



## Fish Passage Center

# Weekly Report #12 - 20

July 27, 2012

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### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 55% and 202% of average at individual sub-basins over July. Precipitation above The Dalles has been 131% of average over July. Over the 2012 water year, precipitation has ranged between 92% and 126% of average.

**Table 1. Summary of July precipitation and cumulative October through July 23, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2012 July 1-23, 2012		Water Year 2012 October 1, 2011 to July 23, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
	Columbia Above Coulee	1.68	127	26.76
Snake River Above Ice Harbor	0.73	107	15.75	100
Columbia Above The Dalles	1.21	131	23.36	113
Kootenai	1.96	139	28.20	126
Clark Fork	0.96	109	16.69	111
Flathead	1.42	121	24.20	121
Pend Oreille/ Spokane	1.69	167	34.47	122
Central Washington	0.56	202	7.86	96
Snake River Plain	0.51	114	9.22	92
Salmon/Boise/ Payette	0.43	73	17.94	98
Clearwater	1.12	104	31.60	113
SW Washington Cascades/Cowlitz	1.02	99	69.22	104
Willamette Valley	0.34	55	62.01	110

Table 2 displays the May 29<sup>th</sup> and July 25<sup>th</sup> Ensemble Streamflow Prediction (ESP) runoff volume forecasts for multiple reservoirs. The July 25<sup>th</sup> forecast at The Dalles between January and July is 129,750 Kaf (121% of average).

**Table 2. May 29<sup>th</sup> and July 25<sup>th</sup> ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.**

Location	May 29, 2012 ESP		July 25, 2012 ESP	
	% Average (1971- 2000)	Runoff Volume (Kaf)	% Average (1971- 2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	109	117424	121	129750
Grand Coulee (Jan-July)	113	71280	129	81109
Libby Res. Inflow, MT (Apr-Aug)	117	7281 7155*	148	9230
Hungry Horse Res. Inflow, MT (Jan-July)	103	2290	124	2749
Lower Granite Res. Inflow (Apr- July)	99	21410	105	22732
Brownlee Res. Inflow (Apr-July)	84	5275	87	5506
Dworshak Res. Inflow (Apr-July)	114	3024 3226*	126	3343

\* Denotes COE Forecast

Grand Coulee Reservoir is at 1288.6 feet (7-25-12) and drafted 0.7 feet over the last week. Grand Coulee is currently 1.4 feet from full (1290 feet). Outflows at Grand Coulee have ranged between 225.8 and 249.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2459.1 feet (7-25-12) and has drafted 0.4 feet over the last week. Libby is currently slightly above full (2459 feet). Outflows at Libby Dam have ranged between 26.0-36.4 Kcfs last week.

Hungry Horse is currently at an elevation of 3558.3 feet (7-25-12) and has drafted 0.4 feet over the last week. Hungry Horse is currently 1.7 feet from full (3560 feet). Outflows at Hungry Horse have been 3.2-3.8 Kcfs last week.

Dworshak is currently at an elevation of 1582.2 feet (7-25-12) and has drafted 7.2 feet over the last week for temperature and flow augmentation. Dworshak is currently 17.8 feet from full (1600 feet). Outflows from Dworshak have been approximately 13.0 Kcfs over most of the past week, however were decreased to 9.5 Kcfs on July 19, 2012.

The Brownlee Reservoir was at an elevation of 2065.6 feet on July 24<sup>th</sup>, 2012 drafting 2.1 feet last week. Brownlee is 11.4 feet from full (2077 feet). Over the last week, outflows at Brownlee have ranged between 11.3 and 14.3 Kcfs.

The Biological Opinion summer flow objective at Lower Granite (June 21<sup>st</sup> to August 31<sup>st</sup>) is 52 Kcfs; over the summer period flows at Lower Granite have 56.9 Kcfs and 40.4 Kcfs over the last week.

The Summer Biological Opinion Flow Objective is 200 Kcfs at McNary Dam (began July 1<sup>st</sup> and will end August 31<sup>st</sup>). Over the summer period, flows at McNary have averaged 336.0 Kcfs and 316.5 Kcfs over the last week.

**Spill:** The summer spill program began on June 21 in the Snake River and July 1 at the lower River projects, at 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 30% and 44.5% of daily average flow at this project. At Lower Monumental Dam daily average spill to the gas cap using bulk spill ranged from 16.4 to 20.6 Kcfs. The summer spill level of 17 Kcfs began on June 21<sup>st</sup>. At Ice Harbor Dam the Court Order “test-like” conditions were completed as of July 13<sup>th</sup> and spill reverted back to the 45 Kcfs during the day and gas cap spill during the night.

Project	Day/Night Spill
Lower Granite	18 Kcfs/18 Kcfs
Little Goose	30%/30%
Lower Monumental	17 Kcfs/17 Kcfs
Ice Harbor	45 Kcfs/gas cap

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 of 50% 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 at the test levels of 30%/30% versus 40%/40% until July 20<sup>th</sup>. The spill level going forward from that date is 30% instantaneously. At The Dalles Dam, spill was near the 40% daily spill level over several days of the past week, but not always near the hourly measurements due to the management of spill at The Dalles Dam to control TDG at the Bonneville dam forebay monitor. Spill at Bonneville Dam completed the summer test levels comparing 95 Kcfs for 24 hours versus 85 Kcfs during daytime hours and gas cap spill at night on July 20<sup>th</sup>. Spill from July 21<sup>st</sup> to the end of August will be 75 Kcfs during the day and gas cap spill at night. Spill generally met or exceeded these levels.

Project	Day/Night Spill
McNary	50%/50%
John Day	30%/30%
The Dalles	40%/40%
Bonneville	75 Kcfs/gas cap

Gas bubble trauma samples were taken this past week at Little Goose, Lower Monumental, McNary, Rock Island and Bonneville dams. There were no signs of GBT detected in the samples this past week at Little Goose, Lower Monumental, McNary and Bonneville dams. At Rock Island on July 24<sup>th</sup> there were 2% of the fish in the sample with minor signs of GBT. All incidents were below the action criteria.

**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.

Subyearling Chinook were the dominant species of salmonid at all SMP dams over the past week. When compared to last week, subyearling Chinook passage decreased at all the SMP sites this week, except McNary Dam. The SMP sites continue to collect very few spring migrants.

Subyearling Chinook numbers at BON decreased this week, with a daily average passage index of nearly 58,000 per day, compared to last week's daily average passage index of about 73,500. Sockeye and yearling Chinook were the only spring migrants collected at BON this week. Only pacific lamprey macrophthalmia were collected at BON this week. The daily collections for pacific lamprey macrophthalmia were variable this week, ranging from 0 to 200 per day. Due to anticipated repairs to the Gantry crane at BON, the Corps of Engineers has begun pulling screens from the juvenile bypass system at the second powerhouse. All screens, except three (units 11, 12, and 18), are expected to be pulled by the end of the month and will remain out for the remainder of the 2012 SMP season. This may result in bias collections in the future, as not as many fish will be guided into the juvenile bypass system in the second powerhouse.

Passage of subyearling Chinook at JDA continued to decrease this week. The daily average passage index for subyearling Chinook at JDA this week was about 102,000 per day, compared to nearly 106,000 per day last week. As with BON, sockeye and yearling Chinook were the only spring migrants collected at JDA this week. Collections of pacific lamprey macrophthalmia increased this week. The daily average collection for pacific macrophthalmia at JDA this week was about 1,800 per day, compared to about 1,400 per day last week. Pacific lamprey ammocoetes were collected on two days (July 22<sup>nd</sup> and 24<sup>th</sup>) this week.

Passage of subyearling Chinook at MCN increased this week, when compared to last week. The daily average passage index for subyearling Chinook at MCN this week was just over 108,000 per day, compared to just over 101,000 per day last week. Passage of pacific lamprey macrophthalmia also increased this week. This week's daily average collection for pacific lamprey macrophthalmia at MCN

was about 1,025 per day, compared to 700 per day last week. No pacific lamprey ammocoetes were collected at MCN this week.

Subyearling Chinook passage at LGR decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at LGR this week was about 2,750 per day. Last week's daily average passage index for subyearling Chinook was just over 5,800 per day. Sockeye and steelhead were the only spring migrants collected at LGR this week. However, given that Dworshak Dam has been spilling up to 3 Kcfs since July 10<sup>th</sup>, these sockeye juveniles may be kokanee from Dworshak reservoir. Finally, only pacific lamprey ammocoetes were collected at LGR this week.

When compared to last week, passage of subyearling Chinook at LGS and LMN decreased this week. The daily average passage index for subyearling Chinook at LGS this week was nearly 2,000 per day, compared to almost 6,300 per day last week. This week's daily average passage index for subyearling Chinook at LMN was about 460 per day, compared to over 1,350 per day last week. Although lamprey collections at LMN and LGS were low this week, both pacific lamprey ammocoetes and macrophthalmia were collected at LGS and LMN this week.

Passage of subyearling Chinook at RIS decreased this week. This week's daily average passage index for subyearling Chinook at RIS was 491 per day, compared to 718 per day last week. Coho, sockeye, and steelhead were the only spring migrants collected at RIS this week. Finally, only a few pacific lamprey macrophthalmia were collected at RIS this week.

The most recent data that we have from the Imnaha River Trap this week are from July 20<sup>th</sup> and 23<sup>rd</sup>. On July 20<sup>th</sup>, thirteen yearling Chinook and two steelhead juveniles were collected. The July 23<sup>rd</sup> sample only yielded two yearling Chinook and zero steelhead juveniles.

#### **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 new releases of juvenile salmonids scheduled for this zone this week. In addition, there are no releases 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. No new releases of juvenile salmonids were scheduled to begin in this zone this week. There are also no releases of juvenile salmonids in 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. No new releases of juvenile salmonids were scheduled for this zone this week. Furthermore, there are no new releases to this zone scheduled over the next two weeks.

**Adult Passage:**

Daily passage numbers at Bonneville Dam ranged between 386 and 603 adult summer Chinook in the last week. The 2012 summer Chinook count of 79,396 is about 75.8% of the 2011 count and 88% of the 10 year average count. The 2012 Bonneville Dam summer Chinook jack count of 11,584 is about 23.3% of the 2011 count and 69.3% of the 10 year average count. At McNary Dam 58,812 adult summer Chinook have been counted. The 2012 McNary adult summer Chinook is about 87.3% of the 2011 and 92.2% of the 10 average counts. The McNary jack summer Chinook count of 4,328 is about 16.6% of the 2011 count of 26,104 and about 42.1% of the 10 year average count of 10,287. The 2012 adult summer Chinook count at Lower Granite Dam in the Snake River of 12,058 is about 35.1% of the 2011 count and 73.7% of the 10 year average count. The 2012 Lower Granite summer Chinook jack count of 1,547 is about 9.8% of the 2011 count and 28.5% of the 10 year average count.

The Bonneville Dam 2012 steelhead count of 67,155 is about 95.5% of the 2011 count of 70,497 and about 73.9% of the 10 year average count of 90,867. The 2012 Bonneville wild adult steelhead count of 29,781 is about 83.7% of the 2011 count of 35,589 and about 75.1% of the 10 year average count of 39,671. In the Snake River, this year's Lower Granite steelhead count of 9,985 is about 69.5% of the 2011 count of 14,362 and 76.9% of the 10 year average of 12,974. The 2012 Lower Granite wild adult steelhead count of 4,398 is about 67.3% of the 2011 count of 6,531, while being about 1.05 times greater than the 10 year average count of 4,200. At Willamette Falls Dam, the 2012 count for steelhead was 28,306, as of July 22th. This year's steelhead count is about 1.07 times greater than the

2011 count of 26,458 and 1.07 times greater than the 10 year average count of 26,485.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 65 and 174 last week. The 2012 accumulated total adult sockeye count at Bonneville Dam of 515,255, as of 7/26/2012, is about 2.78 times greater than the 2011 count of 185,089 and about 3.94 times greater than the 10 year average count of 130,694. The 2012 McNary Dam adult sockeye count of 363,328 is about 3.23 times greater than the 2011 count of 112,389 and 3.94 times greater than the 10 year average count of 92,864. 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 424 is 39.3% of the 2011 count of 1,077, while being 1.10 times greater than the 10 year average count of 386. The Lower Granite Dam 2012 adult sockeye count of 390 is about 28.5% of the 2011 count of 1,367 and about 71.9% of the 10 year average count of 542.

As of July 26<sup>th</sup> at Bonneville Dam, the adult shad count was 2,428,028. This year's shad count is about 2.57 times greater than the 2011 count of 944,172, while being 82.8% of the 10 year average count of 2,931,930.

**Hatchery Releases Last Two Weeks**

<b>Hatchery Release Summary</b>									
<b>From:</b>		<b>7/13/2012 to 07/26/12</b>							
<b>Agency</b>	<b>Hatchery</b>	<b>Species</b>	<b>Race</b>	<b>MigYr</b>	<b>NumRel</b>	<b>RelStart</b>	<b>RelEnd</b>	<b>RelSite</b>	<b>RelRiver</b>
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
<b>Yakama Tribe Total</b>					<b>96,987</b>				
<b>Grand Total</b>					<b>96,987</b>				

**Hatchery Releases Next Two Weeks**

**There are no planned hatchery releases during the next two weeks.**



**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
07/12/2012	245.9	28.4	240.6	96.3	262.4	91.2	255.1	118.4	255.5	65.6	274.7	160.8	275.5	147.3
07/13/2012	252.9	34.4	249.8	118.1	268.5	99.6	265.8	118.6	263.2	70.3	288.7	169.4	284.9	166.5
07/14/2012	243.0	25.0	243.1	97.9	263.2	89.4	268.4	110.6	268.2	66.7	301.0	168.9	302.7	205.7
07/15/2012	242.9	25.0	242.5	95.3	261.9	87.4	265.0	112.0	264.7	72.2	308.3	177.6	320.2	235.2
07/16/2012	241.1	23.2	240.7	104.0	255.2	88.5	265.2	100.2	262.5	60.1	283.8	161.8	282.9	186.7
07/17/2012	232.4	15.1	230.7	93.2	245.7	85.9	252.3	100.2	254.7	57.1	268.3	134.4	269.4	161.5
07/18/2012	233.5	17.3	226.9	79.4	243.4	76.7	242.7	89.2	248.0	55.8	254.4	137.6	257.6	153.3
07/19/2012	242.3	24.7	247.4	91.5	260.2	84.4	260.3	95.4	264.6	58.6	274.6	150.2	273.0	166.0
07/20/2012	249.0	30.1	248.3	102.5	263.3	91.3	265.9	102.8	272.9	68.1	286.2	173.3	288.8	197.8
07/21/2012	248.9	30.0	246.1	94.1	263.0	85.5	264.6	97.6	272.6	66.1	290.6	156.0	291.9	205.2
07/22/2012	248.5	30.0	244.2	96.5	256.5	87.3	259.3	96.9	265.8	63.2	284.9	149.3	286.6	187.9
07/23/2012	240.3	30.0	242.9	100.4	255.0	86.9	257.1	96.1	264.0	65.8	278.9	165.4	282.1	165.4
07/24/2012	238.2	30.0	242.2	100.5	254.9	80.1	254.8	86.3	249.5	61.7	268.4	139.5	266.1	151.6
07/25/2012	225.8	15.1	229.4	93.1	244.4	69.9	248.0	90.2	239.0	57.0	265.2	128.7	266.2	146.0

**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
07/12/2012	12.8	3.2	11.2	14.4	50.8	20.4	50.5	15.7	50.7	17.0	52.7	16.1		
07/13/2012	12.9	3.4	10.7	12.9	49.2	22.4	49.1	18.2	47.9	17.4	48.8	32.5		
07/14/2012	12.9	3.4	10.4	11.5	40.7	19.2	40.3	13.6	39.0	17.3	42.8	32.3		
07/15/2012	13.0	3.4	11.6	12.2	42.5	26.5	42.5	28.6	42.0	18.7	43.1	32.3		
07/16/2012	12.9	3.3	11.6	11.4	46.9	22.0	47.8	22.2	47.3	19.2	49.6	39.1		
07/17/2012	12.9	3.3	11.2	13.4	45.3	18.9	45.9	15.1	45.7	16.6	48.8	38.4		
07/18/2012	11.0	1.4	11.6	15.6	44.9	19.8	45.0	15.9	44.4	17.0	46.8	35.8		
07/19/2012	9.6	0.0	12.0	15.6	43.9	18.2	44.3	13.3	44.5	16.7	45.9	34.9		
07/20/2012	11.5	1.9	10.9	15.3	41.6	20.3	39.7	15.8	38.7	18.4	40.8	30.3		
07/21/2012	12.8	3.2	10.1	13.2	44.6	22.4	44.8	18.9	45.9	19.6	49.3	39.6		
07/22/2012	12.7	3.1	10.5	11.6	39.3	21.0	40.2	17.9	39.5	20.6	41.7	31.5		
07/23/2012	12.9	3.3	10.4	12.9	38.3	19.1	37.2	13.0	37.5	16.4	37.1	27.3		
07/24/2012	13.1	3.4	---	13.1	37.7	18.4	37.2	11.1	35.0	17.0	38.2	28.4		
07/25/2012	13.1	3.5	---	---	37.6	18.8	37.1	11.1	37.7	16.9	39.1	29.3		

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
07/12/2012	334.1	204.2	327.7	120.1	312.4	127.3	343.1	151.5	84.8	94.4
07/13/2012	338.9	188.9	338.5	131.2	320.5	124.6	331.7	132.8	85.0	101.5
07/14/2012	329.6	179.9	332.9	128.2	316.0	127.0	343.5	139.7	85.0	106.4
07/15/2012	336.7	186.3	319.6	138.5	296.9	124.4	319.3	124.2	83.0	99.7
07/16/2012	357.4	214.9	362.0	118.4	345.1	137.0	358.0	164.3	75.2	106.2
07/17/2012	332.5	197.9	335.4	103.1	319.2	128.1	339.2	142.9	75.5	108.4
07/18/2012	297.3	164.0	295.3	103.3	282.9	113.6	297.8	103.8	75.2	106.4
07/19/2012	298.8	168.4	299.0	89.7	279.6	111.2	298.5	99.0	79.8	107.2
07/20/2012	323.5	188.4	307.6	102.7	288.5	115.9	292.1	98.3	82.8	98.6
07/21/2012	340.1	201.3	335.4	120.2	320.1	137.7	343.7	135.8	85.2	110.4
07/22/2012	333.3	194.1	329.3	138.0	312.1	136.7	334.0	130.2	85.4	106.1
07/23/2012	324.3	193.4	325.7	112.6	308.3	128.3	328.8	132.2	75.7	108.4
07/24/2012	310.9	184.7	307.9	92.6	291.1	116.2	309.4	159.1	48.1	89.9
07/25/2012	284.5	158.5	288.8	86.6	273.2	109.0	281.3	98.8	71.5	98.6

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

### Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			<u>Boundary</u>			<u>Grand Coulee</u>			<u>Grand C. Tlwr</u>			<u>Chief Joseph</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>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>				
7/13	106.8	107.1	107.3	24	126.2	126.8	127.6	23	121.9	122.0	122.4	18	119.6	119.8	120.1	23	118.5	118.7	118.9	24
7/14	107.1	107.2	107.5	24	125.4	126.1	126.5	23	122.0	122.4	123.2	24	118.9	119.2	119.4	23	119.1	119.5	119.8	24
7/15	106.7	106.9	107.2	24	126.2	126.5	126.9	23	122.8	123.0	123.3	24	119.3	119.4	119.6	23	118.6	118.8	119.2	24
7/16	107.1	107.4	107.6	24	121.9	122.6	124.0	21	122.2	122.5	122.8	24	119.0	119.3	119.5	21	118.4	118.9	119.4	24
7/17	107.0	107.2	107.4	24	122.0	122.8	123.4	24	122.4	122.7	122.9	24	118.6	118.9	119.3	24	118.6	118.8	119.0	24
7/18	106.7	107.0	107.4	24	120.0	121.5	125.4	22	122.2	122.4	122.8	24	118.7	119.3	119.6	22	118.4	118.7	119.1	24
7/19	106.7	106.9	107.2	24	120.2	122.4	122.7	22	122.1	122.3	122.6	23	119.0	119.4	119.8	22	118.5	118.9	119.3	24
7/20	106.6	106.8	107.3	24	122.9	123.6	124.4	23	121.8	122.3	122.9	24	119.3	119.7	120.1	23	118.4	118.8	119.3	24
7/21	106.3	106.6	106.7	24	122.5	122.8	123.2	23	120.7	121.0	121.2	24	118.5	119.0	119.4	23	118.2	118.6	118.9	24
7/22	106.4	106.6	106.8	24	121.6	121.6	122.5	12	120.7	121.1	121.3	24	119.2	119.5	119.8	22	119.2	119.7	120.1	24
7/23	106.4	106.6	106.9	24	120.3	120.5	121.0	13	120.1	120.4	120.9	24	118.5	118.7	119.1	23	118.1	118.3	118.6	24
7/24	106.0	106.3	106.6	24	119.9	120.1	120.4	22	120.3	120.7	121.0	24	118.3	118.7	119.1	21	118.3	118.9	119.5	24
7/25	106.1	106.5	106.9	24	119.4	119.6	120.3	22	120.1	120.3	120.5	24	117.7	118.0	118.4	22	118.8	119.4	119.9	24
7/26	106.1	106.1	106.7	14	119.1	119.1	120.4	13	119.8	119.9	120.4	14	117.8	117.9	118.2	13	118.2	118.3	118.7	14

### Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			<u>Wells</u>			<u>Wells Dwnstrm</u>			<u>Rocky Reach</u>			<u>Rocky R. Tlwr</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>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>				
7/13	120.4	120.5	121.5	13	119.8	120.7	121.1	24	129.4	130.8	133.0	24	124.5	125.1	125.4	24	123.0	124.0	125.2	24
7/14	119.4	119.8	120.4	24	119.6	120.0	120.6	23	128.5	129.3	131.4	23	126.2	126.8	127.5	24	123.5	124.4	124.8	24
7/15	119.0	119.2	119.4	24	118.7	119.3	120.0	24	127.7	128.5	129.6	24	124.8	125.4	126.2	24	123.7	124.7	125.7	24
7/16	119.2	119.8	120.7	24	118.6	119.5	119.7	24	128.1	129.1	129.6	24	123.9	124.3	124.6	24	121.5	121.9	122.6	24
7/17	118.9	119.2	120.0	24	118.2	118.5	119.3	23	127.8	128.1	128.6	23	124.7	124.9	125.2	24	119.4	121.0	121.7	24
7/18	118.6	118.9	119.9	24	118.5	118.7	118.9	24	126.5	127.1	127.8	24	124.6	124.8	124.9	24	118.7	119.4	119.8	24
7/19	119.1	119.9	120.6	24	118.3	118.9	119.2	24	127.2	128.4	129.1	24	123.0	123.4	123.8	24	119.2	119.7	120.6	24
7/20	119.4	120.1	120.7	24	118.2	119.0	119.7	24	127.7	128.2	128.8	24	123.8	124.3	124.8	24	119.7	120.3	120.9	24
7/21	119.0	119.4	120.2	24	118.4	118.9	119.0	24	127.0	127.6	128.0	24	123.8	124.9	125.5	24	120.4	120.8	121.1	24
7/22	119.2	119.7	120.2	24	119.0	119.7	120.2	24	128.2	129.3	130.4	24	124.4	124.7	125.4	24	120.7	121.4	122.1	24
7/23	120.0	120.4	121.4	24	117.2	118.3	119.1	24	126.8	127.2	127.6	24	122.5	123.2	124.0	24	119.5	120.2	121.2	24
7/24	120.1	120.3	120.5	24	119.3	119.9	120.1	24	127.0	127.5	128.0	24	123.4	124.4	125.1	24	119.0	119.4	119.9	24
7/25	119.1	119.9	121.8	24	119.8	120.3	120.7	24	126.3	127.5	127.9	24	124.5	124.8	125.3	24	119.1	119.9	121.3	24
7/26	117.3	117.5	119.3	14	118.9	119.1	119.9	14	123.1	123.2	123.9	14	124.2	124.3	125.0	14	118.3	118.4	119.1	14

### Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>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>				
7/13	124.4	125.0	125.8	24	127.6	128.3	129.5	24	124.5	125.8	126.7	24	128.6	129.5	130.8	24	126.1	128.5	129.5	24
7/14	125.0	126.0	126.8	24	127.5	128.0	128.8	24	125.4	126.3	127.6	24	128.4	129.0	129.7	24	125.3	126.6	127.2	24
7/15	124.8	125.4	126.1	24	127.7	128.8	129.8	24	123.9	124.5	125.0	24	129.3	129.6	130.2	24	123.6	124.5	125.5	24
7/16	123.5	124.0	124.2	24	125.7	126.2	126.9	24	124.5	125.7	126.6	24	128.2	129.3	130.3	24	124.6	126.5	127.6	24
7/17	123.6	124.1	124.3	24	125.8	126.4	126.7	24	124.1	125.1	126.3	24	124.8	127.5	129.5	24	124.8	127.0	128.2	24
7/18	123.5	124.1	124.6	24	125.6	126.1	126.7	24	123.4	124.6	125.3	24	125.5	128.0	129.4	24	122.9	125.6	127.6	24
7/19	122.6	123.5	124.0	24	124.6	124.9	125.1	24	123.4	124.6	125.2	24	126.7	128.1	129.2	24	123.4	126.3	127.1	24
7/20	122.6	123.5	124.1	24	124.5	124.7	124.9	24	121.9	123.2	123.9	24	128.7	129.5	131.2	24	123.8	126.2	129.3	24
7/21	123.9	124.6	125.2	24	124.0	124.2	124.4	24	121.3	122.6	123.2	24	126.8	127.5	128.6	24	123.3	125.4	126.4	24
7/22	124.2	125.0	125.9	24	124.7	124.9	125.1	24	123.6	124.9	126.2	24	126.5	127.9	128.6	24	123.4	124.5	125.0	24
7/23	122.4	123.2	123.8	24	119.5	124.0	124.4	16	119.7	119.8	120.2	24	128.0	128.6	129.2	24	124.1	126.7	127.3	24
7/24	122.8	123.5	123.8	24	122.8	122.8	124.8	10	122.9	124.3	125.7	24	125.6	126.2	126.7	24	123.5	124.8	125.4	24
7/25	123.9	124.4	125.0	24	125.6	126.0	126.4	24	---	---	---	0	---	---	---	0	---	---	---	0
7/26	123.1	123.1	123.8	14	124.6	124.6	125.3	14	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwtr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
7/13	125.0	125.5	125.9	24	119.2	119.6	120.1	24	108.7	109.1	110.4	22	108.0	108.8	109.3	24	102.5	103.5	104.8	22
7/14	125.3	125.6	125.8	24	118.8	119.8	120.4	24	108.5	108.8	109.3	24	107.7	108.6	109.3	24	101.9	102.6	103.3	24
7/15	125.1	125.4	125.6	24	118.3	119.0	119.6	24	108.5	109.0	109.5	24	107.5	108.4	109.5	24	102.1	103.0	103.8	24
7/16	124.6	124.9	125.2	24	118.3	119.1	119.8	24	108.3	108.8	109.2	24	107.2	108.1	108.8	24	102.0	103.1	104.5	24
7/17	124.8	125.1	125.2	24	118.5	119.4	120.0	24	108.5	108.9	109.5	24	107.5	108.5	109.4	24	102.2	103.4	104.8	24
7/18	123.6	123.9	124.3	24	118.3	119.0	119.6	24	104.8	107.5	108.5	24	105.6	106.7	107.9	24	102.2	103.1	104.7	24
7/19	123.8	124.6	125.0	24	117.4	118.1	118.7	24	101.8	102.3	102.8	24	103.5	104.8	105.8	24	102.2	103.0	103.8	24
7/20	124.4	124.8	125.0	24	116.8	117.1	117.3	24	105.5	108.5	110.0	24	105.4	108.0	110.0	24	101.7	102.1	102.6	24
7/21	124.3	125.0	125.3	24	117.3	118.5	119.0	24	108.3	108.8	109.1	24	107.4	108.6	109.4	24	101.9	103.0	103.9	24
7/22	124.4	124.8	125.2	24	118.1	119.0	119.7	24	108.5	109.0	109.7	24	107.8	109.0	109.9	24	102.4	103.5	104.6	24
7/23	124.0	124.6	124.9	24	116.3	117.5	118.2	24	108.4	108.9	109.4	24	107.4	108.5	109.5	24	101.5	102.5	103.5	24
7/24	123.8	124.1	124.8	24	118.2	119.4	120.2	24	109.0	109.4	109.9	24	107.8	108.7	109.6	24	102.1	103.3	104.3	24
7/25	---	---	---	0	118.0	119.3	120.1	24	109.2	109.5	109.6	24	108.0	109.0	109.9	24	102.3	103.5	104.6	24
7/26	---	---	---	0	117.8	117.9	118.9	14	109.3	109.4	109.9	15	107.5	107.5	108.7	13	101.7	101.8	103.7	14

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

Date	<u>Clrwtr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
7/13	105.1	107.2	109.0	24	101.8	102.4	102.6	24	115.6	116.6	118.5	24	115.2	115.5	116.0	24	113.2	113.9	115.8	24
7/14	104.7	106.2	107.4	24	102.9	103.2	103.5	24	115.7	116.2	118.1	24	115.6	115.7	116.0	24	113.2	113.5	114.0	24
7/15	105.2	107.1	108.0	24	103.1	103.3	103.7	24	119.0	119.4	119.8	24	115.0	115.1	115.3	24	115.1	116.3	117.3	24
7/16	104.9	106.9	108.7	24	102.4	102.6	103.0	24	116.7	117.9	119.3	24	113.4	113.8	114.3	24	114.3	115.7	116.5	24
7/17	105.4	107.6	109.5	24	102.1	102.3	102.5	24	115.7	116.3	118.9	24	112.5	112.7	113.1	24	112.8	113.4	115.1	24
7/18	105.1	107.6	109.3	24	102.3	103.2	103.6	24	116.0	116.9	118.6	24	111.7	111.8	111.9	24	112.6	112.8	113.5	24
7/19	103.9	106.3	107.8	23	102.9	103.1	103.3	24	115.3	115.7	116.4	24	111.6	112.0	112.4	24	112.8	113.2	113.5	24
7/20	102.9	104.3	105.3	24	102.5	102.9	103.5	24	116.1	117.2	118.9	24	112.8	112.9	113.2	24	113.1	113.6	114.2	24
7/21	105.3	107.7	109.2	24	102.3	102.8	103.3	24	116.3	117.5	118.8	24	112.6	112.8	113.0	24	114.1	115.1	116.6	24
7/22	105.6	108.0	109.8	24	102.3	102.5	102.8	24	116.5	117.5	118.5	24	112.3	112.5	112.7	24	113.1	114.3	115.4	24
7/23	104.8	107.3	108.8	24	100.7	101.0	101.6	24	115.8	116.4	116.8	24	111.0	111.3	111.8	24	111.9	112.1	112.5	24
7/24	105.3	107.9	109.5	24	100.5	100.6	100.8	24	115.6	116.0	116.3	24	110.0	110.1	110.5	24	111.7	112.0	112.6	24
7/25	105.5	108.0	109.5	24	101.5	101.9	102.1	24	116.3	116.9	117.9	24	109.5	109.7	109.8	24	112.1	112.5	112.7	24
7/26	103.9	104.2	107.5	14	102.1	102.1	102.2	14	115.8	116.0	116.6	14	109.3	109.4	109.6	14	112.0	112.1	112.7	14

### 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>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
7/13	113.9	114.3	114.6	24	116.9	117.5	118.5	24	114.3	114.7	115.2	24	113.8	115.1	115.9	24	---	---	---	0
7/14	113.9	114.1	114.6	24	116.8	117.1	117.4	24	114.6	114.8	115.0	24	113.7	114.1	114.6	24	---	---	---	0
7/15	113.2	113.4	113.7	24	116.7	117.1	117.6	24	114.2	114.3	114.4	24	114.1	114.7	116.2	24	---	---	---	0
7/16	111.4	111.8	112.6	24	117.3	117.8	118.6	24	112.4	112.6	113.4	24	113.9	114.7	115.4	24	---	---	---	0
7/17	111.4	111.7	111.9	24	116.5	117.0	117.4	24	111.8	112.0	112.4	24	113.7	114.3	114.8	24	---	---	---	0
7/18	112.2	113.2	114.5	24	117.2	117.5	118.2	24	111.1	111.5	112.3	24	114.0	114.7	115.5	24	---	---	---	0
7/19	113.2	113.5	113.7	24	116.8	117.5	118.1	24	112.4	113.0	114.2	24	114.0	114.7	115.2	24	---	---	---	0
7/20	112.5	113.1	113.4	24	116.1	116.8	117.4	24	112.3	112.8	113.2	24	114.0	114.4	114.8	24	---	---	---	0
7/21	111.2	111.5	111.7	24	116.8	117.8	119.3	24	111.3	111.7	111.9	24	114.3	114.9	115.6	24	---	---	---	0
7/22	110.9	111.1	111.3	24	126.0	134.4	138.4	24	112.0	112.4	112.7	24	114.1	114.8	115.2	24	---	---	---	0
7/23	109.8	110.0	110.3	24	125.5	135.1	137.6	24	110.0	110.2	110.6	24	113.2	114.2	115.0	24	---	---	---	0
7/24	110.8	111.1	111.3	24	116.8	117.1	117.5	24	111.1	111.8	112.4	24	113.3	113.9	114.7	24	---	---	---	0
7/25	111.0	111.2	111.4	24	116.6	116.9	117.3	24	111.3	111.5	111.8	24	113.7	114.2	114.8	24	---	---	---	0
7/26	110.8	110.8	111.0	14	116.3	116.4	116.9	14	110.9	111.0	111.5	14	114.0	114.0	114.7	14	---	---	---	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>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	AVG	High	
7/13	118.3	118.8	119.1	24	121.1	122.2	122.9	22	116.1	116.6	117.0	21	118.7	119.2	119.5	21	113.6	114.3	115.3	21
7/14	116.7	117.3	117.7	24	120.4	120.7	120.9	24	116.5	116.9	117.4	24	118.5	118.9	119.4	24	114.3	115.0	115.7	24
7/15	116.1	116.6	117.3	24	120.6	120.9	122.6	23	114.5	115.7	116.8	24	118.6	119.0	119.5	24	113.0	113.8	114.9	24
7/16	113.8	114.2	114.7	24	122.6	123.0	123.2	24	112.0	112.6	112.9	24	118.6	118.9	119.4	24	113.2	114.3	115.1	24
7/17	115.0	116.4	116.9	24	121.7	122.6	123.2	24	112.7	113.0	113.8	24	117.5	118.2	118.4	24	112.9	113.4	114.4	24
7/18	116.9	117.3	117.7	24	119.7	120.2	120.5	24	111.3	111.5	112.0	24	117.0	118.1	118.3	24	110.9	111.9	113.9	24
7/19	117.1	117.6	118.0	24	120.1	120.8	121.1	24	113.4	115.0	116.2	24	116.4	117.7	118.8	24	111.0	112.5	113.7	24
7/20	115.2	115.8	116.8	24	120.7	121.5	122.3	24	114.3	115.0	115.6	24	117.2	118.6	119.4	24	111.4	112.4	113.4	24
7/21	113.7	114.4	115.0	24	121.3	122.3	122.9	22	112.6	112.9	113.1	24	118.3	118.7	118.8	24	113.1	114.8	116.6	24
7/22	115.5	116.3	116.9	24	121.1	122.0	122.5	24	111.9	112.2	112.2	24	118.6	119.2	119.3	24	112.1	112.8	113.2	24
7/23	114.2	114.8	115.1	24	120.7	121.3	121.6	24	109.5	109.8	110.6	24	117.4	117.9	118.9	24	110.8	111.7	113.2	24
7/24	114.8	115.8	116.9	24	120.2	120.7	121.2	24	111.0	112.4	113.1	24	116.3	117.1	118.1	24	110.9	112.0	112.9	24
7/25	117.7	118.8	119.7	24	119.3	119.9	120.2	24	113.5	113.9	114.4	24	115.7	116.2	116.9	24	112.9	113.4	113.8	24
7/26	118.7	118.8	119.3	14	120.6	121.1	123.0	15	113.3	113.4	114.1	14	115.2	115.6	119.0	14	113.0	113.2	113.8	14

### 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>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
7/13	118.2	118.4	119.3	21	113.3	113.6	114.2	20	116.5	117.1	118.0	21	115.3	115.7	116.4	21	122.1	123.2	123.6	21
7/14	119.3	119.8	120.2	24	114.1	114.6	114.9	24	117.0	117.2	117.5	24	115.7	116.5	117.3	24	123.4	123.8	124.2	24
7/15	119.3	120.4	121.1	24	113.9	114.2	114.9	24	116.0	116.3	117.0	24	114.6	115.0	115.8	24	121.2	121.9	123.1	24
7/16	119.2	120.0	121.2	24	115.0	115.9	117.0	24	119.3	119.7	120.2	24	116.3	118.4	119.2	24	123.9	124.1	124.3	24
7/17	118.7	119.4	119.9	24	117.3	117.8	118.2	24	119.4	119.9	120.6	24	117.9	118.7	119.7	24	123.3	124.0	124.3	24
7/18	117.5	118.2	119.3	24	112.8	113.3	114.9	24	114.9	115.7	118.3	24	115.2	116.3	116.7	24	119.9	120.5	122.9	24
7/19	117.3	118.2	119.4	24	112.3	113.2	114.4	24	114.0	114.4	114.9	24	112.8	113.3	113.7	24	119.1	119.4	119.7	24
7/20	117.4	118.3	120.3	24	112.1	112.7	114.2	24	113.8	114.6	115.1	24	112.0	112.3	112.7	24	117.9	119.4	120.0	24
7/21	120.4	121.9	125.7	24	113.9	115.3	116.0	24	116.5	117.4	118.2	24	113.6	115.4	116.1	24	122.6	123.1	123.5	24
7/22	119.1	120.4	122.5	24	116.3	118.1	120.4	24	117.8	119.1	120.2	24	115.8	116.5	117.5	24	121.9	123.2	123.8	24
7/23	118.0	118.9	119.9	24	112.8	113.5	114.2	24	115.9	116.3	116.5	24	113.9	114.6	114.9	24	121.9	123.1	123.3	24
7/24	117.6	118.2	118.8	24	114.8	115.6	116.1	24	119.8	122.7	123.2	24	115.2	116.6	117.7	24	122.4	122.9	123.2	24
7/25	118.3	118.7	119.0	24	115.4	115.8	116.2	24	117.0	118.3	123.2	24	117.9	119.1	120.6	24	117.6	118.8	122.6	24
7/26	118.1	118.3	119.1	14	114.9	115.0	115.2	14	115.8	116.0	117.1	14	113.6	113.7	114.7	14	117.7	118.0	120.2	14

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
<b>Lower Granite Dam</b>											
<b>Little Goose Dam</b>											
	07/16/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/23/12	Chinook + Steelhead	12	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	07/18/12	Chinook + Steelhead	69	0	0	0.00%	0.00%	0	0	0	0
	07/25/12	Chinook + Steelhead	3	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	07/13/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/15/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/19/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	07/23/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Bonneville Dam</b>											
	07/14/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/17/12	Chinook + Steelhead	100	2	1	1.00%	0.00%	1	0	0	0
	07/21/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	07/24/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Rock Island Dam</b>											
	07/17/12	Chinook + Steelhead	100	3	3	3.00%	0.00%	2	1	0	0
	07/19/12	Chinook + Steelhead	100	3	3	3.00%	0.00%	3	0	0	0
	07/24/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 7/27/2012 8:37

### Two-Week Summary of Passage Indices

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

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

For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>

For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmptsubmitdata.asp>

COMBINED YEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/13/2012 *	---	6	---	---	0	58	46	0	---	0	0
07/14/2012	---	---	---	---	0	0	8	0	0	0	0
07/15/2012 *	---	---	---	---	10	0	0	0	---	0	0
07/16/2012 *	---	0	---	---	0	32	8	---	0	0	0
07/17/2012 *	---	3	---	---	0	19	8	0	---	413	0
07/18/2012 *	---	1	---	---	0	0	8	0	0	0	0
07/19/2012 *	---	2	---	---	0	0	8	0	---	0	0
07/20/2012 *	---	13	---	---	0	14	8	0	0	0	0
07/21/2012 *	---	---	---	---	0	20	16	0	---	0	0
07/22/2012	---	---	---	---	0	0	8	0	0	218	12
07/23/2012 *	---	2	---	---	0	8	15	0	---	0	0
07/24/2012 *	---	---	---	---	0	0	0	0	0	0	0
07/25/2012 *	---	---	---	---	0	0	30	0	---	0	0
07/26/2012	---	---	---	---	0	3	0	0	2	0	0
07/27/2012	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>154</b>	<b>163</b>	<b>0</b>	<b>2</b>	<b>631</b>	<b>12</b>
<b># Days:</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>1</b>
<b>YTD</b>	<b>58,098</b>	<b>10,907</b>	<b>26,417</b>	<b>13,494</b>	<b>4,042,634</b>	<b>2,265,931</b>	<b>754,461</b>	<b>25,797</b>	<b>2,179,373</b>	<b>4,290,476</b>	<b>2,538,774</b>

COMBINED SUBYEARLING CHINOOK											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)
07/13/2012 *	---	0	---	---	3,538	9,021	1,466	729	---	143,389	104,197
07/14/2012	---	---	---	---	3,091	3,535	1,634	796	59,601	102,625	96,877
07/15/2012 *	---	---	---	---	4,649	5,851	517	568	---	79,353	74,747
07/16/2012 *	---	0	---	---	7,331	6,751	1,051	---	124,332	91,883	58,504
07/17/2012 *	---	0	---	---	10,517	8,082	1,948	596	---	89,911	62,039
07/18/2012 *	---	0	---	---	6,531	5,438	1,502	633	119,465	109,505	59,409
07/19/2012 *	---	0	---	---	5,052	5,325	1,361	984	---	123,992	52,849
07/20/2012 *	---	0	---	---	4,179	4,001	714	433	218,514	110,993	55,064
07/21/2012 *	---	---	---	---	3,593	2,520	496	480	---	139,435	51,383
07/22/2012	---	---	---	---	3,788	2,444	890	493	75,491	159,887	67,176
07/23/2012 *	---	0	---	---	2,207	1,371	170	530	---	100,703	47,370
07/24/2012 *	---	---	---	---	1,403	779	389	543	57,053	88,536	107,937
07/25/2012 *	---	---	---	---	1,771	946	351	479	---	66,548	33,541
07/26/2012	---	---	---	---	2,309	1,355	207	475	81,852	50,774	43,399
07/27/2012	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59,959</b>	<b>57,419</b>	<b>12,696</b>	<b>7,739</b>	<b>736,308</b>	<b>1,457,534</b>	<b>914,492</b>
<b># Days:</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,283</b>	<b>4,101</b>	<b>907</b>	<b>595</b>	<b>105,187</b>	<b>104,110</b>	<b>65,321</b>
<b>YTD</b>	<b>0</b>	<b>3</b>	<b>67</b>	<b>327</b>	<b>1,036,847</b>	<b>1,014,540</b>	<b>366,238</b>	<b>22,122</b>	<b>2,333,044</b>	<b>3,361,108</b>	<b>5,270,977</b>

Two-Week Summary of Passage Indices

COMBINED COHO												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/13/2012	*	---	0	---	---	0	0	0	0	---	0	0
07/14/2012		---	---	---	---	0	0	0	0	0	0	0
07/15/2012	*	---	---	---	---	0	0	0	2	---	0	0
07/16/2012	*	---	0	---	---	0	0	0	---	0	0	0
07/17/2012	*	---	0	---	---	0	0	0	6	---	0	327
07/18/2012	*	---	0	---	---	0	0	0	8	0	0	0
07/19/2012	*	---	0	---	---	0	0	0	8	---	0	0
07/20/2012	*	---	0	---	---	0	0	0	4	0	0	0
07/21/2012	*	---	---	---	---	0	0	0	0	---	0	0
07/22/2012		---	---	---	---	0	0	0	2	0	0	0
07/23/2012	*	---	0	---	---	0	0	0	4	---	0	0
07/24/2012	*	---	---	---	---	0	0	0	16	3	0	0
07/25/2012	*	---	---	---	---	0	0	0	6	---	0	0
07/26/2012		---	---	---	---	0	3	0	6	0	0	0
07/27/2012		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>62</b>	<b>3</b>	<b>0</b>	<b>327</b>	
<b># Days:</b>		<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>23</b>	
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>	<b>69,763</b>	<b>78,614</b>	<b>19,953</b>	<b>49,548</b>	<b>145,764</b>	<b>287,207</b>	<b>689,804</b>

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
07/13/2012	*	---	1	---	---	0	131	15	4	---	0	0
07/14/2012		---	---	---	---	38	49	8	6	0	0	0
07/15/2012	*	---	---	---	---	10	17	0	6	---	0	0
07/16/2012	*	---	1	---	---	25	0	8	---	0	0	321
07/17/2012	*	---	0	---	---	9	16	0	20	---	0	0
07/18/2012	*	---	4	---	---	0	64	8	22	0	220	12
07/19/2012	*	---	3	---	---	0	29	8	14	---	0	0
07/20/2012	*	---	2	---	---	0	0	0	6	0	0	0
07/21/2012	*	---	---	---	---	0	41	0	8	---	0	0
07/22/2012		---	---	---	---	0	17	0	4	0	0	0
07/23/2012	*	---	0	---	---	10	0	0	6	---	0	0
07/24/2012	*	---	---	---	---	0	7	0	4	0	0	0
07/25/2012	*	---	---	---	---	8	3	0	6	---	0	0
07/26/2012		---	---	---	---	0	14	0	8	0	0	0
07/27/2012		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>388</b>	<b>47</b>	<b>114</b>	<b>0</b>	<b>220</b>	<b>333</b>
<b># Days:</b>		<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>28</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>16</b>	<b>24</b>
<b>YTD</b>		<b>2,722</b>	<b>21,608</b>	<b>2,065</b>	<b>2,311</b>	<b>3,538,917</b>	<b>1,490,139</b>	<b>610,976</b>	<b>17,276</b>	<b>543,076</b>	<b>2,834,971</b>	<b>296,204</b>

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)
07/13/2012 *	---	0	---	---	0	0	0	2	---	0	0
07/14/2012	---	---	---	---	0	0	0	4	464	192	0
07/15/2012 *	---	---	---	---	0	0	0	0	---	2,405	630
07/16/2012 *	---	0	---	---	0	0	0	---	0	243	0
07/17/2012 *	---	0	---	---	9	16	0	0	---	0	0
07/18/2012 *	---	0	---	---	0	0	0	0	247	0	0
07/19/2012 *	---	0	---	---	0	0	0	0	---	204	0
07/20/2012 *	---	0	---	---	0	0	0	4	244	205	0
07/21/2012 *	---	---	---	---	0	0	0	8	---	0	292
07/22/2012	---	---	---	---	0	0	0	8	258	0	0
07/23/2012 *	---	0	---	---	10	0	0	6	---	0	0
07/24/2012 *	---	---	---	---	0	6	0	8	258	205	0
07/25/2012 *	---	---	---	---	8	0	0	4	---	205	14
07/26/2012	---	---	---	---	0	0	0	14	464	0	0
07/27/2012	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>22</b>	<b>0</b>	<b>58</b>	<b>1,935</b>	<b>3,659</b>	<b>936</b>
<b># Days:</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>276</b>	<b>261</b>	<b>67</b>
<b>YTD</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>475</b>	<b>43,254</b>	<b>37,119</b>	<b>18,243</b>	<b>46,744</b>	<b>1,133,904</b>	<b>850,332</b>	<b>777,767</b>

COMBINED LAMPREY JUVENILES											
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR <sup>†</sup> (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)
07/13/2012 *	---	0	---	---	0	100	5	0	---	1,429	200
07/14/2012	---	---	---	---	0	40	0	0	800	614	100
07/15/2012 *	---	---	---	---	0	0	0	1	---	0	8
07/16/2012 *	---	0	---	---	5	20	5	---	900	2,292	0
07/17/2012 *	---	0	---	---	5	20	5	1	---	3,000	0
07/18/2012 *	---	0	---	---	5	30	0	2	400	1,143	8
07/19/2012 *	---	0	---	---	0	70	5	1	---	1,571	0
07/20/2012 *	---	0	---	---	0	10	0	1	500	1,714	0
07/21/2012 *	---	---	---	---	0	0	0	1	---	2,714	100
07/22/2012	---	---	---	---	0	0	0	1	1,500	2,572	4
07/23/2012 *	---	0	---	---	15	10	0	1	---	2,143	100
07/24/2012 *	---	---	---	---	4	8	4	0	700	1,286	200
07/25/2012 *	---	---	---	---	0	26	0	2	---	1,571	32
07/26/2012	---	---	---	---	0	14	8	0	1,400	1,143	100
07/27/2012	---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>348</b>	<b>32</b>	<b>11</b>	<b>6,200</b>	<b>23,192</b>	<b>852</b>
<b># Days:</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>25</b>	<b>2</b>	<b>1</b>	<b>886</b>	<b>1,657</b>	<b>61</b>
<b>YTD</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,974</b>	<b>6,237</b>	<b>2,188</b>	<b>119</b>	<b>118,130</b>	<b>489,624</b>	<b>31,605</b>



## 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:

7/27/12 8:26 AM

		07/13/12	TO	07/27/12				
		Species						
Site	Data	CH0	CH1	CO	ST	SO	Grand Total	
<b>LGR</b>	Sum of NumberCollected	31,130		5		49	14	31,198
	Sum of NumberBarged	33,072		9		63	9	33,153
	Sum of NumberBypassed	4		0		0	1	5
	Sum of Numbertrucked	0		0		0	0	0
	Sum of SampleMorts	105		1		1	0	107
	Sum of FacilityMorts	135		0		0	4	139
	Sum of ResearchMorts	0		0		0	0	0
	Sum of TotalProjectMorts	240		1		1	4	246
<b>LGS</b>	Sum of NumberCollected	34,527		89		247	14	34,877
	Sum of NumberBarged	39,351		88		260	13	39,712
	Sum of NumberBypassed	4		0		0	0	4
	Sum of Numbertrucked	0		0		0	0	0
	Sum of SampleMorts	41		0		0	1	42
	Sum of FacilityMorts	207		2		1	0	210
	Sum of ResearchMorts	0		0		0	0	0
	Sum of TotalProjectMorts	248		2		1	1	252
<b>LMN</b>	Sum of NumberCollected	7,500		96		30		7,626
	Sum of NumberBarged	8,219		116		45		8,380
	Sum of NumberBypassed	72		0		0		72
	Sum of Numbertrucked	0		0		0		0
	Sum of SampleMorts	22		0		0		22
	Sum of FacilityMorts	101		0		0		101
	Sum of ResearchMorts	0		0		0		0
	Sum of TotalProjectMorts	123		0		0		123
<b>MCN</b>	Sum of NumberCollected	303,313			1		800	304,114
	Sum of NumberBarged	0			0		0	0
	Sum of NumberBypassed	303,251			1		800	304,052
	Sum of Numbertrucked	0			0		0	0
	Sum of SampleMorts	16			0		0	16
	Sum of FacilityMorts	46			0		0	46
	Sum of ResearchMorts	0			0		0	0
	Sum of TotalProjectMorts	62			0		0	62
Total Sum of NumberCollected		376,470		190	1	326	828	377,815
Total Sum of NumberBarged		80,642		213	0	368	22	81,245
Total Sum of NumberBypassed		303,331		0	1	0	801	304,133
Total Sum of Numbertrucked		0		0	0	0	0	0
Total Sum of SampleMorts		184		1	0	1	1	187
Total Sum of FacilityMorts		489		2	0	1	4	496
Total Sum of ResearchMorts		0		0	0	0	0	0
Total Sum of TotalProjectMorts		673		3	0	2	5	683

### YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/27/12 8:26 AM

TO: 07/27/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	656,535	2,693,473	47,635	30,559	2,353,335	5,781,537
	Sum of NumberBarged	641,829	989,031	39,435	29,064	949,587	2,648,946
	Sum of NumberBypassed	11,455	1,702,758	8,165	1,423	1,403,470	3,127,271
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	326	180	2	9	61	578
	Sum of FacilityMorts	1,800	1,429	33	63	182	3,507
	Sum of ResearchMorts	0	75	0	0	35	110
	Sum of TotalProjectMorts	2,126	1,684	35	72	278	4,195
<b>LGS</b>	Sum of NumberCollected	640,630	1,498,448	53,298	25,703	971,155	3,189,234
	Sum of NumberBarged	638,840	1,109,451	51,693	25,007	683,450	2,508,441
	Sum of NumberBypassed	120	388,249	1,601	689	287,507	678,166
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	82	30	0	2	15	129
	Sum of FacilityMorts	656	716	2	5	173	1,552
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	738	746	2	7	188	1,681
<b>LMN</b>	Sum of NumberCollected	245,200	543,338	14,381	13,396	438,603	1,254,918
	Sum of NumberBarged	231,599	531,224	14,352	13,372	428,299	1,218,846
	Sum of NumberBypassed	12,904	11,582	19	13	9,825	34,343
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	88	60	0	3	35	186
	Sum of FacilityMorts	496	472	10	8	147	1,133
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	584	532	10	11	182	1,319
<b>MCN</b>	Sum of NumberCollected	897,882	1,040,137	72,876	554,839	247,888	2,813,622
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	897,668	1,039,959	72,876	554,764	247,862	2,813,129
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	105	43	0	28	10	186
	Sum of FacilityMorts	109	135	0	47	16	307
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	214	178	0	75	26	493
Total Sum of NumberCollected		2,440,247	5,775,396	188,190	624,497	4,010,981	13,039,311
Total Sum of NumberBarged		1,512,268	2,629,706	105,480	67,443	2,061,336	6,376,233
Total Sum of NumberBypassed		922,147	3,142,548	82,661	556,889	1,948,664	6,652,909
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		601	313	2	42	121	1,079
Total Sum of FacilityMorts		3,061	2,752	45	123	518	6,499
Total Sum of ResearchMorts		0	75	0	0	35	110
Total Sum of TotalProjectMorts		3,662	3,140	47	165	674	7,688

Cumulative Adult Passage at Mainstem Dams Through: 07/27

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	07/26	158075	7591	167097	50945	152015	20110	79396	11584	104794	49677	90175	16710	0	0	0	0	0	0
TDA	07/25	117071	7173	124164	40146	112195	16495	65126	9218	76168	37032	75892	12751	0	0	0	0	0	0
JDA	07/25	107655	6755	103401	39823	94492	15370	56525	9367	70399	32366	68784	13166	0	0	0	0	0	0
MCN	07/26	102763	4787	101246	31750	86252	13687	58812	4328	67309	26104	63773	10287	0	0	0	0	0	0
IHR	07/26	71957	2905	69306	18161	60108	8392	13512	1354	25534	12034	18419	4325	0	0	0	0	0	0
LMN	07/26	68608	2891	69832	18094	58469	7193	14429	1426	29986	13355	19385	4133	0	0	0	0	0	0
LGS	07/26	68247	3449	67321	23492	54053	8198	13565	1480	39928	17603	17658	4886	0	0	0	0	0	0
LGR	07/26	66366	3525	59342	22063	54084	9639	12058	1547	34390	15739	16369	5428	0	0	0	0	0	0
PRD	07/21	19495	1015	15246	6030	16630	1325	37527	653	34028	2264	47117	1568	0	0	0	0	0	0
RIS	07/23	19881	800	13089	8394	14658	2236	36563	1083	27374	9739	43162	3678	0	0	0	0	0	0
RRH	07/23	6641	459	6989	3491	5643	822	24881	885	20813	5076	29551	2632	0	0	0	0	0	0
WEL	07/21	5311	700	4153	3969	4833	817	14946	988	10981	2267	17905	853	0	0	0	0	0	0
WFA	07/22	35026	1233	42435	1330	50264	1041	-	-	-	-	-	-	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.
	Adult	Jack	Adult	Jack	Adult	Jack									
BON	0	0	4	0	0	0	515255	185089	130694	67155	70497	90867	29781	35589	39671
TDA	1	0	1	0	0	0	409428	137362	109007	35623	31722	43359	16506	16471	20316
JDA	9	0	0	0	0	0	393385	141964	113287	22284	21067	33694	11116	10894	14512
MCN	-1	0	0	0	0	0	363328	112389	92864	14677	14034	21374	6092	6151	8366
IHR	0	0	0	0	0	0	424	1077	386	5791	9362	11947	1941	3124	3640
LMN	0	0	0	0	0	0	462	1309	476	6781	8772	10915	2922	8772	3834
LGS	0	0	0	0	0	0	403	1327	450	5275	9317	7129	2873	4507	2770
LGR	0	0	0	0	0	0	390	1367	542	9985	14362	12974	4398	6531	4200
PRD	0	0	0	0	0	0	392725	127500	114148	1271	510	1407	0	0	0
RIS	0	0	0	0	0	0	387615	120688	110116	1076	441	1130	604	294	740
RRH	0	0	0	0	0	0	333261	105526	88547	1260	774	968	857	617	595
WEL	0	0	0	0	0	0	257194	65806	79240	351	184	326	210	136	199
WFA	0	0	0	0	0	0	-	-	-	28306	26458	26485	-	-	-

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: 07/27/12

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