



Fish Passage Center

Weekly Report #12 - 17

July 6, 2012

1827 NE 44th Ave., Suite 240
 Portland, OR 97213
 phone: 503/230-4099
 fax: 503/230-7559

Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 45% and 243% of average at individual sub-basins over June. Precipitation above The Dalles has been 168% of average over June. Over the 2012 water year, precipitation has ranged between 90% and 122% of average.

Table 1. Summary of June precipitation and cumulative October through June 25, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2012 June 1-25, 2012		Water Year 2012 October 1, 2011 to June 25, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	3.99	200	24.28
Sneke River Above Ice Harbor	0.92	75	14.81	100
Columbia Above The Dalles	2.50	168	21.72	112
Kootenai	4.55	222	25.06	122
Clark Fork	1.63	101	15.25	110
Flathead	3.92	178	21.68	118
Pend Oreille/ Spokane	4.44	243	32.27	120
Central Washington	0.92	172	7.04	90
Sneke River Plain	0.36	45	8.72	92
Salmon/Boise/ Payette	0.77	63	17.38	100
Clearwater	2.81	135	29.49	112
SW Washington Cascades/Cowlitz	4.06	165	67.59	104
Willamette Valley	3.74	199	61.20	110

Table 2 displays the May 29th and June 28th Ensemble Streamflow Prediction (ESP) runoff volume forecasts for multiple reservoirs. The June 28th forecast at The Dalles between January and July is 128,401 Kaf (120% of average).

Table 2. May 29th and June 28th ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

Location	May 29, 2012 ESP		June 28, 2012 ESP	
	% Average (1971 -2000)	Runoff Volume (Kaf)	% Average (1971 -2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	109	117424	120	128401
Grand Coulee (Jan-July)	113	71280	127	79904
Libby Res. Inflow, MT (Apr-Aug)	117	7281 7155*	139	8710 7240*
Hungry Horse Res. Inflow, MT (Jan-July)	103	2290	120	2665
Lower Granite Res. Inflow (Apr- July)	99	21410	106	22912
Brownlee Res. Inflow (Apr-July)	84	5275	89	5637
Dworshak Res. Inflow (Apr-July)	114	3024 3226*	125	3317 3236*

* Denotes COE Forecast

Grand Coulee Reservoir is at 1289.1 feet (7-5-12) and refilled 1.5 feet over the last week. Grand Coulee is currently 0.9 feet from full (1290 feet). Outflows at Grand Coulee have ranged between 257.4 and 276.8 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2459.8 feet (7-5-12) and has refilled 2.4 feet last week. Libby is currently slightly above full (2459 feet). Outflows at Libby Dam have ranged between 46.0-48.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3559.1 feet (7-5-12) and has drafted 0.8 feet last week. Hungry Horse is currently 0.9 feet from full (3560 feet). Outflows at Hungry Horse have been 9.5-12.7 Kcfs last week.

Dworshak is currently at an elevation of 1599.5 feet (7-5-12) and has remained within one foot of full (1600 feet) over the last week. Outflows from Dworshak have been approximately 7.1-10.0 Kcfs over the past week.

The Brownlee Reservoir was at an elevation of 2071.9 feet on July 4th, 2012 drafting 0.6 feet last week. Brownlee is 5.1 feet from full (2077 feet). Over the last week, outflows at Brownlee have ranged between 12.8 and 17.2 Kcfs.

The Biological Opinion flow period began on April 3rd and ended on June 20th in the lower Snake River (Lower Granite). The flow objective this spring was 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 107.9 Kcfs over the spring season. The flow objective at Lower Granite over the summer period (June 21st to August 31st) is 52 Kcfs; over the summer period flows at Lower Granite have averaged 72.5 Kcfs and 60.9 Kcfs over the last week.

The Spring Biological Opinion Flow Objectives were 260 Kcfs at McNary Dam (began April 10th and ended June 30th) and 135 Kcfs at Priest Rapids Dam (began April 10th and ended June 30th). Flows at McNary Dam and Priest Rapids Dam have averaged 342.4 Kcfs and 232.4 Kcfs over the spring period. The Summer Biological Opinion Flow Objective is 200 Kcfs at McNary Dam (began July 1st and will end August 31st). Over the summer period, flows at McNary have averaged 364.7 Kcfs.

Spill:

The summer spill program began on June 21 in the Snake River and July 1 at the lower River projects, where dates were not modified for research purposes.

Snake River flows have steadily declined

over the past week and some excess generation spill has occurred. At Lower Granite Dam spill met, or exceeded, the Court Ordered summer spill level of 18 Kcfs. At Little Goose Dam spill met, or exceeded, the 30% of instantaneous flow level as specified in the Court Order and ranged between 29.9% and 59.8% of daily average flow at this project. At Lower Monumental Dam daily average spill to the gas cap using bulk spill ranged from 17 to 24.1 Kcfs. The summer spill level of 17 Kcfs began on June 21st. At Ice Harbor Dam the Court Order “test-like” conditions are in place and have been met or exceeded.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	“Test-Like”: 45 Kcfs/gas cap vs. 30%/30%

Summer spill for fish passage at the Lower Columbia projects began on July 1. Flows remained high in the lower Columbia River for the past week. Spill at McNary Dam changed to the summer level early to accommodate research studies and met, or exceeded, the Court Order as a result of flows in excess of hydraulic capacity due to unit outages and due to spill in excess of generation needs. Spill at John Day Dam continued to the test levels of 30%/30% versus 40%/40%. For the most part, the 30% spill test levels were exceeded at John Day during the past week. At The Dalles Dam, spill generally met or was less than the 40%. The COE is managing spill at The Dalles Dam to control TDG at the Bonneville dam forebay monitor. Spill at Bonneville Dam switched to the summer test levels on June 17th comparing 95 Kcfs for 24 hours versus 85 Kcfs during daytime hours and gas cap spill at night. Spill generally exceeded these levels.

Project	Day/Night Spill
McNary	50%/50%
John Day	Testing: 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	95 Kcfs/95 Kcfs vs. 85 Kcfs/121 Kcfs

Gas bubble trauma samples were taken this past week at Little Goose, Lower Monumental, McNary and Bonneville dams. There were no signs of GBT detected in the samples this past week, except at McNary Dam where on July 1st there were 2% of the sample that showed minor signs of GBT, and 1% on July 5th.

Smolt Monitoring:

Smolt monitoring activities are ongoing at all seven SMP dams (BON, JDA, MCN, LGR, LGS, LMN, and RIS). The Imnaha River Trap is the only SMP trap that is still collecting juvenile salmonids for the 2012 season.

The passage indices for yearling Chinook, coho, and steelhead at BON decreased this week, when compared to last week. The daily average passage index for yearling Chinook this week was about 140 per day, which was much lower than last week's daily average passage index of nearly 1,130. This week's daily average passage index for sockeye was similar to last week's. Subyearling Chinook numbers at BON continued to increase this week, with a daily average passage index of over 80,000 per day, compared to last week's daily average passage index of nearly 78,000. The second powerhouse of BON continued to operate above the mid-range of the 1% efficiency range this week. Descaling rates for subyearling Chinook at BON ranged from 0.3% to 2.2% and mortality rates ranged from 1.0% to 5.5%. Finally, only pacific lamprey macrophthalmia were collected at BON this week. The daily average collection for pacific lamprey macrophthalmia was 146 per day this week, which is close to the daily average collection from last week.

The passage indices for yearling Chinook, steelhead, and coho at JDA all continued to decrease this week. The daily average passage indices for yearling Chinook, coho, sockeye, and steelhead this week were all below 500 per day. Passage of subyearling Chinook at JDA continued to increase this week. The daily average passage index for subyearling Chinook at JDA this week was over 89,000 per day, compared to about 44,000 per day last week. Collections of pacific lamprey macrophthalmia also increased this week. The daily average collection for pacific macrophthalmia at JDA this week was nearly 15,000 per day, compared to about 3,800 per day last week. No pacific lamprey ammocoetes were collected at JDA this week.

At MCN, passage of all salmonid species

decreased this week, when compared to last week. The daily average passage indices for yearling Chinook and sockeye were below 500 per day this week. Furthermore, no coho or steelhead juveniles were collected at MCN this week. Although the daily average passage index for subyearling Chinook decreased this week, subyearling Chinook are still passing MCN in high numbers. The daily average passage index for subyearling Chinook at MCN this week was just under 100,000 per day, compared to over 116,000 per day last week. On July 4th, MCN collected its first pacific lamprey ammocoete of the 2012 season. The sample count on this day was one, which equated to an estimated collection of 100 ammocoetes. Passage of pacific lamprey macrophthalmia increased this week, compared to last week. The daily average collection for pacific lamprey macrophthalmia at MCN was nearly 6,900 per day, compared to about 1,800 per day last week.

Passage for all salmonid species continued to decrease at LGR this week, compared to last week. The daily average passage indices for yearling Chinook and steelhead were both below 200 per day this week and there were several days when no yearling Chinook were collected at LGR this week. In addition, no sockeye or coho juveniles were collected at LGR this week. This week's daily average passage index for subyearling Chinook at LGR was about 6,800, which was much lower than last week's daily average passage index of just over 18,000 per day. Finally, lamprey collections this week only consisted of pacific lamprey ammocoetes, which were sampled on three occasions this week.

As with passage at LGR, passage of all salmonid species at LGS decreased this week, except for sockeye. The daily average passage indices for yearling Chinook, sockeye, and steelhead were all below 125 per day this week. No coho juveniles were collected at LGS this week. The daily average passage index for subyearling Chinook at LGS was about 9,300 per day this week, compared to over 20,000 per day last week. Both pacific lamprey ammocoetes and macrophthalmia were collected at LGS this week.

Passage of yearling Chinook, coho, sockeye, and steelhead at LMN all remained low this week. The daily average passage indices for these four species were all below 300 per day this week. Passage of subyearling Chinook at LMN continued to decrease this week. The daily average passage index for subyearling Chinook at LMN this week was about 4,900, compared

to just over 9,000 per day last week. Finally, both pacific lamprey ammocoetes and macrophthalmia were sampled at LMN this week, but in very small numbers.

Passage of subyearling Chinook at RIS continued to decrease this week. The daily average passage index for subyearling Chinook this week was 185 per day, compared to 208 per day last week. Very few sockeye, coho, and steelhead juveniles were collected at RIS this week. No yearling Chinook were collected at RIS this week. Finally, a total of three Pacific lamprey macrophthalmia were collected at RIS this week, one on each of June 29th, July 1st, and July 5th. No pacific lamprey ammocoetes were collected at RIS this week.

No new data are available from the Imnaha River Trap this 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. Releases of subyearling fall Chinook surrogates to the Clearwater River continued this week. These releases began on June 21st and are expected run through the end of this week. Beginning next week, approximately 10,000 sockeye pre-smolts are going to be released into Redfish Lake. These sockeye pre-smolts are not expected to out-migrate until spring of 2013. This is the only new releases that is scheduled to begin in 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. No new releases of juvenile salmonids were scheduled to begin in this zone this week. The release of about 3.45 million subyearling fall Chinook brights from Ringold Springs Hatchery that began last week continued this week. This release is expected to run through July 10th. In addition, several of the volitional releases of coho and summer steelhead juveniles to the Wenatchee and Yakima rivers that began in April and May were scheduled to end this week and in the coming weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. On Tuesday, July 3rd, nearly 2.0 million subyearling fall Chinook brights were released from Little White Salmon NFH into the Little White Salmon River.

There are no new releases to this zone scheduled over the next two weeks.

Adult Fish Passage:

Daily passage numbers at Bonneville Dam ranged between 1,154 and 1,534 adult summer Chinook in the last week. The 2012 summer Chinook count of 62,323 is about 74.7% of the 2011 count and 86.9% of the 10 year average count. The 2012 Bonneville Dam summer Chinook jack count of 7,807 is about 19.9% of the 2011 count and 59.8% of the 10 year average count.

At McNary Dam 38,657 adult summer Chinook have been counted. The 2012 McNary adult summer Chinook is about 86.9% of the 2011 and 85.3% of the 10 average counts. The McNary jack summer Chinook count of 2,511 is about 13.7% of the 2011 count of 18,252 and about 35.3% of the 10 year average count of 7,094. The 2012 adult summer Chinook count at Lower Granite Dam in the Snake River of 9,184 is about 34.4% of the 2011 count and 70.3% of the 10 year average count. The 2012 Lower Granite summer Chinook jack count of 1,013 is about 10.1% of the 2011 count and 28.1% of the 10 year average count.

The Bonneville Dam 2012 steelhead count of 15,921 is 1.06 times greater than the 2011 count of 14,974, while being about 69.1% of the 10 year average count of 23,028. The 2012 Bonneville wild adult steelhead count of 5,542 is about 98% of the 2011 count of 5,654 and about 65.2% of the 10 year average count of 8,503. In the Snake River, this year's Lower Granite steelhead count of 9,127 is about 73.6% of the 2011 count of 12,397 and 86.4% of the 10 year average of 10,561. The 2012 Lower Granite wild adult steelhead count of 4,006 is about 69.1% of the 2011 count of 5,799, while being about 1.22 times greater than the 10 year average count of 3,286. At Willamette Falls Dam, the 2012 count for steelhead was 26,931, as of July 1st. This year's steelhead count is about 1.18 times greater than the 2011 count of 22,855 and 1.10 times greater than the 10 year average count of 24,493.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 11,851 and 18,607 last week. The 2012 accumulated total adult sockeye count at Bonneville Dam of 457,757, as of 7/05/2012, is about 3.44 times greater than the 2011 count of 132,975 and about 3.98 times greater than the 10 year average count of 114,925. The 2012 McNary Dam adult sockeye count of 267,039 is about 6.14 times greater than the 2011 count of 43,507 and 3.87 times greater than the 10 year average count of 69,002.

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 at Ice Harbor Dam, the 2012 adult sockeye count of 154 is 82.3% of the 2011 count of 187 and about 90.6% of the 10 year average count of 170. The Lower Granite Dam 2012 adult sockeye count of 46 is 1.84 times greater than the 2011 count of 25, while being 42.2% of the 10 year average count of 109.

As of July 5th at Bonneville Dam, the adult shad count was 2,390,626. This year's shad count is about 2.73 times greater than the 2011 count of 873,917, while being 83.1% of the 10 year average count of 2,875,742.

Hatchery Releases Last Two Weeks

Hatchery Release Summary										
From:	6/22/2012		to		07/05/12					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver	
National Marine Fisheries Service National Marine Fisheries Service Total	Lyons Ferry Hatchery	CH0	FA	2012	98,000	06-21-12	07-06-12	Big Canyon (Clearwater River)	Clearwater River M F	
					98,000					
Nez Perce Tribe Nez Perce Tribe Total	Nez Perce Tribal Hatchery	CH0	SP	2013	400,000	06-25-12	06-29-12	Meadow Creek - SELW	Selway River	
					400,000					
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2012	1,995,627	07-03-12	07-03-12	Little White Salmon Hatchery	Little White Salmon River	
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH0	FA	2012	2,573,802	06-26-12	06-26-12	Little White Salmon Hatchery	Little White Salmon River	
U.S. Fish and Wildlife Service Total					4,569,429					
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2012	25,000	05-12-12	06-30-12	Blackbird Island Acc Pond	Wenatchee River	
Washington Dept. of Fish and Wildlife Washington Dept. of Fish and Wildlife Total	Ringold Springs Hatchery	CH0	FA	2012	3,450,000	06-27-12	07-10-12	Ringold Springs Hatchery	Mid-Columbia River	
					3,475,000					
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,537	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River	
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,564	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River	
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,662	05-02-12	06-30-12	Butcher Creek Acclim. Pond	Wenatchee River	
Yakama Tribe	Chelan Hatchery	ST	SU	2012	25,000	05-02-12	07-01-12	Rolfings Acclim Pond	Wenatchee River	
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	64,114	04-16-12	07-01-12	Stiles Pond	Yakima River	
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	67,858	04-16-12	07-01-12	Stiles Pond	Yakima River	
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	78,892	04-16-12	07-01-12	Easton Pond	Yakima River	
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	82,621	04-16-12	07-01-12	Holmes Pond	Yakima River	
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	93,312	04-16-12	07-01-12	Easton Pond	Yakima River	
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	91,112	04-20-12	07-01-12	Easton Pond	Yakima River	
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	97,073	04-20-12	07-01-12	Holmes Pond	Yakima River	
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	100,000	03-02-12	07-01-12	Prosser Acclim Pond	Yakima River	
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,423	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River	
Yakama Tribe Yakama Tribe Total	Willard Hatchery	CO	UN	2012	31,533	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River	
					959,701					
Grand Total					9,502,130					

Hatchery Releases Next Two Weeks

Agency	Hatchery	Hatchery Release Summary			From:		7/6/2012		to		7/19/2012		RelSite	RelRiver
		Species	Race	MigYr	NumRel	RelStart	RelEnd							
Idaho Dept. of Fish and Game	Eagle Hatchery	SO	UN	2013	10,000	07-12-12	07-12-12	Redfish Lake				Salmon River (ID)		
Idaho Dept. of Fish and Game Total					10,000									
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2012	98,000	06-21-12	07-06-12	Big Canyon (Clearwater River)				Clearwater River M F		
National Marine Fisheries Service Total					98,000									
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2012	3,450,000	06-27-12	07-10-12	Ringold Springs Hatchery				Mid-Columbia River		
Washington Dept. of Fish and Wildlife Total					3,450,000									
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,564	05-13-12	07-14-12	Beaver Creek Acclim Pond				Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,423	05-13-12	07-14-12	Beaver Creek Acclim Pond				Wenatchee River		
Yakama Tribe Total					96,987									
Grand Total					3,654,987									

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

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
06/22/2012	225.6	17.7	234.8	65.0	259.9	89.5	267.9	91.2	261.4	75.4	282.6	164.7	285.6	181.5
06/23/2012	226.5	21.1	205.3	50.7	221.9	54.5	226.3	52.9	229.6	66.4	259.3	151.4	268.2	157.4
06/24/2012	246.1	33.2	246.0	80.4	267.3	82.0	269.6	83.6	263.6	72.8	296.1	191.0	304.1	220.3
06/25/2012	278.2	64.1	285.6	145.9	300.5	133.1	310.4	142.0	308.9	119.4	313.6	207.3	309.5	179.5
06/26/2012	283.5	70.0	280.3	147.9	295.3	141.6	308.7	166.0	323.1	137.1	341.4	234.0	354.5	244.8
06/27/2012	279.8	76.1	277.9	137.0	292.3	135.0	298.5	140.3	302.9	112.8	316.3	216.8	328.0	204.0
06/28/2012	286.6	67.0	289.5	144.9	300.7	144.8	311.7	163.2	318.9	135.2	336.4	219.9	338.1	217.2
06/29/2012	276.8	54.1	275.2	133.6	293.5	135.0	300.2	143.0	307.3	123.0	328.1	218.9	338.4	221.8
06/30/2012	270.6	47.6	272.0	114.8	287.3	135.7	294.6	154.5	311.4	121.7	333.9	226.6	339.2	212.6
07/01/2012	249.2	27.5	255.2	103.3	274.5	120.7	280.3	139.3	298.1	111.7	309.8	206.7	324.5	209.5
07/02/2012	264.4	42.5	257.0	100.7	277.9	124.5	280.0	149.7	288.1	99.0	295.0	188.4	298.8	173.9
07/03/2012	266.1	43.9	264.7	120.2	282.1	132.0	285.7	164.4	291.5	105.1	282.9	203.9	280.5	179.2
07/04/2012	258.1	36.3	253.7	120.5	274.1	123.6	279.4	128.5	285.6	99.8	318.6	200.0	330.0	206.0
07/05/2012	257.4	37.5	262.9	108.4	280.6	130.1	286.0	139.1	292.9	107.4	305.4	190.9	308.4	170.6

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
06/22/2012	9.4	0.6	16.8	21.3	81.2	34.5	79.0	30.1	78.5	21.9	80.1	48.5
06/23/2012	9.5	0.8	18.0	21.9	83.6	34.3	83.9	30.0	83.7	21.6	85.7	67.7
06/24/2012	9.4	0.8	16.8	20.0	86.1	29.4	85.7	28.7	85.5	20.0	87.0	65.0
06/25/2012	9.5	0.0	17.2	21.7	83.9	21.1	79.8	25.5	80.8	17.5	84.6	36.1
06/26/2012	11.4	2.8	16.8	18.9	82.7	38.1	82.0	31.5	82.4	22.8	85.0	62.6
06/27/2012	11.8	2.4	16.6	21.5	86.4	25.2	84.5	26.8	84.6	18.0	86.0	56.6
06/28/2012	9.1	0.0	16.2	19.8	75.0	19.7	72.4	22.6	72.0	17.4	74.8	55.5
06/29/2012	8.3	0.0	14.3	16.2	65.5	23.5	65.8	21.1	65.0	17.4	68.0	27.6
06/30/2012	7.1	0.4	14.8	18.1	64.1	29.7	65.2	26.0	65.0	24.1	63.5	34.4
07/01/2012	9.7	2.5	15.2	14.4	61.2	37.4	61.7	36.9	61.9	21.4	65.2	52.8
07/02/2012	10.0	2.1	15.0	18.1	62.3	31.3	63.0	30.7	63.8	21.6	66.2	51.1
07/03/2012	9.7	1.1	14.3	16.7	61.4	24.6	58.8	26.1	58.1	19.2	57.5	30.3
07/04/2012	7.8	0.0	13.2	12.7	60.4	24.6	59.5	17.8	59.7	17.0	62.0	21.9
07/05/2012	7.1	0.4	---	---	51.2	21.6	49.1	19.7	50.3	18.7	50.9	39.1

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		
06/22/2012	364.4	222.6	352.1	140.4	331.1	127.6	346.3	150.6	75.3	108.0
06/23/2012	353.6	216.2	362.5	142.3	344.9	127.9	367.2	169.0	75.6	110.2
06/24/2012	355.8	228.9	356.7	162.4	339.3	140.9	356.4	159.1	75.2	109.7
06/25/2012	394.3	277.9	416.8	173.5	402.0	196.2	409.0	212.3	74.3	110.0
06/26/2012	406.3	297.0	398.0	168.4	376.6	149.3	389.0	197.2	78.2	101.2
06/27/2012	414.4	303.2	432.2	181.9	414.5	179.3	421.0	215.7	73.9	119.0
06/28/2012	403.3	291.9	392.1	160.4	376.5	184.4	399.8	184.3	83.1	120.0
06/29/2012	393.2	268.5	393.7	160.7	372.2	185.0	388.0	160.1	93.8	121.7
06/30/2012	386.0	250.4	395.5	146.2	379.3	185.0	394.1	167.4	93.6	120.7
07/01/2012	394.2	257.7	406.9	142.2	389.6	177.9	401.1	174.9	93.7	120.2
07/02/2012	364.1	228.3	371.3	145.8	353.3	139.4	379.7	158.9	90.8	117.7
07/03/2012	354.3	216.0	353.8	135.7	336.1	126.8	362.1	140.6	93.9	115.2
07/04/2012	348.0	199.1	344.4	110.9	325.0	122.8	334.0	105.4	94.8	121.4
07/05/2012	362.7	212.7	370.1	134.8	348.3	123.2	367.1	132.7	95.1	126.9

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			#	<u>Boundary</u>			#	<u>Grand Coulee</u>			#	<u>Grand C. Tlwr</u>			#	<u>Chief Joseph</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>	
	<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>			<u>Avg</u>	<u>Avg</u>		
6/22	114.7	114.8	115.0	24	129.1	129.5	130.2	20	117.9	118.4	119.0	24	114.9	115.3	116.3	20	114.1	114.6	115.1	24
6/23	114.8	114.8	114.9	24	127.4	128.2	129.2	22	117.9	118.1	118.3	24	115.4	115.8	116.0	22	113.9	114.1	114.4	24
6/24	114.7	114.8	115.0	24	128.5	128.8	129.4	23	118.4	118.6	118.9	24	116.8	117.3	118.6	23	114.3	114.5	114.8	24
6/25	115.9	117.0	117.3	24	128.1	128.6	129.0	22	119.4	120.0	120.2	24	120.8	122.5	123.5	22	115.7	116.4	117.1	24
6/26	117.1	117.2	117.3	24	129.0	129.3	130.0	22	119.9	120.1	120.2	24	122.2	122.8	123.5	22	119.4	120.5	120.9	24
6/27	116.4	116.9	117.0	24	128.5	129.0	129.2	22	119.0	119.3	119.6	24	121.8	122.6	123.8	22	120.6	120.8	120.9	24
6/28	115.0	115.2	115.5	24	129.3	130.0	130.7	23	119.0	119.5	119.7	24	121.7	122.1	122.7	23	121.8	122.6	123.1	24
6/29	114.1	114.3	114.7	24	128.4	129.1	129.6	22	119.6	119.7	119.8	24	120.3	120.7	121.1	22	121.1	121.4	121.6	24
6/30	113.9	114.2	114.4	24	128.2	128.8	129.2	21	120.1	120.4	120.7	24	119.6	119.9	120.2	21	120.1	120.5	120.9	24
7/1	113.8	113.8	114.0	17	128.9	129.6	131.5	22	120.3	120.5	120.8	24	117.8	118.1	118.8	22	119.2	119.5	119.8	24
7/2	112.5	112.5	112.9	11	129.9	130.5	131.0	22	120.7	121.1	121.4	24	119.0	119.6	120.6	22	117.9	118.1	118.3	24
7/3	111.1	112.6	113.1	23	127.9	128.6	130.0	22	120.6	121.3	122.8	24	119.2	119.9	120.6	22	117.2	117.7	118.0	24
7/4	110.6	111.6	112.4	24	127.4	127.9	128.3	23	119.4	119.6	119.8	24	117.6	117.9	118.3	23	117.7	118.1	118.5	24
7/5	108.4	110.9	112.2	24	127.2	127.7	128.6	21	119.3	119.5	119.5	24	117.9	118.3	118.8	21	117.8	118.1	118.5	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>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>		
6/22	119.4	120.9	121.3	24	116.0	116.6	118.3	24	125.7	126.4	127.7	24	121.9	122.7	123.2	24	123.2	123.7	124.0	24
6/23	115.7	119.3	120.7	24	115.2	115.9	116.4	24	120.9	123.7	126.0	24	122.3	122.5	122.8	24	121.5	123.6	124.4	24
6/24	118.3	118.8	121.5	24	113.8	114.6	114.9	24	123.2	124.6	125.1	24	118.8	120.2	121.8	24	122.0	122.5	123.2	24
6/25	122.3	123.7	125.7	24	116.8	119.0	121.8	24	129.8	131.5	132.5	24	122.3	125.0	127.2	24	125.0	126.0	127.9	24
6/26	121.7	122.6	124.5	24	119.6	120.4	122.3	24	131.8	132.3	133.0	24	127.9	129.0	129.6	24	127.0	128.3	129.7	24
6/27	120.6	121.1	121.9	24	120.6	121.3	123.2	23	131.7	132.2	132.7	23	129.6	130.9	131.8	24	125.8	126.9	128.6	24
6/28	121.7	121.9	122.6	24	120.9	122.0	122.4	23	132.6	133.3	133.8	23	129.9	130.6	131.2	24	126.9	128.6	129.7	24
6/29	121.4	121.6	121.9	24	120.7	121.2	121.6	24	131.7	132.8	134.0	24	130.6	131.4	131.9	24	127.3	129.5	131.4	24
6/30	120.6	120.9	121.6	24	120.2	120.7	121.1	24	132.3	132.9	133.5	24	129.9	130.8	131.2	24	128.7	129.8	130.6	24
7/1	120.3	120.6	120.8	24	118.6	119.0	119.4	24	130.2	131.4	132.6	24	129.5	130.0	130.8	24	128.4	129.4	130.1	24
7/2	120.5	121.4	122.4	24	118.6	119.5	120.8	24	130.1	130.8	131.6	24	127.1	128.5	129.1	24	125.7	126.7	127.7	24
7/3	121.3	121.8	125.2	24	117.6	118.4	120.2	24	130.5	131.3	132.2	24	127.3	127.8	128.2	24	126.3	128.5	130.6	24
7/4	120.3	120.6	120.7	24	118.0	119.2	119.6	24	130.2	130.6	131.0	24	127.3	128.8	129.8	24	126.7	129.0	130.1	24
7/5	120.7	121.3	123.4	24	119.3	120.3	121.5	24	131.7	132.5	133.7	24	128.3	129.1	129.4	24	125.0	126.0	126.7	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>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>		
6/22	120.9	121.3	121.8	24	125.3	125.9	126.3	24	120.6	121.2	121.6	24	128.3	130.3	134.7	24	123.8	127.0	130.4	24
6/23	121.6	122.7	123.4	24	125.0	126.0	126.2	24	119.7	120.1	120.9	24	127.3	129.6	132.3	24	124.8	128.0	130.4	24
6/24	119.1	119.8	120.4	24	123.2	123.9	124.9	24	119.9	120.9	121.5	24	129.3	130.9	135.6	24	121.1	124.0	125.3	24
6/25	122.9	124.2	125.4	24	127.9	129.0	130.1	24	119.7	120.4	120.8	24	131.1	135.0	138.4	24	128.6	133.1	135.8	24
6/26	127.7	128.2	128.6	24	131.3	131.7	132.2	24	121.1	121.8	123.3	24	134.9	138.5	140.6	24	127.5	131.2	134.2	24
6/27	127.8	128.2	129.0	24	130.7	131.0	131.6	24	125.5	127.3	128.1	24	133.7	137.0	139.6	24	130.9	133.7	135.6	24
6/28	128.8	129.4	129.9	24	131.8	132.2	132.8	24	---	---	---	0	---	---	---	0	---	---	---	0
6/29	129.1	129.9	130.5	24	131.7	132.5	133.2	24	---	---	---	0	---	---	---	0	---	---	---	0
6/30	128.9	129.7	130.4	24	131.6	132.1	132.7	24	---	---	---	0	---	---	---	0	---	---	---	0
7/1	128.7	129.3	130.4	24	131.2	131.8	132.4	24	---	---	---	0	---	---	---	0	---	---	---	0
7/2	126.3	127.2	128.1	24	127.6	129.9	130.6	24	---	---	---	0	---	---	---	0	---	---	---	0
7/3	126.6	127.8	129.0	24	129.9	130.8	131.6	24	---	---	---	0	---	---	---	0	---	---	---	0
7/4	127.2	128.1	128.6	24	130.0	131.1	131.6	24	---	---	---	0	---	---	---	0	---	---	---	0
7/5	127.0	127.6	128.0	24	129.9	130.6	130.9	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>Clrwr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
6/22	124.8	125.6	126.8	24	118.9	119.8	121.6	24	104.1	105.5	108.8	24	103.2	103.9	104.6	24	104.5	105.2	105.8	24
6/23	125.1	126.1	127.2	24	117.3	117.8	118.3	24	104.0	105.5	107.7	24	103.0	104.2	105.4	24	103.8	104.4	105.2	24
6/24	124.0	125.4	126.4	24	118.1	118.4	118.9	24	103.9	105.6	107.8	24	102.9	103.4	103.8	24	103.8	104.5	105.1	24
6/25	127.1	128.1	129.4	24	119.4	120.6	121.4	24	102.0	102.4	102.6	24	102.5	103.2	103.9	24	104.2	104.9	105.7	24
6/26	126.7	127.4	128.4	24	118.8	119.5	120.3	24	106.6	108.8	109.4	24	103.3	104.7	105.2	24	103.0	103.5	103.6	24
6/27	127.8	128.6	130.1	24	120.8	122.2	122.9	24	106.3	109.8	110.3	24	104.0	104.7	105.2	24	103.8	105.0	105.8	24
6/28	---	---	---	0	121.7	122.3	122.8	24	101.7	102.1	102.4	24	102.3	103.1	103.9	24	104.2	105.0	105.8	24
6/29	---	---	---	0	121.7	122.3	122.7	24	101.4	101.6	101.7	24	101.8	102.4	102.9	24	103.4	104.1	104.8	24
6/30	---	---	---	0	121.4	122.0	122.9	24	103.2	104.4	109.1	24	102.8	103.6	104.1	24	103.5	104.2	105.0	24
7/1	---	---	---	0	121.2	121.6	122.0	24	106.6	108.0	108.5	24	103.7	104.6	105.3	24	103.0	103.5	104.3	24
7/2	---	---	---	0	121.0	121.5	121.9	24	106.4	108.1	108.4	24	104.3	105.3	106.5	24	103.5	104.5	105.3	24
7/3	---	---	---	0	117.1	117.9	119.3	24	104.9	108.1	110.5	24	103.4	104.6	105.6	24	102.6	103.2	103.8	24
7/4	---	---	---	0	119.0	120.2	120.5	24	101.8	102.4	102.8	24	102.1	103.3	104.2	24	102.8	103.9	104.8	24
7/5	---	---	---	0	120.5	121.2	121.6	24	103.3	104.6	108.4	24	102.9	103.7	104.2	24	102.7	103.6	104.4	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
6/22	103.2	104.7	105.9	24	105.5	105.8	106.1	24	117.6	120.0	120.1	24	115.5	116.3	116.5	24	114.3	115.9	116.4	24
6/23	102.4	103.6	104.6	24	105.1	105.3	105.5	24	117.8	120.0	120.2	24	111.5	111.7	112.6	24	113.3	114.5	114.9	24
6/24	103.1	104.4	105.7	24	103.3	103.7	104.6	24	115.8	119.5	120.1	24	110.8	111.3	112.8	24	113.3	114.5	115.0	24
6/25	102.7	103.9	105.0	24	102.8	103.0	103.1	24	112.5	113.7	119.4	24	113.3	113.8	114.4	24	113.1	114.1	116.1	24
6/26	101.5	102.3	103.2	24	102.3	102.6	103.0	24	118.3	119.4	119.7	24	113.1	113.7	114.5	24	114.0	114.9	115.1	24
6/27	104.3	106.0	107.4	24	101.8	102.0	102.2	24	114.2	116.7	120.0	24	110.6	111.0	111.9	24	112.7	113.7	114.8	24
6/28	103.1	104.8	106.0	24	101.5	101.6	101.8	24	112.2	113.2	118.8	24	110.0	110.3	110.8	24	111.4	111.9	114.7	24
6/29	102.6	104.2	105.4	24	102.1	102.9	103.8	24	114.4	116.2	119.5	24	112.7	113.8	114.3	24	112.3	112.8	114.0	24
6/30	103.0	104.9	106.6	24	103.7	103.9	104.1	24	117.1	119.4	119.8	24	114.1	114.4	114.6	24	114.0	115.6	120.0	24
7/1	102.6	104.0	104.7	24	103.1	103.3	103.7	24	119.0	119.8	120.0	24	112.4	112.8	113.1	24	116.9	119.6	120.5	24
7/2	104.3	106.2	107.6	24	103.0	103.3	103.8	24	117.3	119.1	119.7	24	113.0	114.1	114.4	24	115.8	118.4	120.1	24
7/3	102.9	104.6	105.9	24	102.0	102.5	103.3	24	115.4	117.4	119.6	24	113.1	113.5	114.0	24	114.5	116.8	119.7	24
7/4	102.7	104.6	106.1	22	101.3	101.5	101.6	24	115.5	117.1	119.6	24	112.8	113.5	114.0	24	113.0	113.3	113.6	24
7/5	103.1	105.1	107.0	23	101.5	101.8	102.0	24	116.0	116.9	118.7	24	113.2	113.4	113.8	24	114.5	115.3	116.5	24

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
6/22	115.2	115.5	115.6	24	117.8	119.3	120.0	24	117.1	117.4	117.8	24	116.3	117.3	118.0	24	---	---	---	0
6/23	114.0	114.4	114.7	24	117.2	118.4	119.0	24	114.9	115.5	116.3	24	116.7	117.1	117.8	24	---	---	---	0
6/24	113.0	113.7	114.6	24	117.5	118.3	119.3	24	113.0	113.3	113.9	24	116.5	116.9	118.8	24	---	---	---	0
6/25	113.7	114.4	114.9	24	117.5	118.1	118.9	24	114.0	114.5	114.7	24	116.1	116.8	118.7	24	---	---	---	0
6/26	113.1	114.0	115.0	24	117.6	118.1	118.4	24	113.3	113.8	114.6	24	116.8	117.5	117.8	24	---	---	---	0
6/27	111.8	112.1	113.2	24	116.8	117.3	118.5	24	112.3	112.5	112.9	24	116.6	116.9	117.3	24	---	---	---	0
6/28	113.6	114.2	115.2	24	117.5	118.0	119.5	24	113.7	114.2	114.5	24	115.8	116.0	116.1	24	---	---	---	0
6/29	114.1	114.5	114.7	24	116.7	117.3	118.5	24	113.7	113.9	114.1	24	114.9	115.6	115.9	24	---	---	---	0
6/30	112.0	112.2	112.8	24	117.7	118.4	118.8	24	114.3	114.6	114.8	24	115.5	115.7	116.3	24	---	---	---	0
7/1	112.6	113.0	113.3	24	117.1	118.1	118.7	24	114.3	114.5	114.6	24	116.4	116.9	117.4	24	---	---	---	0
7/2	113.7	114.5	114.8	24	117.9	118.5	119.3	24	114.5	114.7	115.0	24	116.0	116.3	116.7	24	---	---	---	0
7/3	114.3	114.6	115.7	24	116.9	117.8	118.5	24	113.1	114.2	114.6	24	113.3	114.5	115.4	24	---	---	---	0
7/4	113.5	113.9	114.2	24	117.1	117.7	118.3	24	111.1	111.3	111.4	24	114.2	114.6	115.0	24	---	---	---	0
7/5	112.8	113.4	113.9	24	117.0	117.6	118.4	24	111.0	111.1	111.1	24	113.2	113.6	113.9	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>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</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>		
6/22	118.6	119.1	119.5	24	121.7	122.5	122.8	24	114.8	115.7	116.0	24	119.0	119.7	120.2	24	112.9	113.5	114.7	24
6/23	115.9	117.0	117.4	24	121.7	122.3	122.5	24	116.3	116.5	116.8	24	119.5	120.0	120.3	24	114.9	115.4	116.0	24
6/24	114.6	114.9	115.4	24	121.9	122.9	125.2	24	114.6	115.3	115.9	24	120.5	121.5	122.5	24	114.8	115.4	116.3	24
6/25	116.3	117.0	117.5	24	123.9	124.8	125.1	24	112.8	113.1	113.4	24	122.6	123.8	124.7	24	115.6	115.9	116.2	24
6/26	115.3	116.1	116.6	24	125.2	127.3	128.5	24	112.1	112.5	113.2	24	121.4	122.6	122.9	24	113.1	114.1	114.9	24
6/27	115.3	116.6	117.6	24	126.0	128.1	131.3	24	113.6	114.9	115.3	24	123.4	125.3	129.0	24	116.7	119.0	121.9	24
6/28	119.6	121.0	121.5	24	125.4	127.2	128.2	24	115.0	115.3	115.6	24	121.0	121.4	122.1	24	115.9	116.6	118.7	24
6/29	120.2	120.5	120.7	24	123.6	124.0	124.6	24	117.7	119.0	120.2	24	120.9	121.1	121.5	24	116.0	117.4	118.0	24
6/30	120.4	120.6	120.8	24	123.0	123.2	123.5	24	121.1	121.3	121.5	24	120.3	120.7	121.3	24	118.4	119.1	119.9	24
7/1	119.4	119.9	120.2	24	123.2	123.4	123.6	24	120.3	120.7	121.1	24	120.3	120.6	121.5	24	116.7	117.3	118.1	24
7/2	118.8	119.5	120.2	24	122.4	122.9	123.1	24	118.3	118.6	119.1	24	119.9	120.4	121.0	24	116.0	116.7	117.4	24
7/3	116.1	117.3	117.9	24	121.6	122.1	122.2	24	115.2	116.0	117.2	24	119.0	119.1	119.9	24	113.3	113.8	115.0	24
7/4	113.9	114.8	115.2	24	121.3	122.4	127.6	24	113.7	114.2	114.5	24	118.1	119.1	119.9	24	114.0	114.6	115.0	24
7/5	117.0	118.4	119.5	24	121.5	122.0	122.5	24	114.8	115.1	115.3	24	119.3	119.5	119.7	24	114.5	115.6	116.5	24

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</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>		
6/22	118.5	119.4	120.4	24	115.2	116.3	118.1	24	118.7	119.6	120.7	24	118.4	119.0	119.3	24	123.2	123.6	123.9	24
6/23	118.6	119.5	120.2	24	115.3	115.6	115.9	24	119.8	120.3	120.6	24	116.7	117.9	118.7	24	123.3	123.5	123.6	24
6/24	120.1	121.0	121.5	24	115.7	116.1	116.5	24	119.0	119.2	119.7	24	117.3	117.8	118.1	24	123.4	123.7	124.1	24
6/25	121.2	121.6	122.3	24	117.7	118.2	118.3	24	123.4	124.6	125.2	24	119.1	120.6	121.7	24	124.9	125.8	126.8	24
6/26	119.1	119.5	121.0	24	117.0	117.5	118.3	24	122.1	122.8	123.4	24	120.2	121.0	122.1	24	123.8	124.7	125.2	24
6/27	121.2	122.6	124.3	24	118.2	120.2	121.4	23	124.1	125.3	125.9	24	121.4	122.5	123.4	24	125.3	125.7	128.7	24
6/28	122.3	122.8	123.5	24	121.4	121.7	121.8	24	123.8	125.2	125.8	24	122.7	123.4	123.9	24	123.9	124.5	125.3	24
6/29	121.7	122.6	123.1	24	119.8	120.3	121.1	24	121.0	121.3	121.5	24	120.0	120.2	120.6	24	122.7	122.8	123.0	24
6/30	123.0	123.7	124.1	24	121.3	121.6	121.8	24	122.3	122.5	122.7	24	120.3	120.8	120.9	24	123.5	123.7	123.8	24
7/1	121.3	121.8	122.2	24	119.7	120.3	121.0	24	121.6	121.8	122.0	24	119.8	120.1	120.2	24	123.8	124.1	124.4	24
7/2	120.1	120.8	121.9	24	118.4	118.7	119.0	24	120.4	120.7	120.9	24	119.6	119.9	120.2	24	122.9	123.1	123.5	24
7/3	117.9	118.4	119.7	24	115.0	115.5	116.4	24	117.5	117.9	119.1	24	116.2	116.8	118.0	24	123.1	124.2	124.4	24
7/4	118.3	118.7	119.3	24	115.9	116.8	117.3	24	116.8	117.4	118.0	24	115.9	116.6	117.1	24	119.9	120.3	120.7	24
7/5	118.2	118.6	119.1	24	117.2	117.4	117.6	24	118.8	119.0	119.1	24	116.7	118.3	119.0	24	122.7	124.0	125.3	24

Two-Week Summary of Passage Indices

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)	
06/22/2012	*	---	4	---	---	37	233	269	4	1,458	810	1,904
06/23/2012	*	---	---	---	---	211	117	157	0	---	727	422
06/24/2012		---	---	---	---	0	119	239	4	541	757	508
06/25/2012	*	---	2	---	---	144	261	145	0	---	656	220
06/26/2012	*	---	2	---	---	0	416	338	0	352	618	3,054
06/27/2012	*	---	7	---	---	45	276	149	0	---	706	1,122
06/28/2012		---	---	---	---	0	0	307	0	0	342	671
06/29/2012	*	---	---	---	---	74	38	566	0	---	355	0
06/30/2012		---	---	---	---	82	154	789	0	918	383	311
07/01/2012	*	---	---	---	---	39	0	16	0	---	843	13
07/02/2012		---	---	---	---	0	0	159	0	3	625	0
07/03/2012	*	---	---	---	---	0	0	181	0	---	233	635
07/04/2012		---	---	---	---	16	0	150	0	0	362	12
07/05/2012	*	---	---	---	---	0	49	37	0	---	256	0
07/06/2012		---	---	---	---	---	---	---	---	---	---	0
Total:		0	15	0	0	648	1,663	3,502	8	3,272	7,673	8,872
# Days:		0	4	0	0	14	14	14	14	7	14	15
Average:		0	4	0	0	46	119	250	1	467	548	591
YTD		58,098	10,794	26,417	13,494	4,042,593	2,265,735	754,062	25,794	2,179,125	4,286,664	2,538,080

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)	
06/22/2012	*	---	0	---	---	13,603	12,808	3,242	201	63,706	17,900	39,926
06/23/2012	*	---	---	---	---	9,915	8,774	3,731	253	---	25,601	48,384
06/24/2012		---	---	---	---	17,601	17,012	7,473	226	125,297	34,673	67,038
06/25/2012	*	---	0	---	---	20,022	22,218	6,811	402	---	34,127	80,978
06/26/2012	*	---	0	---	---	23,183	28,066	12,670	255	181,125	48,016	103,507
06/27/2012	*	---	0	---	---	29,490	21,439	13,264	42	---	82,281	83,562
06/28/2012		---	---	---	---	14,810	30,159	16,014	78	94,465	65,409	121,475
06/29/2012	*	---	---	---	---	9,608	26,796	7,415	115	---	74,448	94,713
06/30/2012		---	---	---	---	6,377	14,317	5,676	154	55,725	51,637	90,227
07/01/2012	*	---	---	---	---	7,540	8,878	4,864	92	---	63,055	63,710
07/02/2012		---	---	---	---	8,118	2,593	5,982	163	108,264	137,068	59,980
07/03/2012	*	---	---	---	---	8,222	4,084	5,078	229	---	110,079	75,193
07/04/2012		---	---	---	---	4,534	2,214	3,265	274	132,144	104,365	98,545
07/05/2012	*	---	---	---	---	3,115	6,175	1,737	265	---	84,470	80,442
07/06/2012		---	---	---	---	---	---	---	---	---	---	79,899
Total:		0	0	0	0	176,138	205,533	97,222	2,749	760,726	933,129	1,187,579
# Days:		0	4	0	0	14	14	14	14	7	14	15
Average:		0	0	0	0	12,581	14,681	6,944	196	108,675	66,652	79,172
YTD		0	2	67	327	944,277	921,497	336,384	9,703	1,063,484	1,122,958	3,789,125

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)	
06/22/2012	*	---	0	---	---	0	0	0	33	263	562	1,608
06/23/2012	*	---	---	---	---	0	0	133	56	---	203	1,954
06/24/2012		---	---	---	---	43	0	82	59	541	205	644
06/25/2012	*	---	0	---	---	36	0	27	19	---	219	656
06/26/2012	*	---	0	---	---	36	38	3	11	0	236	367
06/27/2012	*	---	0	---	---	0	0	0	16	---	88	15
06/28/2012		---	---	---	---	0	0	1	8	0	0	336
06/29/2012	*	---	---	---	---	0	0	137	11	---	228	324
06/30/2012		---	---	---	---	0	0	2	13	0	270	0
07/01/2012	*	---	---	---	---	0	0	3	0	---	155	13
07/02/2012		---	---	---	---	0	0	0	27	0	125	326
07/03/2012	*	---	---	---	---	0	0	0	28	---	0	317
07/04/2012		---	---	---	---	0	0	0	20	0	133	0
07/05/2012	*	---	---	---	---	0	0	0	10	---	0	272
07/06/2012		---	---	---	---	---	---	---	---	---	---	0
Total:		0	0	0	0	115	38	388	311	804	2,424	6,832
# Days:		0	4	0	0	14	14	14	14	7	14	15
Average:		0	0	0	0	8	3	28	22	115	173	455
YTD		0	0	0	80	69,763	78,568	19,953	49,447	145,761	287,042	689,477

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)	
06/22/2012	*	---	4	---	---	475	1,242	154	16	657	330	402
06/23/2012	*	---	---	---	---	633	731	265	27	---	577	159
06/24/2012		---	---	---	---	812	797	416	15	541	410	644
06/25/2012	*	---	24	---	---	431	672	385	19	---	406	604
06/26/2012	*	---	33	---	---	213	189	319	24	0	316	367
06/27/2012	*	---	29	---	---	135	670	529	48	---	265	369
06/28/2012		---	---	---	---	197	824	399	18	768	342	336
06/29/2012	*	---	---	---	---	261	265	0	19	---	12	0
06/30/2012		---	---	---	---	164	115	153	8	0	383	0
07/01/2012	*	---	---	---	---	98	0	157	8	---	78	26
07/02/2012		---	---	---	---	179	47	2	17	0	187	0
07/03/2012	*	---	---	---	---	183	43	315	13	---	233	0
07/04/2012		---	---	---	---	82	80	147	7	0	8	12
07/05/2012	*	---	---	---	---	16	245	72	17	---	256	0
07/06/2012		---	---	---	---	---	---	---	---	---	---	296
Total:		0	90	0	0	3,879	5,920	3,313	256	1,966	3,803	3,215
# Days:		0	4	0	0	14	14	14	14	7	14	15
Average:		0	23	0	0	277	423	237	18	281	272	214
YTD		2,722	21,552	2,065	2,311	3,538,421	1,488,897	610,620	17,088	542,830	2,834,291	295,538

Two-Week Summary of Passage Indices

COMBINED SOCKEYE												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/22/2012	*	---	0	---	---	0	0	0	0	394	56	106
06/23/2012	*	---	---	---	---	0	0	1	0	---	117	0
06/24/2012		---	---	---	---	0	0	0	0	0	137	0
06/25/2012	*	---	0	---	---	0	0	26	0	---	73	436
06/26/2012	*	---	0	---	---	0	0	1	0	349	275	0
06/27/2012	*	---	0	---	---	0	0	0	0	---	441	369
06/28/2012		---	---	---	---	0	0	0	0	768	257	0
06/29/2012	*	---	---	---	---	0	0	0	0	---	115	0
06/30/2012		---	---	---	---	0	77	0	0	0	315	0
07/01/2012	*	---	---	---	---	0	0	0	5	---	233	0
07/02/2012		---	---	---	---	0	0	0	0	577	187	652
07/03/2012	*	---	---	---	---	0	0	2	3	---	932	635
07/04/2012		---	---	---	---	0	0	1	2	497	495	293
07/05/2012	*	---	---	---	---	0	0	0	0	---	0	0
07/06/2012		---	---	---	---	---	---	---	---	---	---	0
Total:		0	0	0	0	77	31	10	2,585	3,633	2,491	
# Days:		0	4	0	0	14	14	14	7	14	15	
Average:		0	0	0	0	6	2	1	369	260	166	
YTD		5	0	0	475	43,227	37,097	18,243	46,667	1,130,715	844,283	776,147

COMBINED LAMPREY JUVENILES												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR† (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
06/22/2012	*	---	0	---	---	25	100	0	1	800	3,053	158
06/23/2012	*	---	---	---	---	75	0	50	2	---	3,831	150
06/24/2012		---	---	---	---	0	0	0	1	1,700	4,440	16
06/25/2012	*	---	0	---	---	375	0	0	0	---	2,703	133
06/26/2012	*	---	0	---	---	0	0	0	1	1,200	5,139	100
06/27/2012	*	---	0	---	---	25	100	0	1	---	5,093	8
06/28/2012		---	---	---	---	0	50	0	1	3,600	2,700	200
06/29/2012	*	---	---	---	---	25	0	0	1	---	8,267	100
06/30/2012		---	---	---	---	0	50	0	0	8,100	8,907	100
07/01/2012	*	---	---	---	---	0	0	1	1	---	10,743	604
07/02/2012		---	---	---	---	20	0	0	0	8,200	18,646	100
07/03/2012	*	---	---	---	---	0	10	1	0	---	27,571	0
07/04/2012		---	---	---	---	10	30	0	0	4,400	21,508	20
07/05/2012	*	---	---	---	---	0	5	10	1	---	9,119	100
07/06/2012		---	---	---	---	---	---	---	---	---	---	200
Total:		0	0	0	0	555	345	62	10	28,000	131,720	1,989
# Days:		0	4	0	0	14	14	14	14	7	14	15
Average:		0	0	0	0	40	25	4	1	4,000	9,409	133
YTD		6	0	0	0	6,920	5,744	2,156	100	106,630	442,197	30,621

Two-Week Summary of Passage Indices

* 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, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:

Two classes of fish counts are shown in these tables:

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.

Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.

The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macrophthalmia, and unidentified lamprey species.

† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

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 = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

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

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

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

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

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

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

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

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

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

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

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

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

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

RIS data collected for the FPC by Chelan Co. PUD.

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.

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

7/6/12 10:32 AM

06/22/12 TO 07/06/12

		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	109,420	405	75	2,395		112,295
	Sum of NumberBarged	109,111	400	75	2,389		111,975
	Sum of NumberBypassed	34	0	0	0		34
	Sum of Numbertrucked	0	0	0	0		0
	Sum of SampleMorts	38	1	0	0		39
	Sum of FacilityMorts	237	4	0	6		247
	Sum of ResearchMorts	0	0	0	0		0
	Sum of TotalProjectMorts	275	5	0	6		286
LGS	Sum of NumberCollected	132,648	1,082	25	3,848	50	137,653
	Sum of NumberBarged	132,512	1,076	25	3,837	50	137,500
	Sum of NumberBypassed	7	0	0	0	0	7
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	17	0	0	1	0	18
	Sum of FacilityMorts	112	6	0	10	0	128
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	129	6	0	11	0	146
LMN	Sum of NumberCollected	70,825	2,502	289	2,419	24	76,059
	Sum of NumberBarged	65,490	2,484	289	2,390	23	70,676
	Sum of NumberBypassed	5,181	16	0	14	0	5,211
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	31	0	0	1	0	32
	Sum of FacilityMorts	123	2	0	14	1	140
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	154	2	0	15	1	172
MCN	Sum of NumberCollected	255,959	1,157	300	650	850	258,916
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	255,893	1,157	300	650	849	258,849
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	42	0	0	0	1	43
	Sum of FacilityMorts	24	0	0	0	0	24
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	66	0	0	0	1	67
Total Sum of NumberCollected		568,852	5,146	689	9,312	924	584,923
Total Sum of NumberBarged		307,113	3,960	389	8,616	73	320,151
Total Sum of NumberBypassed		261,115	1,173	300	664	849	264,101
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		128	1	0	2	1	132
Total Sum of FacilityMorts		496	12	0	30	1	539
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		624	13	0	32	2	671

YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/6/12 10:32 AM

TO: 07/06/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	606,150	2,693,449	47,635	30,545	2,353,052	5,730,831
	Sum of NumberBarged	592,939	989,012	39,435	29,055	949,309	2,599,750
	Sum of NumberBypassed	11,448	1,702,758	8,165	1,422	1,403,470	3,127,263
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	164	178	2	9	58	411
	Sum of FacilityMorts	1,599	1,426	33	59	180	3,297
	Sum of ResearchMorts	0	75	0	0	35	110
	Sum of TotalProjectMorts	1,763	1,679	35	68	273	3,818
LGS	Sum of NumberCollected	582,009	1,498,331	53,266	25,689	970,327	3,129,622
	Sum of NumberBarged	581,493	1,109,340	51,663	24,994	682,636	2,450,126
	Sum of NumberBypassed	113	388,249	1,601	689	287,507	678,159
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	32	30	0	1	15	78
	Sum of FacilityMorts	371	712	2	5	169	1,259
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	403	742	2	6	184	1,337
LMN	Sum of NumberCollected	226,442	543,087	14,381	13,396	438,371	1,235,677
	Sum of NumberBarged	213,485	530,973	14,352	13,372	428,069	1,200,251
	Sum of NumberBypassed	12,550	11,582	19	13	9,823	33,987
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	59	60	0	3	35	157
	Sum of FacilityMorts	348	472	10	8	147	985
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	407	532	10	11	182	1,142
MCN	Sum of NumberCollected	386,160	1,040,036	72,875	553,539	247,788	2,300,398
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	386,029	1,039,859	72,875	553,464	247,762	2,299,989
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	83	43	0	28	10	164
	Sum of FacilityMorts	48	134	0	47	16	245
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	131	177	0	75	26	409
Total Sum of NumberCollected		1,800,761	5,774,903	188,157	623,169	4,009,538	12,396,528
Total Sum of NumberBarged		1,387,917	2,629,325	105,450	67,421	2,060,014	6,250,127
Total Sum of NumberBypassed		410,140	3,142,448	82,660	555,588	1,948,562	6,139,398
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		338	311	2	41	118	810
Total Sum of FacilityMorts		2,366	2,744	45	119	512	5,786
Total Sum of ResearchMorts		0	75	0	0	35	110
Total Sum of TotalProjectMorts		2,704	3,130	47	160	665	6,706

Cumulative Adult Passage at Mainstem Dams Through: 07/06

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.		2012		2011		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	07/05	158075	7591	167097	50945	152015	20110	62323	7807	83423	39102	71676	13053	0	0	0	0	0	0
TDA	07/04	117071	7173	124164	40146	112195	16495	47166	5551	55921	26853	57655	9428	0	0	0	0	0	0
JDA	07/04	107655	6755	103401	39823	94492	15370	38690	5624	49444	23115	50613	9227	0	0	0	0	0	0
MCN	07/05	102763	4787	101245	31750	86252	13687	38657	2511	44457	18252	45339	7094	0	0	0	0	0	0
IHR	07/05	71957	2905	69306	18161	60108	8392	11802	1114	21643	9222	15976	3525	0	0	0	0	0	0
LMN	07/05	68608	2891	69832	18094	58469	7193	12295	1019	24274	9899	16372	3099	0	0	0	0	0	0
LGS	07/05	68247	3449	67321	23492	54053	8198	9917	969	32231	12455	14401	3608	0	0	0	0	0	0
LGR	07/05	66366	3525	59342	22063	54084	9639	9184	1013	26653	10042	13055	3609	0	0	0	0	0	0
PRD	07/03	19495	1015	15246	6030	16630	1325	11110	297	9169	1305	21904	693	0	0	0	0	0	0
RIS	07/02	19881	800	13089	8394	14658	2236	4229	107	3003	2772	12720	1076	0	0	0	0	0	0
RRH	07/02	6641	459	6989	3491	5643	822	879	38	1378	559	6247	375	0	0	0	0	0	0
WEL	07/04	5259	698	4153	3969	4833	817	449	34	276	183	3406	118	0	0	0	0	0	0
WFA	07/01	32707	1115	38195	1100	47924	939	-	-	-	-	-	-	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead					
	2012		2011		10-Yr Avg.		2012	2011	10-Yr Avg.	2012	2011	10-Yr Avg.	Wild 2012	Wild 2011	10-Yr Avg.
BON	0	0	0	0	0	0	457757	132975	114925	15921	14974	23028	5542	5654	8503
TDA	0	0	0	0	0	0	327977	78055	89999	4858	4216	9159	1649	1735	3755
JDA	0	0	0	0	0	0	301027	67741	88135	4762	4585	9669	2430	2335	3605
MCN	-1	0	0	0	0	0	267039	43507	69002	4348	3986	6142	1729	1894	2102
IHR	0	0	0	0	0	0	154	187	170	3596	3492	4368	1329	1290	1321
LMN	0	0	0	0	0	0	119	82	175	4406	4224	4683	2117	2223	1786
LGS	0	0	0	0	0	0	87	56	125	4247	6411	4083	2388	3386	1685
LGR	0	0	0	0	0	0	46	25	109	9127	12397	10561	4006	5799	3286
PRD	0	0	0	0	0	0	64458	14157	51128	285	85	313	0	0	0
RIS	0	0	0	0	0	0	9116	2381	19364	289	85	200	184	58	140
RRH	0	0	0	0	0	0	3972	1401	11663	814	570	370	659	502	256
WEL	0	0	0	0	0	0	2528	829	10777	162	128	97	121	99	59
WFA	0	0	0	0	0	0	-	-	-	26931	22855	24493	-	-	-

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: 07/06/12

BON counts from January 1, 2012 to March 14, 2012 (historical counts begin March 15):

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2012	12	1	1,471	497
2011	47	0	1,370	580

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
Lower Granite Dam											
Little Goose Dam											
	06/25/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/02/12	Chinook + Steelhead	36	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	06/27/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/04/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	06/25/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/29/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/01/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/05/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
Bonneville Dam											
	06/23/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/26/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/30/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/03/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	06/25/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/29/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/01/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/05/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0