---	0	0	17	4	0	0	0
07/20/2010	---	---	---	---	0	0	0	6	0	0	0
07/21/2010	---	---	---	---	0	0	0	3	0	0	0
07/22/2010	---	---	---	---	0	0	0	10	0	0	0
07/23/2010	---	---	---	---	0	0	0	8	41	0	0
07/24/2010	---	---	---	---	0	7	0	3	0	0	0
07/25/2010	---	---	---	---	0	6	0	7	0	0	0
07/26/2010	---	---	---	---	0	3	0	5	0	0	0
07/27/2010	---	---	---	---	0	6	0	3	41	0	0
07/28/2010	---	---	---	---	0	3	0	0	0	0	0
07/29/2010	---	---	---	---	0	3	0	0	0	0	21
07/30/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	17	28	23	88	82	0	21
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	1	2	2	6	6	0	2
YTD	0	0	0	104	40,132	53,885	13,604	41,395	85,634	111,146	524,764

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)
07/16/2010	---	---	---	---	0	29	0	0	0	0	0
07/17/2010	---	---	---	---	0	19	16	0	0	0	215
07/18/2010	---	---	---	---	0	0	0	0	102	0	0
07/19/2010	---	---	---	---	0	7	0	0	0	84	0
07/20/2010	---	---	---	---	0	0	18	0	0	0	0
07/21/2010	---	---	---	---	17	14	0	0	0	0	0
07/22/2010	---	---	---	---	0	14	0	0	0	0	0
07/23/2010	---	---	---	---	0	0	0	2	0	0	0
07/24/2010	---	---	---	---	0	0	0	0	0	0	0
07/25/2010	---	---	---	---	0	1	0	0	0	0	0
07/26/2010	---	---	---	---	0	0	0	0	0	0	0
07/27/2010	---	---	---	---	10	12	0	0	0	0	0
07/28/2010	---	---	---	---	0	14	0	0	0	0	0
07/29/2010	---	---	---	---	19	9	0	0	0	0	0
07/30/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	46	119	34	2	102	84	215
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	3	9	2	0	7	6	15
YTD	4,385	27,688	4,051	11,795	2,045,766	1,594,091	427,816	17,299	448,141	594,800	942,442

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)
07/16/2010	---	---	---	---	0	7	6	1	0	0	302
07/17/2010	---	---	---	---	0	0	0	1	0	0	0
07/18/2010	---	---	---	---	17	6	0	1	0	0	0
07/19/2010	---	---	---	---	0	0	0	0	0	0	0
07/20/2010	---	---	---	---	0	0	0	0	0	0	0
07/21/2010	---	---	---	---	0	0	0	0	0	0	0
07/22/2010	---	---	---	---	18	0	0	2	0	0	0
07/23/2010	---	---	---	---	0	0	19	3	41	0	0
07/24/2010	---	---	---	---	0	0	0	1	41	0	0
07/25/2010	---	---	---	---	0	0	0	1	82	0	10
07/26/2010	---	---	---	---	0	0	0	0	0	0	0
07/27/2010	---	---	---	---	0	0	0	2	41	0	0
07/28/2010	---	---	---	---	10	0	0	0	82	0	0
07/29/2010	---	---	---	---	0	0	0	0	0	57	43
07/30/2010	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	45	13	25	12	287	57	355
# Days:	0	0	0	0	14	14	14	14	14	14	14
Average:	0	0	0	0	3	1	2	1	21	4	25
YTD	80	0	0	188	8,733	12,812	2,202	36,495	1,468,910	656,015	803,447

* 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:

7/30/10 8:30 AM

		07/16/10 TO 07/30/10						
		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
LGR	Sum of NumberCollected	25,905	30	10	25	25	25,995	
	Sum of NumberBarged	25,760	29	10	21	25	25,845	
	Sum of NumberBypassed	0	0	0	0	0	0	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	43	0	0	0	0	43	
	Sum of FacilityMorts	102	1	0	4	0	107	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	145	1	0	4	0	150	
LGS	Sum of NumberCollected	29,444	24	19	83	9	29,579	
	Sum of NumberBarged	29,288	22	19	81	9	29,419	
	Sum of NumberBypassed	2	0	0	0	0	2	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	60	0	0	0	0	60	
	Sum of FacilityMorts	94	2	0	2	0	98	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	154	2	0	2	0	158	
LMN	Sum of NumberCollected	29,148	647	14	20	14	29,843	
	Sum of NumberBarged	28,832	645	14	19	12	29,522	
	Sum of NumberBypassed	178	1	0	0	0	179	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	19	0	0	0	0	19	
	Sum of FacilityMorts	119	1	0	1	2	123	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	138	1	0	1	2	142	
MCN	Sum of NumberCollected	211,445	165	40	70	140	211,860	
	Sum of NumberBarged	204,495	144	40	69	140	204,888	
	Sum of NumberBypassed	100	0	0	0	0	100	
	Sum of Numbertrucked	0	0	0	0	0	0	
	Sum of SampleMorts	110	0	0	0	0	110	
	Sum of FacilityMorts	2,591	1	0	1	0	2,593	
	Sum of ResearchMorts	0	0	0	0	0	0	
	Sum of TotalProjectMorts	2,701	1	0	1	0	2,703	
Total Sum of NumberCollected		295,942	866	83	198	188	297,277	
Total Sum of NumberBarged		288,375	840	83	190	186	289,674	
Total Sum of NumberBypassed		280	1	0	0	0	281	
Total Sum of Numbertrucked		0	0	0	0	0	0	
Total Sum of SampleMorts		232	0	0	0	0	232	
Total Sum of FacilityMorts		2,906	5	0	8	2	2,921	
Total Sum of ResearchMorts		0	0	0	0	0	0	
Total Sum of TotalProjectMorts		3,138	5	0	8	2	3,153	

YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/30/10 8:30 AM

TO: 07/30/10

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	599,888	1,622,342	28,335	5,775	1,358,138	3,614,478
	Sum of NumberBarged	598,031	1,428,782	28,325	5,760	1,309,473	3,370,371
	Sum of NumberBypassed	700	191,860	0	10	48,344	240,914
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	155	54	0	0	19	228
	Sum of FacilityMorts	1,002	1,231	10	5	285	2,533
	Sum of ResearchMorts	0	415	0	0	17	432
	Sum of TotalProjectMorts	1,157	1,700	10	5	321	3,193
LGS	Sum of NumberCollected	835,263	873,167	36,891	8,868	1,085,549	2,839,738
	Sum of NumberBarged	829,597	791,489	36,890	8,867	1,025,842	2,692,685
	Sum of NumberBypassed	68	81,373	0	0	59,473	140,914
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	125	29	1	0	10	165
	Sum of FacilityMorts	5,473	276	0	1	224	5,974
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	5,598	305	1	1	234	6,139
LMN	Sum of NumberCollected	503,446	305,624	8,789	1,524	239,890	1,059,273
	Sum of NumberBarged	502,347	304,139	8,789	1,421	234,667	1,051,363
	Sum of NumberBypassed	498	1,473	0	0	5,000	6,971
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	44	9	0	0	10	63
	Sum of FacilityMorts	576	201	0	3	314	1,094
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	620	210	0	3	324	1,157
MCN	Sum of NumberCollected	1,704,618	1,224,084	47,375	848,790	260,010	4,084,877
	Sum of NumberBarged	204,495	144	40	140	69	204,888
	Sum of NumberBypassed	1,490,588	1,222,563	47,275	847,904	259,728	3,868,058
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	269	121	5	96	16	507
	Sum of FacilityMorts	5,117	1,236	55	650	197	7,255
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	5,386	1,357	60	746	213	7,762
Total Sum of NumberCollected		3,643,215	4,025,217	121,390	864,957	2,943,587	11,598,366
Total Sum of NumberBarged		2,134,470	2,524,554	74,044	16,188	2,570,051	7,319,307
Total Sum of NumberBypassed		1,491,854	1,497,269	47,275	847,914	372,545	4,256,857
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		593	213	6	96	55	963
Total Sum of FacilityMorts		12,168	2,944	65	659	1,020	16,856
Total Sum of ResearchMorts		0	415	0	0	17	432
Total Sum of TotalProjectMorts		12,761	3,572	71	755	1,092	18,251

Cumulative Adult Passage at Mainstem Dams Through: 07/29

DAM	EndDate	Spring Chinook						Summer Chinook					
		2010		2009		10-Yr Avg.		2010		2009		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	07/29	244362	12613	114525	66631	167834	17301	96927	15478	81433	37178	81602	13161
TDA	07/29	189839	11546	93908	53646	121486	13792	79726	12305	79414	27562	70883	10038
JDA	07/29	179446	11794	76806	49733	101283	12037	69395	12140	65264	32491	64489	10659
MCN	07/29	153246	9178	70413	43328	93119	11340	63974	7673	56307	20746	59851	8529
IHR	07/29	101188	6047	55435	28223	64058	7222	28888	3416	23453	9333	14980	3342
LMN	07/29	97334	5899	66931	20009	63381	6004	34528	4260	22991	11491	15372	2861
LGS	07/28	92991	5461	52642	24331	58937	6617	31262	3782	19729	10871	12559	3392
LGR	07/29	94100	6390	49667	31064	59309	8137	28031	5090	14043	15836	11944	4108
PRD	07/27	30539	932	13469	2910	19097	834	44665	792	46556	1948	49109	1798
RIS	07/27	29684	1513	12634	6003	15841	1581	40719	2762	39825	6155	44280	4451
RRH	07/27	8660	523	6090	1086	6208	510	27288	939	29140	4025	30971	2887
WEL	07/21	7555	661	6307	1867	4866	487	16710	534	17058	1773	16856	789
WFA	07/26	62551	1433	25661	2554	-	-	-	-	-	-	-	-

DAM	2010		Coho 2009		10-Yr Avg.		Sockeye			Steelhead			Wild 2010
	Adult	Jack	Adult	Jack	Adult	Jack	2010	2009	10-Yr Avg.	2010	2009	10-Yr Avg.	
BON	0	0	3	2	0	0	386308	177672	94453	178809	117408	105946	85004
TDA	0	0	4	0	0	0	324900	155410	80460	111119	54906	50240	55381
JDA	5	2	1	0	1	0	323864	157197	86490	79337	49206	37499	38200
MCN	0	0	0	0	0	0	278445	121620	69595	51886	23573	24582	23067
IHR	0	0	0	0	0	0	1284	865	175	31624	16135	12429	11268
LMN	0	0	0	0	0	0	1618	1149	219	23674	16557	11539	9767
LGS	0	0	0	0	0	0	1534	1061	197	12208	10687	6856	4960
LGR	0	0	0	0	0	0	1990	1179	242	19419	14889	11819	7718
PRD	0	2	0	0	2	0	355505	152357	87557	5275	1611	2160	-
RIS	0	0	0	0	1	0	335147	161511	84093	3042	1126	1506	1698
RRH	0	0	0	0	1	0	291327	130935	62724	2057	1095	1133	1044
WEL	0	0	0	0	0	0	266805	124207	58074	607	279	310	317
WFA	0	0	0	0	-	-	-	-	-	27434	16784	-	-

PRD does not post 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: 07/30/2010

BON counts from January 1, 2009 to March 14, 2010 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2010	39	0	2,318	657
2009	19	-1	321	109