



Fish Passage Center

Weekly Report #09 - 26

September 4, 2009

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 34% and 234% of average at individual sub-basins through August. Precipitation above The Dalles has been 117% of average over August. Over the entire water year, precipitation has generally been near average.

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

Location	Water Year 2009 August 1-31		Water Year 2009 October 1, 2008 to August 1-31, 2009	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	1.70	101	21.72	91
Snake River Above Ice Harbor	1.26	147	19.34	115
Columbia Above The Dalles	1.40	117	22.06	100
Kootenai	1.59	94	21.39	87
Clark Fork	1.77	136	17.55	105
Flathead	1.76	109	20.17	92
Pend Oreille/ Spokane	1.59	125	28.33	95
Central Washington	0.13	34	7.06	81
Snake River Plain	0.84	144	12.86	119
Salmon/Boise/ Payette	1.64	234	19.13	100
Clearwater	2.43	202	32.03	109
SW Washington Cascades/ Cowlitz	1.46	95	60.44	88
Willamette Valley	0.41	38	48.62	84

The summer flow period began on 6-21-09 at Lower Granite Dam and ended on 8-31-09; the flow objective was 52.5 Kcfs. Flows at Lower Granite averaged 48.2 Kcfs over the summer period.

The summer flow period began on 7-1-09 at McNary Dam and ended on 8-31-09; the flow objective was 200 Kcfs. Flows at McNary Dam averaged 141.8 Kcfs over the summer period.

Grand Coulee drafted to 1278 feet by August 29th, 2009 and was at 1277.5 feet on August 31st, 2009; the summer draft elevation was 1278 feet by the end of August. Grand Coulee is expected to target elevation 1283 feet by the end of September. Outflows at Grand Coulee have ranged between 51.7 and 74.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2443.0 feet (9-3-09) and has drafted 0.2 feet last week. Outflows at Libby are currently 6 Kcfs and will remain at this level through September.

Hungry Horse is currently at an elevation of 3553.7 ft (9-3-09) and has drafted 1.1 feet last week. Outflows at Hungry Horse have been approximately 2.5 Kcfs last week. The BOR plans to draft Hungry Horse to elevation 3550 by the end of September.

Dworshak drafted to elevation 1534.2 feet on August 31st, 2009 and is currently at an elevation of 1531.0 feet (9-3-09) and has drafted 5.9 feet last week. Outflows at Dworshak are currently 8.1 Kcfs. Dworshak is expected to draft to elevation 1520 feet by mid-September.

The Brownlee Reservoir was at an elevation of 2054.9 feet on September 2nd, 2009 refilling 0.3 feet last week. Outflows at Brownlee Dam have been 8.8 to 11.5 Kcfs over the last week.

Spill:

The 2009 planned summer spill program at the lower Snake River Projects began at 0001 hours on June 20, 2009 and ended at midnight on August 31, 2009. The following table shows the planned operations for 2009.

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

Lower Granite Dam spilled less than the 18 kcfs due to lower flows and powerhouse minimum flows. At Little Goose spill was reduced to 9.9 Kcfs on August 26th. The flat spill amounts at Little Goose have resulted in spill in excess of the 30% Court Order. At Lower Monumental dam the 17 Kcfs spill was not met most days due to low flows and powerhouse minimum requirements. At Ice Harbor Dam the court ordered levels of 45 Kcfs daytime spill and gas cap nighttime spill were often precluded due to low flows and required powerhouse minimum flows. The minimum spill of 15.2 Kcfs at Ice Harbor was met the last four days of August.

The following table shows the planned operations for summer spill levels in the lower Columbia River for 2009.

Project	Day/Night Spill
McNary	50%/50%* (beginning June 20)
John Day	30%/30%
The Dalles	40%/40%
Bonneville	75 Kcfs/gas cap

McNary Dam spill met the 50% Court Ordered spill level. John Day Dam spilled an instantaneous 30% through August 31. At The Dalles Dam flows were high enough to meet the 40% spill requirement, while at Bonneville Dam daily average spill was 75 Kcfs.

There were no exceedences of the 115%/120% TDG levels at the gages required for management of spill this past week. Gas bubble trauma (GBT) monitoring occurred at Little Goose and Lower Monumental dams in the Snake River, and at McNary and Bonneville dams in the lower Columbia through the end of the month. No fish were detected with signs of GBT.

Smolt Monitoring:

Subyearling Chinook smolts remained fairly steady this week at Snake River sites but continued to

decline in numbers in the Lower Columbia. Unclipped subyearlings continue to predominate at all the sites, suggesting that many of the late season out-migrant fish are of wild origin. It should be noted however, that a good portion of hatchery origin fish are unmarked as well.

At Lower Granite Dam subyearling Chinook predominated with coho smolt numbers second in prevalence but at very low numbers. Average daily passage index for subyearling Chinook was at 90 per day this week compared to 98 per day last week. At Little Goose Dam the subyearling Chinook indices increased slightly this week, with the daily average index at 92 per day this week compared to 79 last week.

Sampling at Rock Island for the 2009 Smolt Monitoring Program ended on August 31st. The average daily passage index for subyearling Chinook over the last seven days of sampling at Rock Island was 10 fish per day.

At McNary Dam, the daily average passage index for subyearling Chinook decreased rapidly this week with 606 per day, compared to 4,256 per day the previous week. John Day and Bonneville Dam continue to limit sampling due to high temperatures at those projects. Subyearling Chinook weekly average passage indices remained fairly steady this week compared to last week. The daily average passage index for subyearling Chinook this week was 608 fish per day, compared to 670 per day last week.

Hatchery Release:

Snake River Zone: The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. There were no releases of juvenile salmonids scheduled for this week. Furthermore, no releases of juvenile salmonids are scheduled to begin over the next two weeks.

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

Adult Passage:

Fall Chinook began to pass Bonneville Dam on August 1st. Daily counts of adult fall Chinook ranged from 9115 to 15497. The 2009 adult fall Chinook count of 151692 was about 1.03 times greater than the 2008 count and about 1.29 times greater than the 10 year average. The fall Chinook jack count of 47114 was about 3.37 times greater than the 2008 count and about 4.76 times greater than the 10 year average. The adult fall Chinook count total at The Dalles Dam of 68707 is about 45.3% of the Bonneville passage to date. The 2009 Lower Granite Dam adult fall Chinook count of 2068 is about 97.2% of the 2008 count and about 2.68 times greater than the 10 year average count.

Daily steelhead counts at Bonneville Dam for the past week ranged between 4389 and 8013. The daily adult steelhead count of 34053 on 8/13/09 was the highest recorded adult daily steelhead count at Bonneville Dam (date range searched was 1977 through 2009). Prior to this, the 2nd highest adult daily steelhead count at Bonneville Dam occurred on August 3rd, 2001 when a total of 14432 adult steelhead were counted. The Bonneville Dam 2009 steelhead count of 502806 is about 1.93 times greater than the 2008 count and 1.91 times greater than the 10 year average.

During this time of year, there are times when there are higher steelhead counts at upstream projects compared to downstream projects. The higher counts of steelhead at upstream sites compared to downstream sites in any particular year is because some steelhead spend the winter between sites, for instance between Ice Harbor and Lower Granite, and then start their migration upstream the following year. The summer steelhead run is delineated according to dates of passage past Bonneville Dam and is made up of two components. A-run steelhead pass Bonneville Dam from the first of June through August 25th and B-run steelhead pass Bonneville from August 26th through October. The 2009 B-run steelhead began on August 26th at Bonneville Dam and was 58820 as of September 3rd. The 2009 B-run steelhead count is about 1.34 times greater than the 2008 count of 43907 and is about 1.53 times greater than the 10 year average count of 38431.

In the Snake River, this year's Lower Granite total steelhead count of 26447 is about 94.5% of the 2008 count of 27973 and 1.35 times greater than the 10 year average of 19601. The 2009 wild steelhead count as of September 3rd was 8996. At Rock Island Dam, as of September 1st, 9271 adult steelhead had been

counted and at Rocky Reach Dam, 7197 adult steelhead had been counted so far this season. At Willamette Falls Dam, the 2009 count for steelhead was 17254, as of August 31st. This year's steelhead count is only about 92.2% of the 2008 count of 18718 at Willamette Falls Dam for the same date range.

The 2009 adult coho count at Bonneville Dam is 49082 adults and 2932 jacks. The Bonneville 2009 adult coho count is about 2.39 times greater than the 2008 count of 20568 and is about 2.88 times greater than the 10 year average count of 17071. The 2009 coho jack count of 2932 is about 2.02 times greater than the 2008 count of 1453 and is about 2.77 times greater than the 10 year average count of 1057 at Bonneville Dam.

After August 31st, there is only a small amount of spill at Bonneville Dam primarily for adult attraction to the ladders. When spill levels are low and powerhouse two is used exclusively, the majority of the fish cross the dam using the Washington shore ladder, causing crowding. When the total salmonids fish count at Bonneville Dam is over 25,000, the fish passage plan states that two screened units at powerhouse one must be operational in addition to power house two. This attracts fish to both the Washington and Oregon ladders, distributing fish more evenly among the ladders. Numbers at Bonneville Dam over the past two days have been over 25,000. This operation is currently occurring.

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
08/21/2009	73.1	0.2	74.6	0.0	80.1	6.0	80.4	7.5	78.0	0.0	83.6	1.9	84.3	0.9
08/22/2009	63.7	0.2	58.8	0.0	61.9	4.9	63.2	5.0	64.5	0.0	71.8	1.8	65.4	1.0
08/23/2009	49.0	0.2	53.9	0.0	52.9	4.6	51.2	4.5	48.8	0.0	53.6	1.9	52.6	1.0
08/24/2009	90.9	0.1	89.2	0.0	90.9	7.2	88.5	7.7	86.3	0.0	94.9	1.8	94.2	1.0
08/25/2009	74.6	0.1	77.2	0.0	81.4	6.5	84.1	7.8	85.0	0.0	93.7	1.9	88.8	0.8
08/26/2009	79.1	0.2	77.7	0.0	80.8	7.0	82.9	7.3	82.4	0.0	86.2	2.1	83.2	0.8
08/27/2009	76.9	0.1	83.6	0.0	82.6	0.0	76.6	6.4	75.5	0.0	81.4	1.9	79.8	0.7
08/28/2009	74.0	0.1	68.4	0.0	66.6	0.0	68.2	6.8	66.6	0.0	85.1	1.7	80.9	0.7
08/29/2009	56.0	0.1	60.0	0.0	61.8	0.0	59.4	5.0	58.8	0.0	60.4	0.9	59.4	0.6
08/30/2009	51.7	0.1	54.9	0.0	57.6	0.0	59.5	4.9	58.0	0.0	59.6	0.9	56.6	0.9
08/31/2009	78.7	0.1	75.5	0.0	72.5	0.0	70.5	6.5	70.6	0.0	75.3	1.0	67.7	0.9
09/01/2009	60.3	0.1	58.5	0.0	61.1	0.0	58.0	0.0	58.7	0.0	53.4	1.1	50.0	1.5
09/02/2009	53.7	0.1	60.2	0.0	61.9	0.0	64.2	0.0	64.4	0.0	87.1	0.9	88.7	1.7
09/03/2009	56.0	0.1	57.0	0.0	55.9	0.0	51.2	0.0	50.4	0.0	44.7	1.5	42.3	0.5

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

Date	Dworshak		Hells Brownlee Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
08/21/2009	11.2	0.9	9.8	16.2	38.8	18.6	37.6	11.6	36.2	17.5	36.4	29.6
08/22/2009	10.2	0.0	9.3	14.3	35.3	18.6	34.5	11.6	32.9	17.5	35.5	28.2
08/23/2009	10.3	0.0	9.2	12.2	33.1	18.7	32.2	11.6	31.4	17.5	34.2	26.7
08/24/2009	8.6	0.0	10.2	11.2	30.8	17.9	30.9	11.6	30.8	17.5	32.2	24.8
08/25/2009	8.0	0.0	10.3	13.3	26.5	16.2	25.5	11.6	24.3	12.2	25.4	15.6
08/26/2009	8.0	0.0	10.7	14.4	29.8	16.8	28.4	10.6	26.5	14.0	26.2	16.5
08/27/2009	8.1	0.0	10.9	14.7	30.9	18.0	29.7	9.7	28.9	16.6	30.1	21.2
08/28/2009	8.1	0.0	10.5	10.6	31.2	18.5	31.0	9.7	29.6	17.5	31.6	24.6
08/29/2009	7.6	0.0	9.3	9.9	25.8	13.0	26.2	8.4	25.8	13.8	26.9	20.0
08/30/2009	7.5	0.0	10.2	9.0	26.3	13.6	25.6	7.9	25.3	13.3	25.2	18.5
08/31/2009	7.4	0.0	10.5	10.5	23.8	10.9	23.0	7.7	23.0	10.9	25.5	18.7
09/01/2009	8.1	0.0	10.8	9.1	28.2	0.3	27.1	0.0	27.2	0.0	27.5	0.0
09/02/2009	8.1	0.0	11.5	12.6	25.5	0.0	23.9	0.2	24.3	0.0	24.9	0.0
09/03/2009	8.2	0.0	---	---	29.5	0.0	27.8	0.0	28.1	0.0	25.8	0.0

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
08/21/2009	119.8	59.9	108.9	32.6	106.8	42.8	124.5	80.4	0.0	32.0
08/22/2009	119.3	59.7	119.3	35.7	112.2	45.0	126.5	83.4	0.0	31.0
08/23/2009	116.2	57.9	109.9	33.1	114.1	45.5	123.2	79.9	0.0	31.1
08/24/2009	110.6	55.5	104.5	31.3	99.8	40.0	110.5	67.8	0.0	30.6
08/25/2009	109.5	54.8	97.6	29.3	97.7	39.0	103.6	60.7	0.0	30.8
08/26/2009	130.8	65.6	114.8	34.4	104.4	41.8	109.2	66.4	0.0	30.7
08/27/2009	119.3	59.6	108.9	32.7	107.1	42.7	118.1	75.1	0.0	30.9
08/28/2009	120.9	60.5	107.6	32.2	105.5	42.1	118.0	75.3	0.0	30.6
08/29/2009	111.2	55.5	112.6	33.6	107.6	43.2	117.9	75.2	0.0	30.6
08/30/2009	109.7	54.5	113.4	33.8	110.4	44.2	118.0	75.3	0.0	30.6
08/31/2009	112.7	56.6	104.8	31.5	105.5	41.9	118.1	74.8	0.0	31.0
09/01/2009	83.7	0.0	77.3	0.9	82.3	0.0	93.0	1.7	15.4	67.0
09/02/2009	88.8	0.0	84.4	0.8	88.5	0.0	92.9	1.5	15.0	69.0
09/03/2009	92.0	0.2	85.4	0.9	83.4	0.0	90.1	1.5	14.3	67.0

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

Site	Date	Species	Number of Fish	Number w GBT signs	Number w Fin Signs	% Fin GBT	% Severe Fin GBT	Number of Fish with Fin GBT Listed by Highest Rank			
								Rank 1	Rank 2	Rank 3	Rank 4
Little Goose Dam											
	08/31/09	Chinook + Steelhead	12	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	08/29/09	Chinook + Steelhead	23	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	08/27/09	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	08/31/09	Chinook	27	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at 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>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>	
8/21	108.5	109.1	109.4	24	108.2	109.0	109.7	24	102.4	103.8	104.3	24	103.8	104.8	106.1	24	101.7	102.8	104.0	24
8/22	106.3	106.9	107.4	24	105.3	106.0	106.3	24	100.4	100.8	101.1	24	102.2	103.3	104.5	24	101.6	102.8	104.1	24
8/23	105.4	105.9	106.3	24	104.9	105.5	105.9	24	100.6	100.9	101.2	24	102.2	103.3	104.5	24	101.2	102.2	103.3	24
8/24	105.0	105.5	106.1	24	104.0	104.6	104.9	24	100.5	100.9	101.3	24	102.2	103.7	105.3	24	101.1	102.7	104.2	24
8/25	105.5	106.0	106.2	24	103.2	103.9	104.2	24	100.6	100.9	101.3	24	102.3	103.7	105.2	24	101.3	102.6	104.5	24
8/26	105.6	106.0	106.3	24	103.5	104.4	104.8	24	100.2	100.6	101.0	24	102.0	103.4	104.6	24	101.7	103.0	104.4	24
8/27	105.8	106.3	106.6	24	103.6	104.5	105.0	24	100.0	100.4	100.7	24	102.1	103.4	104.6	24	101.9	103.3	104.7	24
8/28	106.1	106.7	107.0	24	103.9	104.6	105.3	24	100.5	101.2	101.6	24	102.3	103.7	105.1	24	102.1	103.4	104.9	24
8/29	105.9	106.7	107.0	24	102.9	103.7	104.1	24	101.2	101.6	101.9	24	102.1	103.4	104.9	24	101.2	102.2	103.2	24
8/30	106.4	106.8	107.3	24	104.1	104.8	105.3	24	101.8	102.2	102.7	24	102.6	104.0	105.4	24	101.7	103.1	104.5	24
8/31	---	---	---	0	104.9	105.5	106.1	24	101.6	101.9	102.1	24	102.7	104.1	105.2	24	101.7	103.1	104.5	24
9/1	---	---	---	0	104.2	104.8	105.2	24	101.2	101.6	102.4	24	102.5	103.8	105.0	24	101.5	102.8	104.3	24
9/2	---	---	---	0	104.2	105.1	105.7	24	101.4	101.8	102.2	24	102.1	103.4	104.6	24	101.4	102.8	104.2	24
9/3	---	---	---	0	103.1	103.6	105.0	24	101.3	101.6	101.8	24	101.9	102.8	103.9	24	101.0	101.8	102.7	24

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwtr-Lewiston</u>				<u>Lower Granite</u>				<u>L. Granite Tlwr</u>				<u>Little Goose</u>				<u>L. Goose Tlwr</u>			
	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#	<u>24 h</u>		<u>12 h</u>		#
	<u>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>	
8/21	103.8	105.7	107.3	24	101.4	101.8	102.2	24	110.1	110.2	110.7	24	107.1	107.4	107.9	24	112.2	112.6	113.0	24
8/22	102.8	104.8	106.5	24	102.3	102.8	103.5	24	110.8	111.1	111.4	24	108.0	108.2	108.5	24	112.8	113.5	114.4	24
8/23	102.5	104.1	105.6	23	103.0	103.2	103.4	24	111.0	111.1	111.3	24	108.0	108.4	108.9	24	112.7	113.3	113.8	24
8/24	102.5	104.8	106.7	24	102.8	103.0	103.3	24	111.0	111.4	112.0	24	108.3	108.7	109.2	24	112.6	113.2	113.6	24
8/25	102.5	104.5	106.3	23	103.0	103.2	103.6	24	112.0	113.6	115.8	24	107.5	107.7	108.4	24	112.4	112.7	113.1	24
8/26	102.5	104.5	106.2	23	101.4	101.7	102.3	24	111.5	112.2	112.5	24	106.7	107.0	107.2	24	112.1	112.7	113.5	24
8/27	102.7	105.0	106.7	24	100.6	101.0	102.0	24	111.7	112.0	112.3	24	106.7	106.9	107.1	24	111.5	111.7	111.9	24
8/28	102.8	104.8	106.6	24	101.2	101.6	102.2	24	111.7	112.0	112.4	24	107.2	107.5	107.8	24	111.6	112.1	112.5	24
8/29	102.4	103.7	104.7	22	100.4	100.7	101.0	24	109.5	109.9	110.6	24	108.0	108.2	108.5	24	111.1	111.5	111.8	24
8/30	103.1	104.9	106.4	24	101.2	101.6	102.1	24	110.4	110.8	111.4	24	108.0	108.5	108.8	24	111.3	111.8	112.1	24
8/31	103.0	104.7	106.1	24	102.5	102.9	103.4	24	109.9	110.2	110.7	24	107.7	108.0	108.3	24	110.0	111.1	111.7	24
9/1	102.7	104.4	106.0	23	102.8	103.4	104.6	24	103.3	104.2	109.2	24	107.9	108.1	108.2	24	108.2	109.3	110.0	24
9/2	102.4	104.2	105.8	24	102.1	102.9	104.7	24	101.2	101.6	102.0	24	107.4	107.8	108.3	24	108.3	109.4	111.1	24
9/3	102.0	103.0	104.1	22	100.9	102.0	104.6	24	99.9	100.4	100.7	24	107.0	107.5	108.3	24	106.2	106.9	108.7	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>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>	
8/21	105.7	106.1	106.6	24	115.2	115.6	116.2	24	111.7	112.2	112.6	24	113.3	114.2	114.8	24	---	---	---	0
8/22	107.2	108.0	108.4	24	115.6	116.0	116.4	24	112.6	113.0	113.3	24	113.4	114.2	115.1	24	---	---	---	0
8/23	108.8	109.2	109.5	24	115.6	115.9	116.2	24	113.0	113.2	113.6	24	113.3	114.1	114.7	24	---	---	---	0
8/24	108.6	108.7	109.0	24	115.7	115.9	116.3	24	112.2	112.5	112.7	24	112.4	112.8	113.4	24	---	---	---	0
8/25	108.5	108.7	109.0	24	113.1	113.5	114.7	24	111.5	111.7	112.1	24	111.0	111.6	111.9	24	---	---	---	0
8/26	108.6	108.8	109.3	24	113.9	114.9	115.7	24	111.3	111.5	111.7	24	111.0	111.7	112.1	24	---	---	---	0
8/27	108.7	109.2	109.6	24	115.1	116.0	116.3	24	111.2	111.4	111.9	24	112.5	113.3	113.9	24	---	---	---	0
8/28	109.5	109.8	110.4	24	115.4	115.7	115.9	24	111.5	111.8	112.1	24	112.6	113.3	113.7	24	---	---	---	0
8/29	108.2	108.4	108.8	24	114.0	114.7	115.6	24	110.9	111.2	111.6	24	111.8	112.8	113.0	24	---	---	---	0
8/30	109.3	110.1	110.5	24	114.1	114.8	115.3	24	110.9	111.1	111.4	24	110.9	111.6	112.2	24	---	---	---	0
8/31	109.6	109.7	110.0	24	113.2	113.8	114.6	24	111.0	111.3	111.7	24	110.6	111.4	111.9	24	---	---	---	0
9/1	109.1	109.5	109.7	24	108.8	109.5	111.2	24	110.8	111.0	111.2	24	110.5	111.2	111.5	24	---	---	---	0
9/2	108.3	108.9	109.3	24	107.8	108.4	108.8	24	110.3	110.5	110.7	24	109.8	110.3	110.8	24	---	---	---	0
9/3	108.5	109.2	110.1	24	107.6	107.9	109.0	24	110.1	110.4	111.0	24	109.3	109.6	110.2	24	---	---	---	0

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

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>			<u>24h</u>	<u>12h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
8/21	107.9	108.1	108.2	24	116.5	117.0	117.3	24	102.2	102.5	102.8	24	112.3	112.8	113.0	24	105.5	105.9	106.3	24
8/22	108.4	108.8	109.0	24	117.0	117.5	117.9	24	102.4	102.9	103.2	24	112.7	113.0	113.4	24	103.9	104.6	104.9	24
8/23	108.7	109.2	109.8	24	116.8	117.2	117.4	24	102.1	102.4	102.5	24	112.0	112.8	113.0	24	104.8	105.0	105.3	24
8/24	107.3	107.4	107.8	24	116.2	116.4	116.6	24	102.4	103.0	103.2	24	112.4	113.0	113.8	24	103.6	104.2	104.7	24
8/25	106.8	107.4	108.3	24	116.5	117.0	117.2	24	102.1	102.3	102.9	24	110.8	111.3	111.5	24	105.4	106.1	106.3	24
8/26	105.3	105.5	107.6	24	117.0	117.5	117.8	24	102.0	102.5	103.2	24	112.4	113.7	114.8	24	105.1	105.4	105.8	24
8/27	105.7	106.1	107.1	24	116.0	116.7	117.0	24	102.2	102.4	102.5	24	114.0	114.5	114.7	24	106.5	107.6	108.1	24
8/28	104.1	104.5	105.1	24	115.8	116.6	116.9	24	102.1	102.3	102.4	24	113.6	113.8	114.1	24	106.7	107.1	107.4	24
8/29	103.5	103.8	104.2	24	116.1	116.4	116.5	24	101.9	102.1	102.3	24	113.6	114.3	114.5	24	104.6	104.9	105.5	24
8/30	104.7	105.3	105.5	24	115.8	116.2	116.4	24	102.4	102.9	103.3	24	113.0	114.3	114.8	24	105.0	105.8	106.1	24
8/31	104.9	105.3	105.8	24	114.9	115.3	115.6	24	103.4	103.8	104.1	24	114.3	114.8	115.1	24	106.5	107.0	107.2	24
9/1	104.3	104.7	105.1	24	105.7	107.1	114.2	24	103.3	103.5	103.7	24	105.2	106.4	112.0	24	105.9	106.2	106.6	24
9/2	104.1	104.4	105.4	24	103.8	104.6	104.8	24	103.3	103.8	104.0	24	103.7	104.2	104.8	24	104.6	105.0	105.3	24
9/3	104.1	104.6	105.4	24	103.6	103.8	104.2	24	102.6	103.0	103.6	24	103.2	103.3	103.6	24	101.6	101.9	102.7	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>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	
8/21	112.2	112.6	112.8	24	106.8	107.3	108.3	24	---	---	---	0	110.6	111.5	113.0	24	113.7	114.6	116.6	24
8/22	111.8	112.3	112.6	24	105.0	105.3	106.0	24	---	---	---	0	112.7	114.4	115.7	24	114.4	115.7	116.7	24
8/23	111.2	111.5	111.8	24	103.8	104.1	104.7	24	---	---	---	0	111.3	112.6	113.3	24	114.1	114.8	116.8	24
8/24	111.5	112.1	112.2	24	103.6	103.8	104.1	24	---	---	---	0	112.5	114.3	115.4	24	112.7	113.0	113.3	24
8/25	111.6	112.0	112.3	24	103.0	103.1	103.6	24	---	---	---	0	112.8	113.7	114.6	24	112.3	112.4	112.8	24
8/26	112.4	112.7	113.1	24	103.7	104.5	105.1	24	---	---	---	0	113.3	114.6	115.4	24	112.4	112.7	113.1	24
8/27	113.2	114.1	114.3	24	105.3	105.6	105.8	24	---	---	---	0	114.1	115.2	115.7	24	112.9	113.0	113.1	24
8/28	113.5	113.9	114.2	24	106.3	106.8	107.2	24	---	---	---	0	114.1	114.7	115.6	24	112.9	113.1	113.2	24
8/29	112.6	112.8	113.0	24	105.6	106.0	106.4	24	---	---	---	0	113.1	113.7	113.9	24	112.9	113.0	113.0	24
8/30	112.9	113.3	113.7	24	105.6	106.0	106.1	24	---	---	---	0	114.1	114.7	115.2	24	113.3	113.6	113.8	24
8/31	113.6	114.0	114.3	24	105.4	105.6	106.0	24	---	---	---	0	113.4	114.0	115.2	24	113.7	113.9	114.3	24
9/1	108.7	110.8	113.1	24	103.4	104.0	104.5	24	---	---	---	0	111.9	112.3	113.2	24	109.2	110.9	112.7	24
9/2	105.9	106.3	106.6	24	102.9	103.9	104.1	24	---	---	---	0	107.0	108.4	110.2	24	110.1	111.0	112.5	24
9/3	103.2	103.7	104.6	24	102.8	103.0	103.6	24	---	---	---	0	104.4	104.7	105.0	24	109.1	109.8	110.9	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)
08/21/2009 *	---	---	---	---	0	0	0	0	0	0	---
08/22/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/23/2009 *	---	---	---	---	0	0	0	0	0	---	---
08/24/2009 *	---	---	---	---	0	0	2	0	0	---	14
08/25/2009 *	---	---	---	---	0	0	0	0	0	0	---
08/26/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/27/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/28/2009 *	---	---	---	---	0	0	0	0	0	0	0
08/29/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/30/2009 *	---	---	---	---	0	0	0	0	0	---	0
08/31/2009 *	---	---	---	---	0	0	0	0	0	---	0
09/01/2009 *	---	---	---	---	0	0	0	---	0	0	0
09/02/2009 *	---	---	---	---	0	0	0	---	0	---	---
09/03/2009 *	---	---	---	---	0	0	0	---	0	---	0
09/04/2009	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	0	0	2	0	0	0	14
# Days:	0	0	0	0	14	14	14	11	14	4	10
Average:	0	0	0	0	0	0	0	0	0	0	1
YTD	37,667	44,693	20,207	29,713	3,081,413	2,432,949	449,037	9,225	2,251,664	1,032,260	1,717,102

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)
08/21/2009 *	---	---	---	---	139	49	37	18	10,823	158	---
08/22/2009 *	---	---	---	---	128	82	34	26	7,983	---	585
08/23/2009 *	---	---	---	---	102	50	22	11	5,223	---	---
08/24/2009 *	---	---	---	---	74	81	34	6	3,686	---	618
08/25/2009 *	---	---	---	---	106	123	57	4	1,003	1,531	---
08/26/2009 *	---	---	---	---	78	127	35	11	648	---	815
08/27/2009 *	---	---	---	---	60	43	11	13	426	---	663
08/28/2009 *	---	---	---	---	77	63	147	20	1,412	901	662
08/29/2009 *	---	---	---	---	141	69	48	10	826	---	724
08/30/2009 *	---	---	---	---	94	197	33	11	793	---	507
08/31/2009 *	---	---	---	---	67	70	13	4	187	---	319
09/01/2009 *	---	---	---	---	55	81	21	---	252	260	623
09/02/2009 *	---	---	---	---	80	80	15	---	225	---	---
09/03/2009 *	---	---	---	---	118	82	16	---	550	---	813
09/04/2009	---	---	---	---	---	---	---	---	---	---	---
Total:	0	0	0	0	1,319	1,197	523	134	34,037	2,850	6,329
# Days:	0	0	0	0	14	14	14	11	14	4	10
Average:	0	0	0	0	94	86	37	12	2,431	713	633
YTD	0	18	15	545	995,929	1,180,477	433,306	8,189	3,651,700	1,506,749	4,302,266

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)
08/21/2009	*	---	---	---	---	33	12	0	0	0	---
08/22/2009	*	---	---	---	---	14	29	0	0	0	0
08/23/2009	*	---	---	---	---	46	36	0	0	0	---
08/24/2009	*	---	---	---	---	9	24	2	0	10	0
08/25/2009	*	---	---	---	---	21	29	0	0	0	---
08/26/2009	*	---	---	---	---	36	23	2	0	0	0
08/27/2009	*	---	---	---	---	17	19	2	0	0	---
08/28/2009	*	---	---	---	---	7	20	25	0	0	0
08/29/2009	*	---	---	---	---	7	13	8	0	0	0
08/30/2009	*	---	---	---	---	12	12	2	0	10	0
08/31/2009	*	---	---	---	---	6	23	4	0	0	---
09/01/2009	*	---	---	---	---	5	6	3	---	0	0
09/02/2009	*	---	---	---	---	1	10	0	---	0	---
09/03/2009	*	---	---	---	---	6	2	1	---	0	5
09/04/2009		---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	220	258	49	0	20	0
# Days:		0	0	0	0	14	14	14	11	14	4
Average:		0	0	0	0	16	18	4	0	1	0
YTD		0	0	0	332	92,285	81,226	18,989	37,588	127,120	240,419

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)
08/21/2009	*	---	---	---	---	0	0	0	0	0	7
08/22/2009	*	---	---	---	---	0	0	0	0	10	---
08/23/2009	*	---	---	---	---	0	0	0	0	0	---
08/24/2009	*	---	---	---	---	0	0	2	0	0	0
08/25/2009	*	---	---	---	---	0	0	0	0	0	---
08/26/2009	*	---	---	---	---	3	0	0	0	0	0
08/27/2009	*	---	---	---	---	0	0	0	0	0	---
08/28/2009	*	---	---	---	---	0	0	0	0	0	0
08/29/2009	*	---	---	---	---	0	0	0	0	0	---
08/30/2009	*	---	---	---	---	0	0	0	0	0	0
08/31/2009	*	---	---	---	---	0	0	0	0	0	---
09/01/2009	*	---	---	---	---	0	1	0	---	0	0
09/02/2009	*	---	---	---	---	0	0	0	---	0	---
09/03/2009	*	---	---	---	---	0	0	0	---	0	0
09/04/2009		---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	3	1	2	0	10	7
# Days:		0	0	0	0	14	14	14	11	14	4
Average:		0	0	0	0	0	0	0	0	1	2
YTD		1,833	24,360	9,611	8,297	4,510,913	3,563,511	727,833	17,612	803,737	940,639

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)	
08/21/2009	*	---	---	---	0	1	0	0	10	0	---	
08/22/2009	*	---	---	---	0	0	0	1	21	---	0	
08/23/2009	*	---	---	---	0	0	0	1	0	---	---	
08/24/2009	*	---	---	---	0	0	0	0	10	---	0	
08/25/2009	*	---	---	---	0	0	0	0	0	14	---	
08/26/2009	*	---	---	---	0	0	0	0	0	---	0	
08/27/2009	*	---	---	---	2	0	0	0	0	---	0	
08/28/2009	*	---	---	---	0	0	0	0	0	0	14	
08/29/2009	*	---	---	---	0	0	0	2	0	---	0	
08/30/2009	*	---	---	---	0	0	0	1	0	---	0	
08/31/2009	*	---	---	---	0	0	0	1	0	---	0	
09/01/2009	*	---	---	---	0	0	0	---	0	5	0	
09/02/2009	*	---	---	---	0	0	0	---	0	---	---	
09/03/2009	*	---	---	---	0	0	0	---	0	---	5	
09/04/2009	*	---	---	---	---	---	---	---	---	---	---	
<hr/>												
Total:		0	0	0	0	2	1	0	6	41	19	19
# Days:		0	0	0	0	14	14	14	11	14	4	10
Average:		0	0	0	0	0	0	0	1	3	5	2
YTD		170	0	0	177	46,503	46,361	21,692	4,926	190,847	111,959	74,964

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

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

Definitions for Smolt Index Counts

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

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.
 RIS data collected for the FPC by Chelan Co. PUD/Washington Dept. of Fish and Wildlife.
 LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.
 LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.
 IMN data collected for the FPC by the Nez Perce Tribe.

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

9/4/09 10:08 AM

		08/21/09		TO		09/04/09			
		Species							
Site	Data	CH0	CH1	CO	ST	SO	Grand Total		
LGR	Sum of NumberCollected	708			102	1	1	812	
	Sum of NumberBarged	0			0	0	0	0	
	Sum of NumberBypassed	110			0	1	0	111	
	Sum of Numbertrucked	593			99	0	1	693	
	Sum of SampleMorts	5			2	0	0	7	
	Sum of FacilityMorts	0			1	0	0	1	
	Sum of ResearchMorts	0			0	0	0	0	
	Sum of TotalProjectMorts	5			3	0	0	8	
LGS	Sum of NumberCollected	833			170	1		1,004	
	Sum of NumberBarged	0			0	0		0	
	Sum of NumberBypassed	0			0	0		0	
	Sum of Numbertrucked	821			160	1		982	
	Sum of SampleMorts	9			8	0		17	
	Sum of FacilityMorts	3			2	0		5	
	Sum of ResearchMorts	0			0	0		0	
	Sum of TotalProjectMorts	12			10	0		22	
LMN	Sum of NumberCollected	248		1	22	1		272	
	Sum of NumberBarged	0		0	0	0		0	
	Sum of NumberBypassed	9		0	0	0		9	
	Sum of Numbertrucked	216		1	22	1		240	
	Sum of SampleMorts	23		0	0	0		23	
	Sum of FacilityMorts	0		0	0	0		0	
	Sum of ResearchMorts	0		0	0	0		0	
	Sum of TotalProjectMorts	23		0	0	0		23	
MCN	Sum of NumberCollected	16,782			10	5	20	16,817	
	Sum of NumberBarged	0			0	0	0	0	
	Sum of NumberBypassed	0			0	0	0	0	
	Sum of Numbertrucked	16,592			10	4	19	16,625	
	Sum of SampleMorts	27			0	0	0	27	
	Sum of FacilityMorts	163			0	1	1	165	
	Sum of ResearchMorts	0			0	0	0	0	
	Sum of TotalProjectMorts	190			0	1	1	192	
Total Sum of NumberCollected		18,571		1	304	8	21	18,905	
Total Sum of NumberBarged		0		0	0	0	0	0	
Total Sum of NumberBypassed		119		0	0	1	0	120	
Total Sum of Numbertrucked		18,222		1	291	6	20	18,540	
Total Sum of SampleMorts		64		0	10	0	0	74	
Total Sum of FacilityMorts		166		0	3	1	1	171	
Total Sum of ResearchMorts		0		0	0	0	0	0	
Total Sum of TotalProjectMorts		230		0	13	1	1	245	

YTD Transportation Summary

Source: Fish Passage Center

Updated:

9/4/09 10:08 AM

TO: 09/04/09

Site	Data	Species					Grand Total
		CH0	CH1	CO	SO	ST	
LGR	Sum of NumberCollected	701,604	2,352,637	65,855	33,452	3,430,196	6,583,744
	Sum of NumberBarged	680,280	1,500,926	63,607	26,169	1,841,961	4,112,943
	Sum of NumberBypassed	15,968	847,954	1,951	7,068	1,587,773	2,460,714
	Sum of NumberTrucked	1,021	0	155	1	1	1,178
	Sum of SampleMorts	259	118	10	22	33	442
	Sum of FacilityMorts	4,057	2,734	132	192	409	7,524
	Sum of ResearchMorts	19	1,035	0	0	19	1,073
	Sum of TotalProjectMorts	4,335	3,887	142	214	461	9,039
LGS	Sum of NumberCollected	850,656	1,720,161	59,422	33,651	2,517,670	5,181,560
	Sum of NumberBarged	833,736	966,563	56,372	27,768	1,057,254	2,941,693
	Sum of NumberBypassed	9,300	751,923	2,825	5,826	1,460,071	2,229,945
	Sum of NumberTrucked	1,125	0	185	0	1	1,311
	Sum of SampleMorts	429	49	35	10	21	544
	Sum of FacilityMorts	6,055	1,622	5	47	323	8,052
	Sum of ResearchMorts	12	4	0	0	0	16
	Sum of TotalProjectMorts	6,496	1,675	40	57	344	8,612
LMN	Sum of NumberCollected	325,382	321,112	13,997	16,048	518,662	1,195,201
	Sum of NumberBarged	318,442	312,082	13,950	15,870	506,287	1,166,631
	Sum of NumberBypassed	5,826	8,790	9	114	12,089	26,828
	Sum of NumberTrucked	314	1	27	0	2	344
	Sum of SampleMorts	115	15	2	3	9	144
	Sum of FacilityMorts	583	237	8	7	258	1,093
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	698	252	10	10	267	1,237
MCN	Sum of NumberCollected	1,831,111	1,303,737	69,881	106,365	467,741	3,778,835
	Sum of NumberBarged	414,822	196	448	425	74	415,965
	Sum of NumberBypassed	1,353,698	1,301,926	69,356	105,852	467,487	3,298,319
	Sum of NumberTrucked	27,054	0	10	24	4	27,092
	Sum of SampleMorts	803	149	1	2	14	969
	Sum of FacilityMorts	34,215	1,441	65	60	158	35,939
	Sum of ResearchMorts	518	25	0	1	3	547
	Sum of TotalProjectMorts	35,536	1,615	66	63	175	37,455
Total Sum of NumberCollected		3,708,753	5,697,647	209,155	189,516	6,934,269	16,739,340
Total Sum of NumberBarged		2,247,280	2,779,767	134,377	70,232	3,405,576	8,637,232
Total Sum of NumberBypassed		1,384,792	2,910,593	74,141	118,860	3,527,420	8,015,806
Total Sum of NumberTrucked		29,514	1	377	25	8	29,925
Total Sum of SampleMorts		1,606	331	48	37	77	2,099
Total Sum of FacilityMorts		44,910	6,034	210	306	1,148	52,608
Total Sum of ResearchMorts		549	1,064	0	1	22	1,636
Total Sum of TotalProjectMorts		47,065	7,429	258	344	1,247	56,343

Cumulative Adult Passage at Mainstem Dams Through: 09/03

DAM	EndDate	Spring Chinook						Summer Chinook						Fall Chinook					
		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.		2009		2008		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	09/03	114525	66631	125543	17554	160243	11507	81936	37416	78271	11621	76947	10024	151692	47114	147450	13997	117739	9904
TDA	09/03	93908	53646	95438	15801	113852	9048	79916	27878	65073	12206	66821	7950	68707	24620	55755	10712	48991	5475
JDA	09/02	76806	49733	81772	14925	95147	7579	65989	33147	63649	13680	61980	8146	43520	17672	30210	8210	25648	3684
MCN	09/03	70413	43328	68080	12133	86998	7409	57137	21182	54735	11239	59015	7256	27634	11337	18726	4213	17476	2263
IHR	09/03	55435	28223	53142	7757	59050	4663	23856	9400	23693	4964	13243	2568	8549	6509	6058	696	2241	346
LMN	09/03	66931	20009	54512	6885	57079	4270	23353	11733	27343	2890	13719	1912	5576	8191	4485	1050	1641	316
LGS	09/03	52642	24331	50396	7805	54016	4453	20340	11207	21748	4811	11241	2521	4668	2820	3172	482	1089	150
LGR	09/03	49667	31064	50146	10946	54673	5280	14482	16367	22612	5072	11171	2757	2068	1751	2127	429	771	146
PRD	08/31	13469	2910	12178	620	18164	621	49417	2117	39174	3442	53065	2394	5051	703	2211	5596	4952	1053
RIS	09/01	12634	6003	12490	1119	14914	1069	44295	7727	38171	3096	50031	5515	2544	1086	1335	758	2293	635
RRH	09/01	6090	1086	4065	371	5734	430	34961	5231	29675	2127	37679	3897	2034	603	1455	773	1830	577
WEL	09/02	6307	1867	2708	426	4250	321	25723	3798	21060	1375	27632	2013	484	245	876	288	630	195
WFA	08/31	25067	2670	14151	521	-	-	-	-	-	-	-	-	254	86	14	43	-	-

DAM	Coho						Sockeye			Steelhead			
	2009		2008		10-Yr Avg.		2009	2008	10-Yr Avg.	2009	2008	10-Yr Avg.	Wild 2009
	Adult	Jack	Adult	Jack	Adult	Jack							
BON	49082	2932	20568	1453	17071	1057	177820	213591	78590	502806	259945	263679	148267
TDA	8107	2252	3885	511	1836	225	155582	177984	66379	251590	143681	116788	77306
JDA	4705	1342	2510	543	746	133	157396	193409	72409	237541	109344	79874	74281
MCN	1549	437	204	31	162	22	121668	146922	58760	125720	66274	56780	37937
IHR	51	14	4	0	3	0	867	539	90	81235	41473	30620	20880
LMN	6	0	2	1	0	0	1162	722	103	61249	43286	26776	18861
LGS	-4	-2	0	0	0	0	1065	593	96	31543	27313	17786	10258
LGR	0	0	0	0	0	0	1215	892	126	26447	27973	19601	8996
PRD	241	17	27	6	17	2	153465	196835	74874	16003	9558	7467	0
RIS	13	44	0	7	1	0	162817	193725	71003	12733	9271	6467	4739
RRH	4	11	1	7	1	0	133083	161320	52415	9351	7197	4662	3541
WEL	0	0	0	0	0	0	134895	165310	52866	5745	4146	3003	2274
WFA	68	44	34	44	-	-	-	-	-	17254	18718	-	-

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: 09/04/09

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

Year	Chinook Adult	Chinook Jack	Steelhead	Wild Steelhead
2009	19	-1	321	109
2008	42	0	561	270