



## Fish Passage Center

# Weekly Report #12 - 10

May 18, 2012

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### Summary of Events:

**Water Supply:** Precipitation throughout the Columbia Basin has varied between 28% and 106% of average at individual sub-basins over May. Precipitation above The Dalles has been 49% of average over May. Over the 2012 water year, precipitation has ranged between 85% and 112% of average.

**Table 1. Summary of May precipitation and cumulative October through May 14, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.**

Location	Water Year 2012		Water Year 2012	
	May 1-14, 2012		October 1, 2011 to May 14, 2012	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia Above Coulee	0.38	38	18.95	112
Snake River Above Ice Harbor	0.45	53	12.80	102
Columbia Above The Dalles	0.44	49	18.12	108
Kootenai	0.38	37	19.28	111
Clark Fork	0.32	34	12.36	111
Flathead	0.41	37	15.94	107
Pend Oreille/Spokane	0.63	53	25.84	109
Central Washington	0.12	35	5.89	85
Snake River Plain	0.19	28	7.49	96
Salmon/Boise/Payette	0.57	70	15.68	103
Clearwater	0.83	61	24.52	108
SW Washington Cascades/Cowlitz	1.81	106	60.75	100
Willamette Valley	1.51	95	55.38	107

Average snowpack in the Columbia River for basins above the Snake River confluence is 108% of average, for Snake River Basins the average snowpack is 43% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 88% of average.

Table 2 displays the April 5<sup>th</sup> and May 15<sup>th</sup> Ensemble Streamflow Prediction (ESP) runoff volume forecasts for multiple reservoirs. The May 15<sup>th</sup> forecast at The Dalles between January and July is 120207 Kaf (112% of average).

**Table 2. April 5<sup>th</sup> and May 15<sup>th</sup> ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.**

Location	April 5, 2012 ESP		May 15, 2012 ESP	
	% Average (1971-2000)	Runoff Volume (Kaf)	% Average (1971-2000)	Runoff Volume (Kaf)
The Dalles (Jan-July)	106	114135	112	120207
Grand Coulee (Jan-July)	110	69099	116	73074
Libby Res. Inflow, MT (Apr-Aug)	117	7312 6872*	130	8146 7155*
Hungry Horse Res. Inflow, MT (Jan-July)	103	2285	101	2236
Lower Granite Res. Inflow (Apr-July)	106	22825	102	22025
Brownlee Res. Inflow (Apr-July)	103	6512	92	5806
Dworshak Res. Inflow (Apr-July)	109	2874 2966*	117	3083 3226*

\* Denotes COE Forecast

Grand Coulee Reservoir is at 1242.8 feet (5-17-12) and refilled 4.5 feet over the last week. Outflows at Grand Coulee have ranged between 160.2 and 182.3 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2404.3 feet (5-17-12) and has refilled 7.3 feet last week. Outflows at Libby Dam have ranged between 13.4-17.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3536.1 feet (5-17-12) and has refilled 3.7 feet last week. Outflows at Hungry Horse have ranged between 4.6 and 9.3 Kcfs last week.

Dworshak is currently at an elevation of 1554.0 feet (5-17-12) and has refilled 9.8 feet last week. Outflows from Dworshak have been 2.6-7.9 Kcfs over the past week.

The Brownlee Reservoir was at an elevation of 2047.8 feet on May 15<sup>th</sup>, 2012 refilling 5.5 feet last week. Over the last week, outflows at Brownlee have ranged between 16.4 and 24.8 Kcfs.

The Biological Opinion flow period began on April 3<sup>rd</sup> in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast, the flow objective this spring is 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 108.1 Kcfs over the last week and 115.1 Kcfs over the spring period.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives will be 260 Kcfs at McNary Dam (began April 10<sup>th</sup>) and 135 Kcfs at Priest Rapids Dam (began April 10<sup>th</sup>). Flows at McNary Dam have averaged 331.1 Kcfs over the last week and 339.4 Kcfs over the spring period. Flows at Priest Rapids Dam have averaged 215.3 Kcfs over the last week and 212.5 Kcfs over the spring period.

**Spill:** Spill for fish passage began on April 3<sup>rd</sup> at the lower Snake River projects, and on April 10<sup>th</sup> at the lower Columbia River projects.

Snake River flows have increased over the past week. At Lower Granite Dam spill met, or exceeded, the Court Ordered 20 Kcfs, and has ranged from a daily average of 20 Kcfs to 48 Kcfs. At Little Goose Dam spill varied widely, but met, or exceeded, the 30% of instantaneous flow level as specified in the Court Order. At Lower Monumental Dam the COE was operating with a bulk spill pattern during the beginning of the past week, which tends to produce higher total dissolved gas than the uniform spill pattern. During this period, TDG exceedences at the Ice Harbor Forebay caused spill levels to be below the Court Order. Late in the week, the COE changed over to the uniform spill pattern and increased spill slightly to the Court Ordered level. Despite the increase in spill level, TDG levels to rapidly decreased in the Lower Monumental tailrace. At Ice Harbor Dam the Court Order “test-like” conditions are in place and have been met.

Project	Day/Night Spill
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	“Test-Like”: 45 Kcfs/gas cap vs. 30%/30%

Spill for fish passage at the Lower Columbia projects began on April 10<sup>th</sup>. Flows have remained relatively high in the lower Columbia River. Spill at McNary Dam was in excess of the Court Order as a result of spill in excess of hydraulic capacity due to unit outages. Spill at John Day Dam changed to the test levels of 30%/30% versus 40%/40%. For the most part, spill test levels were met at John Day, however TDG exceedences did at times limit spill levels. At The Dalles Dam, spill did not always meet the 40% objective due to TDG at the Bonneville forebay exceeding the 115% criteria. At the start of the last week, spill at Bonneville Dam was at times slightly below the 100 Kcfs spill level due to TDG concerns, however later in the week spill levels were consistently at or above the 100 Kcfs in the Court Order due to river flows in excess of hydraulic capacity.

Project	Day/Night Spill
McNary	40%/40%
John Day	<b>Testing:</b> 30%/30% vs. 40%/40%
The Dalles	40%/40%
Bonneville	100 Kcfs/100 Kcfs

Gas bubble trauma samples were taken this past week at Lower Granite, Little Goose, Lower Monumental, Rock Island, McNary and Bonneville dams. The most recent samples estimated fish with signs of GBT equal to: 0% at Lower Granite (5/17); 0% at Little Goose (5/14), 0% at Lower Monumental (5/16), 2% at McNary (5/14), 1% at Bonneville (5/15) and 1% at Rock Island (5/17). All the affected fish exhibited minor (Rank 1) signs of GBT.

**Smolt Monitoring:** Smolt monitoring activities are ongoing at all seven SMP dams (BON, JDA, MCN, LGR, LGS, LMN, and RIS) and GRN, LEW, IMN smolt traps.

The passage index for yearling Chinook at BON increased again this week. The daily average passage index at BON for yearling Chinook this week was over 120,600 per day compared to nearly 69,000 per day last week. Subyearling Chinook numbers decreased this week, with a daily average passage index of 1,050 per day. Sockeye passage at BON increased again this week, with a daily average passage index of over 64,600 per day. The daily average passage index for sockeye juveniles at BON last week was just over 21,000 per day. Mortality rates for sockeye at BON remained high for most of the week this week, with a range in mortality of 6.3% to 11.0% from May 11<sup>th</sup> to May 16<sup>th</sup>. On the afternoon of May 16<sup>th</sup>, the Corps of Engineers changed the turbine operations at the Bonneville second powerhouse to the mid-range of the 1% efficiency range. This change in operation coincided with a decreased mortality rate for the May 17<sup>th</sup> sample (2.9%). Descaling for sockeye juveniles also decreased with this change in operation. From May 11<sup>th</sup> to May 16<sup>th</sup>, the descaling rate for sockeye juveniles at BON ranged from 7.5% to 23.6%. The descaling rate for the May 17<sup>th</sup> sample was only 5%. Compared to last week, the passage index of coho increased this week, whereas that for steelhead decreased. Finally, there was a slight increase in the collection counts of juvenile lamprey this week.

Yearling Chinook continue to be the dominant species of salmonid at John Day Dam this week, with an average daily passage index of 93,351 per day. However, the daily average passage index for yearling Chinook at JDA for this week is much smaller when compared to last week, which had a daily average passage index of 196,567. Steelhead numbers at JDA also decreased this week. The daily average passage index for steelhead this week was 33,807, compared to 105,119 per day last week. Sockeye, subyearling Chinook, and juvenile lamprey passage at JDA also decreased this week. The only salmonids that had an increase in passage at JDA this week was coho. The daily average passage index for coho at JDA this week was 7,667, compared to 4,707 per day last week. Yearling Chinook were also the dominant species of salmonid at McNary Dam this week, with an average daily passage index of 145,452 per day. The daily

passage index for yearling Chinook at MCN this week is fairly similar to last week's daily passage index of 153,017 per day. Steelhead passage continued to decrease this week at MCN. The daily average passage index for steelhead at MCN this week was 13,083, compared to last week's daily average passage index of 30,687 per day. Sockeye passage at MCN continued to increase this week. The daily average passage index for sockeye at MCN this week was 120,845 per day.

Yearling Chinook and steelhead passage at LGR increased this week. The daily average passage index for yearling Chinook at LGR this week was 64,745 per day, compared to 54,253 per day last week. This week's daily average passage index for steelhead at LGR was 50,894. The daily passage index for steelhead at LGR last week was 41,894. Subyearling Chinook, coho, and sockeye/kokanee passage at LGR also increased this week. Finally, no lamprey juveniles were sampled this week at LGR.

Yearling Chinook continue to be the dominant species of salmonid passing LGS this week. The daily average passage index for yearling Chinook at LGS this week was 60,871 per day, which is a decrease in passage when compared to last week's daily average of 115,650 per day. Compared to last week, steelhead, coho, and subyearling Chinook at LGS also decreased this week. However, sockeye passage at LGS increased this week. Yearling Chinook and steelhead were also the most dominant species at LMN this week. The daily average passage indices for yearling Chinook and steelhead at LMN this week were 27,493 and 22,942, respectively.

Based on the passage index, coho were the dominant salmonid species at RIS this week, followed closely by sockeye. The daily average passage indices for coho and sockeye at RIS this week were 2,949 and 2,195 fish per day, respectively. This week's daily average for coho is larger than that for last week. However, for sockeye, the daily average passage index for this week is smaller than that seen last week. The daily average passage index for yearling Chinook and steelhead also decreased this week, with an average of 825 yearling Chinook per day and 478 steelhead coho per day. Very few lamprey juveniles were collected at RIS this week.

Yearling Chinook and steelhead collections at the Grande Ronde Trap have both increased this week. Yearling Chinook were the dominant species this week,

with a daily average collection of 214 per day. The daily average collection for steelhead this week is 56 per day.

Due to high flows, collection activities at the Salmon River Trap were terminated on May 11<sup>th</sup>. Collection activities at this trap will not resume for the rest of the 2012 season. Trapping activities at the Snake River Trap continued this week. Yearling Chinook were the dominant species at the Snake River trap this week, with a daily average collection of 218 per day. The daily average collection for steelhead for this week was 51 per day.

No new data are available from the Imnaha River Trap for this week.

### **Hatchery Release:**

**Snake River Zone:** The Snake River Zone encompasses the Snake River and its tributaries from its confluence with the Columbia River to Hells Canyon Dam. Approximately 165,000 sockeye smolts were scheduled to be released into the Salmon River this week. All of these sockeye smolts are unclipped but are tagged with coded-wire tags. These were the only new releases scheduled for this zone this week.

Several releases of subyearling fall Chinook are scheduled for this zone over the next two weeks. In all, these releases are expected to total over 2.8 million fall Chinook juveniles. Of these, about 82% are scheduled for release into the Snake River and 18% are scheduled for release into the Clearwater River. All subyearling fall Chinook Snake River releases scheduled for the Snake River are to take place above Lower Granite Dam. In addition, about 8.2% of the subyearling fall Chinook juveniles that are scheduled for release over the next two weeks are fall Chinook surrogates and are unmarked. However, these fall Chinook surrogates are 100% PIT-tagged.

**Mid-Columbia Zone:** The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Approximately 484,000 subyearling summer Chinook were scheduled for release from Wells Hatchery, into the Mid-Columbia River, this week. In addition, approximately 345,000 yearling fall Chinook juveniles were scheduled to be released into the Yakima River this week. All of these fall Chinook are unclipped but 91% are tagged with coded-wire-tags and 9% are tagged with PIT-tags. About 150,000 yearling spring Chinook were scheduled to be released into the White River, above Lake Wenatchee, this week. These spring

Chinook juveniles are 100% unmarked. Several volitional releases of coho juveniles were scheduled to begin this week. In all, these volitional releases were expected to total over 281,000 juveniles, all of which were scheduled to take place from acclimation facilities on the Wenatchee River. These volitional releases are expected to run through early June and July. All of these coho juveniles are unclipped but are tagged with coded-wire tags and/or blank wire body tags. Finally, about 225,000 summer steelhead juveniles were scheduled for release into the Wenatchee River this week.

The only release of juvenile salmonids that is scheduled for this zone over the next two weeks is a release of about 80,000 summer steelhead to the Okanogan River. This release is scheduled to take place on or around May 20<sup>th</sup>.

**Lower Columbia Zone:** The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were no new releases of juvenile salmonids planned for this zone this week. There is only one release of juvenile salmonids scheduled for this zone over the next two weeks. This is a release of approximately 600,000 subyearling fall Chinook juveniles to the Umatilla River, which is scheduled to begin on or around May 20<sup>th</sup>.

### **Adult Fish Passage:**

Adult counts at Bonneville Dam have been updated through May 17<sup>th</sup>. Daily adult spring Chinook counts at Bonneville Dam ranged from 4,036 to 8,786 adult salmon per day. As of May 18<sup>th</sup>, using the historical counting schedule, 130,684 spring Chinook have been counted at Bonneville Dam. In 2011, 154,030 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2012 adult spring Chinook count at Bonneville Dam is 84.8% of the 2011 count and 98.4% of the 10 year average of 132,752. At Willamette Falls Dam 10,498 adult spring Chinook has been counted so far this year. At The Dalles Dam, 79,966 adult spring Chinook have been counted and at McNary Dam 50,911 adult spring Chinook have been counted so far this season. The Dalles Dam 2012 adult spring Chinook count is 71.9% of the 2011 count and 87.4% of the 10 year average count. The 2012 McNary Dam adult spring Chinook count is about 67% of the 2011 count and 82.4% of the 10 year average count.

The Bonneville Dam 2012 steelhead count of 3,400 is about 1.10 times greater than the 2011 count

of 3,088 and about 1.01 times greater than the 10 year average count of 3,382. The 2012 Bonneville wild adult steelhead count of 1,028 is about 92.4% of the 2011 count of 1,113, while being about 1.09 times greater than the 10 year average count of 940. At upriver sites, adult steelhead continue to move through the hydro system to reach their tributaries and spawning sites. The majority of these fish over-wintered in pools and will complete their trip to their spawning grounds in March through early May. Daily adult steelhead counts at Lower Granite Dam ranged from 11 to 50 adults per day last week. This year's Lower Granite steelhead count of 8,834 is about 72.5% of the 2011 count of 12,189 and 88.9% of the 10 year average of 9,938. The 2012 Lower Granite wild adult steelhead count of 3,863 is about 67.9% of the 2011 count of 5,685, while being about 1.24 times greater than the 10 year average count of 3,118. At Willamette Falls Dam, the 2012 count for steelhead was 10,443, as of May 13th. This year's steelhead count is about 1.04 times greater than the 2011 count of 10,024, while being and about 83.5% of the 10 year average count of 12,500.

### Hatchery Releases Last Two Weeks

Hatchery Release Summary									
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Oxbow-Idaho	CH0	FA	2012	200,000	05-05-12	05-05-12	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Oxbow-Oregon	SO	UN	2012	85,000	05-12-12	05-12-12	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2012	80,000	05-12-12	05-12-12	Redfish Lake Creek	Salmon River (ID)
<b>Idaho Dept. of Fish and Game Total</b>					<b>365,000</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2012	327,637	04-14-12	05-07-12	Big Canyon Acclim.Pd (Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2012	211,920	04-17-12	06-01-12	Deschutes River	Deschutes River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>539,557</b>				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2012	228,000	05-06-12	05-17-12	Yankee Fk (Salmon R)	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2012	230,000	05-06-12	05-17-12	Yankee Fk (Salmon R)	Salmon River (ID)
<b>U.S. Fish and Wildlife Service Total</b>					<b>458,000</b>				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2012	25,000	04-29-12	05-13-12	Parkdale Acclim Pond	Hood River
<b>Warm Springs Tribe Total</b>					<b>25,000</b>				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2012	298,000	05-11-12	05-20-12	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	ST	SU	2012	200,000	05-15-12	05-20-12	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SP	2012	150,000	05-15-12	05-15-12	White River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2012	617,950	04-06-12	05-07-12	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2012	25,000	05-12-12	06-30-12	Blackbird Island Acc Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	SP	2013	30,000	05-01-12	05-15-12	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2012	183,300	05-11-12	05-11-12	Chewuch Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2012	183,300	05-11-12	05-11-12	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2012	183,300	05-11-12	05-11-12	Twisp River	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2012	400,000	04-12-12	05-25-12	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2012	90,000	04-15-12	05-15-12	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2012	484,000	05-12-12	05-25-12	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2012	30,000	04-25-12	05-10-12	Omak Creek	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2012	100,000	04-25-12	05-10-12	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2012	200,000	04-20-12	05-20-12	Methow River	Methow River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>3,174,850</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,537	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,564	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,662	05-02-12	06-30-12	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Chelan Hatchery	ST	SU	2012	25,000	05-02-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2012	264,721	03-15-12	05-15-12	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2012	265,151	03-15-12	05-15-12	Easton Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2012	267,107	03-15-12	05-15-12	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	64,114	04-16-12	07-01-12	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	67,858	04-16-12	07-01-12	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	78,892	04-16-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	82,621	04-16-12	07-01-12	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	93,312	04-16-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2012	250,000	05-05-12	05-05-12	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	91,112	04-20-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	97,073	04-20-12	07-01-12	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	100,000	03-02-12	07-01-12	Prosser Acclim Pond	Yakima River
Yakama Tribe	Wells Hatchery	CH1	FA	2012	345,000	05-14-12	05-14-12	Stiles Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,423	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,533	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	86,994	05-14-12	06-02-12	Coulter Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	95,257	05-11-12	06-11-12	Twisp Acclim Pond	Methow River
<b>Yakama Tribe Total</b>					<b>2,533,931</b>				
<b>Grand Total</b>					<b>7,096,338</b>				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:		5/18/2012	to	5/31/2012					
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
National Marine Fisheries Service	Lyons Ferry Hatchery	CH0	FA	2012	230,000	05-21-12	06-08-12	Couse Creek	Snake River
<b>National Marine Fisheries Service Total</b>					<b>230,000</b>				
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2012	400,000	05-20-12	05-31-12	Pittsburg Landing Acclim Pond	Snake River
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2012	500,000	05-20-12	05-31-12	Big Canyon (Clearwater River)	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH0	FA	2012	500,000	05-20-12	05-31-12	Cpt John Acclim Pond	Snake River
<b>Nez Perce Tribe Total</b>					<b>1,400,000</b>				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	CH0	FA	2012	375,000	05-24-12	05-24-12	Grande Ronde River	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	CH0	FA	2012	800,000	05-22-12	05-24-12	Hells Canyon Dam	Snake River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2012	211,920	04-17-12	06-01-12	Deschutes River	Deschutes River
<b>Oregon Dept. of Fish and Wildlife Total</b>					<b>1,386,920</b>				
Umatilla Tribe	Umatilla Hatchery	CH0	FA	2012	600,000	05-20-12	05-31-12	Umatilla River	Umatilla River
<b>Umatilla Tribe Total</b>					<b>600,000</b>				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2012	298,000	05-11-12	05-20-12	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	ST	SU	2012	200,000	05-15-12	05-20-12	Wenatchee River	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2012	25,000	05-12-12	06-30-12	Blackbird Island Acc Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2012	400,000	04-12-12	05-25-12	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH0	SU	2012	484,000	05-12-12	05-25-12	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2012	80,000	05-20-12	05-20-12	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2012	200,000	04-20-12	05-20-12	Methow River	Methow River
<b>Washington Dept. of Fish and Wildlife Total</b>					<b>1,687,000</b>				
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,537	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,564	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Cascade Hatchery	CO	UN	2012	65,662	05-02-12	06-30-12	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Chelan Hatchery	ST	SU	2012	25,000	05-02-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	64,114	04-16-12	07-01-12	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	67,858	04-16-12	07-01-12	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	78,892	04-16-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	82,621	04-16-12	07-01-12	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2012	93,312	04-16-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	91,112	04-20-12	07-01-12	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	97,073	04-20-12	07-01-12	Holmes Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2012	100,000	03-02-12	07-01-12	Prosser Acclim Pond	Yakima River
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,423	05-13-12	07-14-12	Beaver Creek Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	31,533	05-14-12	07-01-12	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	86,994	05-14-12	06-02-12	Coulter Creek	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2012	95,257	05-11-12	06-11-12	Twisp Acclim Pond	Methow River
<b>Yakama Tribe Total</b>					<b>1,141,952</b>				
<b>Grand Total</b>					<b>6,445,872</b>				

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

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

Date	Hungry H. Dnst			Boundary			Grand Coulee			Grand C. Tlwr			Chief Joseph							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/4	98.1	98.4	98.7	24	124.1	124.5	124.9	23	112.9	113.2	113.9	24	113.9	116.8	120.8	21	118.4	118.9	119.3	24
5/5	98.2	98.4	98.8	23	125.0	125.5	126.1	21	112.1	112.2	112.4	24	109.6	109.7	109.9	21	117.8	118.6	119.0	24
5/6	97.8	97.9	98.1	24	124.1	124.9	125.2	22	111.9	112.2	112.6	24	109.5	109.7	109.9	22	110.1	110.7	112.9	24
5/7	97.5	97.7	98.0	21	124.5	124.7	125.6	17	112.8	113.4	113.8	24	110.2	110.5	110.9	17	110.2	110.7	110.9	24
5/8	98.1	98.4	98.8	24	124.0	124.6	126.1	22	114.5	115.3	116.4	24	114.7	118.1	121.0	22	111.3	111.9	112.2	24
5/9	98.6	98.8	99.0	24	125.1	126.8	128.2	24	115.0	115.1	115.4	23	112.3	112.6	112.8	24	112.7	114.0	116.8	24
5/10	97.5	97.9	98.4	24	122.0	123.6	125.5	24	114.3	114.5	114.9	24	111.6	111.8	112.1	24	113.4	115.4	117.9	24
5/11	97.2	97.4	97.7	24	123.0	124.7	129.6	24	114.4	114.7	114.9	24	111.4	111.8	112.1	24	111.4	112.1	112.7	24
5/12	97.2	97.5	98.0	24	123.7	124.4	125.0	23	114.7	115.0	115.3	24	111.5	112.0	112.6	23	112.2	112.7	113.2	24
5/13	97.1	97.3	97.5	24	123.7	124.7	125.9	23	115.4	115.8	115.9	24	112.3	113.1	113.6	23	112.9	113.4	113.7	24
5/14	97.5	97.9	98.2	24	123.9	125.1	125.9	24	116.1	116.5	116.6	23	113.1	113.8	114.4	24	113.8	114.3	114.8	24
5/15	98.4	98.8	99.0	24	124.3	125.0	125.9	22	117.2	117.5	117.7	24	113.7	114.2	115.0	22	114.5	114.9	115.3	24
5/16	104.9	108.3	111.8	24	124.6	125.1	125.9	22	117.7	117.9	118.1	23	114.2	115.2	115.7	22	114.8	114.9	115.2	24
5/17	104.3	107.6	108.1	24	125.3	125.9	126.8	23	118.4	118.9	119.1	24	115.0	115.6	116.2	24	115.1	115.4	115.9	24

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

Date	Chief J. Dnst			Wells			Wells Dwnstrm			Rocky Reach			Rocky R. Tlwr							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/4	116.9	117.2	117.6	24	115.6	116.2	116.6	23	123.5	124.0	124.4	23	120.6	120.9	121.3	24	124.4	124.8	125.3	24
5/5	117.2	117.4	117.7	24	115.6	115.9	116.3	24	122.8	124.2	124.9	24	120.5	121.1	121.7	24	123.6	124.0	124.4	24
5/6	115.2	116.1	117.1	24	113.4	114.3	115.5	24	120.3	121.5	122.6	24	121.1	121.5	121.8	24	124.2	124.3	124.5	24
5/7	114.5	115.1	115.3	24	111.0	111.7	112.0	24	118.3	118.8	119.8	24	120.4	121.2	121.8	24	123.8	124.1	124.8	24
5/8	115.5	116.4	117.1	24	112.6	113.2	113.3	24	119.6	120.5	122.5	24	118.7	118.9	119.1	24	122.8	123.0	123.4	24
5/9	116.4	116.8	117.3	24	113.1	113.6	114.0	24	121.4	122.7	125.6	24	117.4	118.0	118.6	24	122.9	123.3	123.5	24
5/10	116.4	117.5	118.3	24	113.6	115.3	115.8	24	121.4	123.0	123.6	24	118.1	118.8	119.3	24	122.4	123.4	124.0	24
5/11	114.3	114.8	115.1	24	112.3	112.7	113.4	24	118.6	119.4	120.9	24	120.4	121.3	121.8	24	122.5	123.2	123.7	24
5/12	110.6	111.0	111.2	24	112.0	112.5	113.0	24	116.0	116.9	119.2	24	118.4	118.9	120.2	24	119.8	121.2	123.4	24
5/13	110.6	111.2	112.5	24	111.7	112.3	112.5	24	114.7	115.7	117.2	24	117.1	117.7	118.5	24	116.6	117.7	118.6	24
5/14	111.4	112.2	114.0	24	112.6	113.1	113.4	24	117.6	119.8	121.5	24	115.4	116.0	116.7	24	114.8	115.6	116.7	24
5/15	111.6	113.0	113.9	24	113.2	113.9	114.2	23	120.3	121.9	122.8	23	117.5	118.8	119.9	24	119.4	120.7	121.7	24
5/16	111.5	113.8	114.2	24	112.6	113.0	113.7	24	119.9	121.1	122.8	24	118.9	119.4	119.8	24	119.2	120.4	121.2	24
5/17	114.8	115.9	117.6	24	112.9	113.4	113.6	22	124.4	125.4	126.9	22	118.4	119.2	119.9	24	118.9	119.8	120.6	24

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

Date	Rock Island			Rock I. Tlwr			Wanapum			Wanapum Tlwr			Priest Rapids							
	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#	24 h	12 h	#					
	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High	Avg	Avg	High					
5/4	120.8	121.3	121.6	24	122.7	123.2	124.3	24	118.9	119.3	119.8	24	125.5	126.2	127.1	24	121.0	121.6	122.4	24
5/5	119.8	120.0	120.4	24	121.4	121.9	123.2	24	116.7	116.9	117.3	24	123.9	125.5	127.3	24	120.3	120.8	121.2	24
5/6	120.6	121.4	121.9	24	122.1	122.6	123.0	24	118.9	120.3	120.9	24	122.6	123.0	124.4	24	119.1	120.2	120.7	24
5/7	120.5	121.3	122.0	24	122.0	122.7	123.2	24	121.8	123.2	123.9	24	122.6	123.5	124.4	24	121.4	122.0	122.9	24
5/8	119.1	119.7	120.2	24	121.3	121.7	122.0	24	122.7	123.2	123.8	24	123.3	124.9	125.7	24	121.6	123.1	124.4	24
5/9	118.0	118.2	118.4	24	122.1	123.0	123.7	24	118.8	120.5	121.9	24	124.1	125.2	126.7	24	118.7	119.4	120.6	24
5/10	118.1	119.8	120.7	24	122.0	123.5	124.4	24	116.3	117.2	117.7	24	123.9	125.0	125.9	24	120.1	121.8	123.1	24
5/11	119.7	120.4	120.9	24	121.3	122.1	122.4	24	---	---	---	0	---	---	---	0	---	---	---	0
5/12	118.7	119.4	120.3	24	119.6	120.4	122.2	24	---	---	---	0	---	---	---	0	---	---	---	0
5/13	116.3	116.8	117.4	24	117.9	118.3	118.7	24	121.7	122.6	123.6	24	119.1	120.0	120.8	24	119.3	119.7	120.4	24
5/14	114.3	114.9	115.5	24	116.1	116.4	116.9	24	121.1	122.3	123.4	24	120.9	121.8	122.5	24	118.4	119.4	120.1	24
5/15	116.4	117.8	118.2	24	118.3	119.4	119.8	24	118.1	118.8	119.7	24	119.9	121.6	123.1	24	119.5	120.9	122.3	24
5/16	117.7	118.3	118.8	24	119.3	120.0	120.4	24	114.5	114.9	115.6	24	120.0	121.4	123.5	24	115.3	116.2	117.2	24
5/17	116.5	117.1	117.8	24	118.5	118.9	119.5	24	115.8	116.3	116.7	24	123.1	124.8	125.5	24	116.7	118.4	119.6	24



## 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	Priest R. Dnst				Pasco				Dworshak				Clrwtr-Peck				Anatone			
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#
5/4	122.3	122.7	123.3	24	115.4	116.1	116.5	24	101.0	102.1	107.3	24	101.2	101.6	103.3	24	104.0	104.2	104.4	24
5/5	121.4	122.0	122.8	24	115.9	117.0	117.6	24	98.3	98.5	99.6	24	100.9	101.5	101.8	23	104.2	104.8	105.4	24
5/6	121.0	121.9	122.6	24	116.2	117.0	117.7	24	97.5	97.9	98.2	24	101.7	102.7	103.5	24	104.5	105.1	105.8	24
5/7	121.9	122.4	122.8	24	117.7	119.3	120.0	24	97.7	98.3	98.6	24	101.4	102.2	102.8	22	104.5	105.3	105.9	24
5/8	122.4	122.9	123.2	24	118.5	119.6	120.3	24	99.1	99.7	100.0	24	101.8	102.7	103.3	24	104.3	105.0	105.5	24
5/9	121.1	121.6	122.1	24	117.0	117.9	119.0	24	100.6	101.7	104.4	24	101.8	102.5	103.2	24	103.7	104.2	104.7	24
5/10	121.5	122.0	122.5	24	114.3	116.7	117.4	24	98.5	98.7	98.9	24	101.0	101.9	102.6	24	103.6	104.4	105.2	24
5/11	---	---	---	0	117.1	118.4	119.1	24	98.4	98.8	99.1	24	101.7	102.4	103.1	21	104.2	105.2	105.9	24
5/12	---	---	---	0	117.3	118.4	119.1	24	98.7	99.5	99.9	24	102.1	103.1	103.9	24	104.6	105.5	106.3	24
5/13	120.0	120.4	120.7	24	116.9	117.3	117.6	24	99.6	100.4	100.8	24	102.4	103.4	104.2	24	105.0	105.9	106.7	24
5/14	120.3	120.6	121.1	24	117.1	118.0	118.6	24	99.6	100.1	100.4	24	102.3	103.3	103.9	24	105.4	106.3	107.1	24
5/15	120.7	121.2	121.6	24	117.2	118.2	119.0	24	100.0	100.5	100.9	24	102.6	103.6	104.3	24	105.6	106.4	107.2	24
5/16	119.0	119.5	119.9	24	116.5	117.2	117.7	24	100.0	100.3	100.5	24	102.9	104.0	104.5	24	105.7	106.4	107.0	24
5/17	119.6	119.9	120.6	24	115.2	115.9	116.7	24	102.0	104.1	109.1	24	103.2	104.1	105.1	24	106.2	106.8	107.7	24

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

Date	Clrwtr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#
5/4	101.0	101.4	101.6	24	104.0	104.5	104.9	24	116.6	117.8	118.0	24	108.4	109.2	110.0	24	117.3	118.4	118.8	24
5/5	100.5	101.2	101.8	23	102.3	102.6	103.0	24	117.2	117.9	118.1	24	105.1	105.6	106.6	24	114.9	116.8	118.3	24
5/6	101.5	102.9	103.9	23	102.2	102.5	102.9	24	110.7	111.8	117.2	24	106.2	107.7	108.9	24	112.9	113.2	113.7	24
5/7	101.8	102.9	103.8	22	103.8	104.5	104.7	24	110.5	111.3	117.0	24	110.9	112.5	113.5	24	114.8	115.4	116.3	24
5/8	102.1	103.2	104.2	22	105.7	106.3	106.6	24	113.1	115.9	118.5	24	114.5	115.1	116.1	24	115.0	115.7	118.5	24
5/9	101.5	102.6	103.9	24	105.4	105.7	106.0	24	117.1	118.2	118.4	24	111.3	112.1	113.7	24	116.1	118.2	118.8	24
5/10	100.7	101.8	102.6	23	103.2	103.5	104.1	24	112.5	114.1	118.0	24	109.0	109.4	110.3	24	113.4	114.1	116.2	24
5/11	101.3	102.5	103.5	22	102.1	102.3	102.5	24	110.3	110.6	111.3	24	111.5	112.4	113.5	24	114.2	114.8	115.2	24
5/12	102.0	103.3	104.3	22	102.9	103.4	103.6	24	110.1	110.6	111.4	24	113.2	113.9	114.3	24	114.0	114.6	115.1	24
5/13	102.3	103.6	104.7	24	104.2	104.7	104.9	24	110.3	110.8	111.4	24	109.6	110.1	111.3	24	113.1	113.5	113.7	24
5/14	102.3	103.4	104.4	24	105.4	105.9	106.3	24	110.6	111.0	111.7	24	109.4	110.0	110.6	24	113.2	113.8	114.6	24
5/15	102.3	103.3	104.1	24	105.9	106.1	106.4	24	111.2	111.5	112.9	24	110.5	111.0	111.8	24	113.9	114.4	115.3	24
5/16	102.3	103.1	103.6	24	105.8	105.9	106.0	24	114.5	115.4	118.4	24	111.1	111.5	111.8	24	116.0	116.9	117.7	24
5/17	102.4	102.9	103.4	24	105.5	105.7	105.9	24	118.7	119.3	120.8	24	110.0	110.3	110.9	24	117.9	119.8	120.7	24

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

Date	Lower Mon.				L. Mon. Tlwr				Ice Harbor				Ice Harbor Tlwr				McNary-Oregon			
	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#	24 h Avg	12 h Avg	High	#
5/4	113.6	113.9	114.7	24	117.8	119.2	119.6	24	113.4	113.7	114.3	24	118.3	118.9	120.2	24	---	---	---	0
5/5	112.6	113.2	114.0	24	114.8	116.8	118.8	24	111.9	112.2	112.6	24	116.9	117.9	118.3	24	---	---	---	0
5/6	115.0	115.5	116.0	24	112.5	112.9	113.3	24	113.1	113.4	113.7	24	116.5	117.1	118.1	24	---	---	---	0
5/7	114.3	114.6	115.2	24	116.7	120.6	121.9	24	114.5	115.1	116.1	24	117.2	118.0	119.2	24	---	---	---	0
5/8	115.4	116.3	116.6	24	120.8	121.8	122.1	24	116.1	116.5	116.8	24	117.4	118.6	119.2	24	---	---	---	0
5/9	116.5	116.7	117.0	24	118.1	119.4	119.9	24	116.7	116.9	117.2	23	117.5	118.3	121.4	24	---	---	---	0
5/10	114.5	115.0	115.4	24	118.9	119.2	119.5	24	115.5	115.8	116.3	24	116.1	116.4	116.7	24	---	---	---	0
5/11	114.2	114.5	115.1	24	119.3	119.5	119.9	24	115.3	115.5	115.6	24	116.3	116.5	116.8	24	---	---	---	0
5/12	113.0	113.4	114.0	24	119.0	119.3	119.5	24	115.6	115.9	116.0	24	116.5	116.8	118.0	24	---	---	---	0
5/13	115.2	115.7	116.1	24	119.4	119.9	120.4	24	116.0	116.2	116.3	24	117.4	118.3	118.9	24	---	---	---	0
5/14	115.4	115.7	116.3	24	118.9	119.8	120.0	24	116.7	117.1	117.3	24	117.4	118.0	119.0	24	---	---	---	0
5/15	114.6	114.9	115.1	24	117.2	119.2	119.4	24	117.7	118.0	118.3	24	117.2	117.5	117.7	24	---	---	---	0
5/16	114.8	115.1	115.4	24	114.5	115.3	118.4	24	117.3	117.5	117.9	24	117.6	118.4	119.5	24	---	---	---	0
5/17	115.8	117.0	118.0	24	118.3	120.9	121.4	24	116.0	116.2	116.6	24	119.0	120.2	120.8	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	McNary-Wash				McNary Tlwr				John Day				John Day Tlwr				The Dalles			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/4	114.0	114.5	114.7	24	121.5	121.9	122.0	24	110.1	110.2	110.3	24	121.1	121.7	122.3	24	112.5	112.7	113.1	24
5/5	111.5	112.1	112.6	24	120.6	121.6	121.8	24	110.9	111.2	111.4	24	120.7	121.8	122.0	24	111.8	112.3	113.0	24
5/6	113.6	114.9	116.3	24	119.2	119.5	119.9	24	111.1	111.5	112.1	24	120.0	120.5	122.0	24	114.2	115.1	115.2	24
5/7	116.6	117.5	118.1	24	119.1	119.3	119.4	24	112.9	113.8	114.5	24	119.5	119.8	120.0	24	114.6	115.4	115.9	24
5/8	118.1	119.2	120.0	24	119.0	119.6	120.2	24	116.8	118.1	118.5	24	118.8	119.2	119.7	24	115.8	116.2	116.4	24
5/9	117.5	118.4	119.1	24	119.7	119.9	120.2	24	116.6	117.3	118.0	24	118.6	118.7	119.1	24	113.7	114.3	115.8	24
5/10	114.6	114.9	115.2	24	118.6	119.5	120.3	24	114.0	114.4	114.7	24	118.6	118.8	119.1	24	113.6	114.9	115.6	24
5/11	113.4	114.5	115.0	24	119.3	120.2	120.4	24	113.9	114.1	114.5	24	118.8	119.4	119.8	24	114.9	115.6	116.1	24
5/12	115.6	116.6	117.3	24	118.9	119.7	119.9	24	113.9	114.6	115.2	24	117.9	118.9	119.3	24	114.2	114.9	115.2	24
5/13	116.9	117.7	118.3	24	116.9	117.2	117.5	24	116.5	117.4	118.1	24	117.2	117.5	118.2	24	115.2	116.0	116.6	24
5/14	118.0	118.8	119.5	24	117.8	118.4	118.6	24	118.9	119.6	120.1	24	117.9	119.0	119.7	24	116.7	117.3	117.9	24
5/15	117.3	117.9	118.2	24	118.9	120.0	120.7	24	119.3	119.6	119.8	24	118.6	119.2	119.7	24	116.7	117.1	117.9	24
5/16	116.7	117.0	117.5	24	118.2	118.8	119.1	24	117.7	118.3	118.9	24	117.8	118.3	118.9	24	114.7	115.4	116.6	24
5/17	115.8	116.1	116.3	24	119.1	119.9	120.2	24	115.3	115.8	116.6	24	119.0	119.7	120.3	24	113.0	113.5	114.3	24

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

Date	The Dalles Dnst				Bonneville				Warrendale				Camas\Washougal				Cascade Island			
	24 h		12 h		#	24 h		12 h		#	24h		12h		#	24h		12h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
5/4	118.4	118.9	119.5	24	117.5	118.3	118.8	24	120.9	121.7	122.0	24	119.1	119.5	119.8	24	---	---	---	0
5/5	118.1	118.6	119.2	24	115.0	115.4	116.1	24	118.1	118.7	119.3	24	117.5	117.9	118.1	24	---	---	---	0
5/6	119.0	119.4	120.3	24	117.5	118.8	120.2	24	120.1	120.7	121.3	24	118.3	119.7	120.2	24	---	---	---	0
5/7	120.0	122.1	122.6	24	119.7	119.9	120.1	24	120.8	121.0	121.1	24	119.5	120.1	120.6	24	---	---	---	0
5/8	118.3	119.0	122.2	24	120.4	121.5	122.1	24	120.4	121.0	121.5	24	119.3	119.9	120.6	24	---	---	---	0
5/9	121.3	121.9	122.7	24	113.8	115.1	119.0	24	116.0	117.1	119.6	24	115.9	116.8	117.6	24	---	---	---	0
5/10	119.5	120.7	122.4	24	116.4	117.6	118.5	24	117.4	118.1	118.4	24	114.5	116.9	118.0	24	---	---	---	0
5/11	117.6	118.2	118.9	24	118.7	119.0	119.2	24	119.0	119.6	120.3	24	117.2	118.0	118.7	24	---	---	---	0
5/12	117.3	117.5	117.6	24	117.1	117.9	118.4	24	118.5	119.3	119.5	24	116.3	117.0	117.8	24	---	---	---	0
5/13	117.6	118.2	118.6	24	117.4	118.0	118.6	24	118.3	118.8	119.5	24	117.7	118.7	119.9	24	---	---	---	0
5/14	118.9	119.2	119.6	24	117.9	118.3	118.7	24	117.9	118.0	118.1	24	117.4	118.5	119.5	24	---	---	---	0
5/15	118.3	118.8	119.3	24	115.7	116.8	117.5	24	117.5	117.9	118.4	24	116.8	117.9	118.7	24	---	---	---	0
5/16	117.6	118.1	118.4	24	113.7	114.3	114.6	24	115.5	116.1	116.8	24	115.4	116.1	116.7	24	---	---	---	0
5/17	118.8	121.0	122.4	24	112.9	113.3	113.6	24	114.5	114.6	114.8	24	113.5	114.5	115.4	24	---	---	---	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
<b>Lower Granite Dam</b>											
	05/10/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/17/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Little Goose Dam</b>											
	05/07/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/14/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
<b>Lower Monumental Dam</b>											
	05/09/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/16/12	Chinook + Steelhead	101	0	0	0.00%	0.00%	0	0	0	0
<b>McNary Dam</b>											
	05/06/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/10/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/14/12	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
<b>Bonneville Dam</b>											
	05/05/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/08/12	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/12/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	05/15/12	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0

## Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 5/18/2012 8:25

### Two-Week Summary of Passage Indices

\* See sampling comments <http://www.fpc.org/currentDaily/smpcomments.htm>  
this means that one or more of the sites on this date had an incomplete or biased sample.

For clip information see: [Daily Catch Report](#)

For sockeye and yearling chinook (Snake only) race information see: [Current Passage Index Query](#)

If the text appears garbled, please hit the refresh button on your browser

NOTE for 2002 Lower Monumental Data: Due to the non-standard operation of Lower Monumental this year, the passage index reliability is in question and is being looked into.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

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)	
05/04/2012 *	---	14	169	365	57,092	166,780	1,153	850	---	231,060	38,562	
05/05/2012 *	54	28	79	320	113,213	148,849	45,220	824	155,085	269,132	27,243	
05/06/2012 *	43	29	112	305	47,364	121,200	96,972	978	---	223,087	41,071	
05/07/2012 *	34	50	43	161	31,925	120,097	57,230	856	180,832	138,951	68,283	
05/08/2012 *	25	27	46	156	37,923	112,643	50,136	1,027	---	167,336	66,807	
05/09/2012	19	---	95	86	37,798	82,784	34,199	1,038	123,134	183,351	109,478	
05/10/2012 *	20	---	445	62	54,458	57,198	38,097	1,049	---	163,049	131,269	
05/11/2012	98	---	352	94	76,956	114,832	59,055	1,105	107,067	121,140	132,350	
05/12/2012 *	---	---	224	105	58,292	87,282	27,723	747	---	101,602	152,162	
05/13/2012 *	---	---	79	244	78,556	58,409	22,180	809	105,535	109,904	124,734	
05/14/2012 *	---	---	86	167	58,574	46,035	23,011	714	---	90,016	100,050	
05/15/2012	---	---	234	128	50,903	50,314	17,202	866	175,893	62,264	116,247	
05/16/2012 *	---	---	315	307	50,758	33,162	15,326	855	---	74,765	123,519	
05/17/2012 *	---	---	207	482	79,176	36,066	27,951	677	193,312	93,763	95,248	
05/18/2012	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>293</b>	<b>148</b>	<b>2,486</b>	<b>2,982</b>	<b>832,988</b>	<b>1,235,651</b>	<b>515,455</b>	<b>12,395</b>	<b>1,040,858</b>	<b>2,029,420</b>	<b>1,327,023</b>	
<b># Days:</b>	<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>42</b>	<b>30</b>	<b>178</b>	<b>213</b>	<b>59,499</b>	<b>88,261</b>	<b>36,818</b>	<b>885</b>	<b>148,694</b>	<b>144,959</b>	<b>94,787</b>	
<b>YTD</b>	<b>58,098</b>	<b>10,280</b>	<b>25,983</b>	<b>10,553</b>	<b>3,727,210</b>	<b>1,842,146</b>	<b>523,327</b>	<b>21,788</b>	<b>1,707,407</b>	<b>3,518,439</b>	<b>1,882,467</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)	
05/04/2012 *	---	0	0	1	546	608	0	2	---	980	3,907	
05/05/2012 *	0	0	1	2	1,636	0	0	10	20,710	725	1,486	
05/06/2012 *	0	0	1	0	0	601	0	4	---	501	4,033	
05/07/2012 *	0	0	0	3	262	0	0	11	14,747	953	990	
05/08/2012 *	0	0	2	1	0	0	0	11	---	1,885	1,339	
05/09/2012	0	---	2	2	630	0	0	4	3,808	1,428	1,506	
05/10/2012 *	0	---	0	1	0	325	0	7	---	1,216	384	
05/11/2012	0	---	0	5	627	0	0	23	3,988	1,413	387	
05/12/2012 *	---	---	0	3	3,363	0	0	17	---	2,168	403	
05/13/2012 *	---	---	0	10	7,084	0	0	21	3,048	1,382	1,115	
05/14/2012 *	---	---	0	6	3,828	571	0	16	---	286	1,221	
05/15/2012	---	---	1	3	1,862	429	32	15	1,811	620	0	
05/16/2012 *	---	---	1	17	2,131	286	0	31	---	208	2,459	
05/17/2012 *	---	---	2	16	1,156	152	28	52	2,658	494	1,766	
05/18/2012	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>70</b>	<b>23,125</b>	<b>2,972</b>	<b>60</b>	<b>224</b>	<b>50,770</b>	<b>14,259</b>	<b>20,996</b>	
<b># Days:</b>	<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>1,652</b>	<b>212</b>	<b>4</b>	<b>16</b>	<b>7,253</b>	<b>1,019</b>	<b>1,500</b>	
<b>YTD</b>	<b>0</b>	<b>2</b>	<b>41</b>	<b>77</b>	<b>43,808</b>	<b>3,097</b>	<b>70</b>	<b>468</b>	<b>111,131</b>	<b>16,558</b>	<b>2,283,648</b>	

Two-Week Summary of Passage Indices

COMBINED COHO												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/04/2012	*	---	0	0	1	273	2,432	13	360	---	2,697	5,946
05/05/2012	*	0	0	0	3	654	6,143	248	523	4,502	5,310	5,118
05/06/2012	*	0	0	0	6	973	1,503	685	644	---	6,509	5,882
05/07/2012	*	0	0	0	2	523	1,444	405	734	2,867	5,721	5,773
05/08/2012	*	0	0	0	4	0	583	522	1,178	---	6,456	9,076
05/09/2012		0	---	0	0	315	673	411	1,423	4,231	3,095	17,489
05/10/2012	*	0	---	0	0	532	650	843	1,611	---	3,163	13,818
05/11/2012		0	---	0	2	3,009	2,856	436	3,547	3,988	4,229	18,962
05/12/2012	*	---	---	0	0	1,495	858	201	3,036	---	7,886	16,504
05/13/2012	*	---	---	0	2	1,138	1,145	240	2,806	6,095	11,473	14,911
05/14/2012	*	---	---	0	0	1,021	285	545	2,409	---	4,798	23,590
05/15/2012		---	---	0	3	1,117	858	419	3,413	7,245	5,199	22,604
05/16/2012	*	---	---	0	3	2,883	3,430	384	3,102	---	10,016	30,612
05/17/2012	*	---	---	0	8	4,623	2,586	519	2,329	14,431	10,069	29,546
05/18/2012		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>18,556</b>	<b>25,446</b>	<b>5,871</b>	<b>27,115</b>	<b>43,359</b>	<b>86,621</b>	<b>219,831</b>
<b># Days:</b>		<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1,325</b>	<b>1,818</b>	<b>419</b>	<b>1,937</b>	<b>6,194</b>	<b>6,187</b>	<b>15,702</b>
<b>YTD</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>71</b>	<b>35,376</b>	<b>27,792</b>	<b>5,885</b>	<b>28,122</b>	<b>53,705</b>	<b>105,812</b>	<b>337,500</b>

COMBINED STEELHEAD												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/04/2012	*	---	194	16	38	34,160	34,724	655	575	---	154,530	11,891
05/05/2012	*	255	235	7	54	52,680	46,413	12,668	531	47,308	124,792	13,209
05/06/2012	*	279	226	6	90	45,093	45,993	31,923	568	---	131,198	1,781
05/07/2012	*	217	296	5	13	32,710	33,759	39,662	580	29,522	117,740	5,938
05/08/2012	*	164	318	6	47	35,006	31,232	26,933	747	---	80,452	9,820
05/09/2012		147	---	28	23	48,192	56,190	23,736	676	15,232	73,579	24,110
05/10/2012	*	109	---	65	96	45,411	23,073	24,263	768	---	53,539	18,039
05/11/2012		172	---	82	51	53,954	42,561	30,161	681	13,983	50,534	13,545
05/12/2012	*	---	---	61	30	42,598	39,776	17,614	467	---	35,669	5,636
05/13/2012	*	---	---	18	58	65,653	26,050	27,982	376	9,524	36,526	8,478
05/14/2012	*	---	---	24	27	53,980	19,196	29,557	393	---	40,327	6,508
05/15/2012		---	---	44	49	42,212	30,159	18,265	410	9,077	28,711	8,072
05/16/2012	*	---	---	75	59	40,356	26,302	17,009	537	---	22,126	11,773
05/17/2012	*	---	---	90	81	57,504	32,254	20,009	481	19,748	22,758	8,381
05/18/2012		---	---	---	---	---	---	---	---	---	---	---
<b>Total:</b>		<b>1,343</b>	<b>1,269</b>	<b>527</b>	<b>716</b>	<b>649,509</b>	<b>487,682</b>	<b>320,437</b>	<b>7,790</b>	<b>144,394</b>	<b>972,481</b>	<b>147,181</b>
<b># Days:</b>		<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>
<b>Average:</b>		<b>192</b>	<b>254</b>	<b>38</b>	<b>51</b>	<b>46,394</b>	<b>34,834</b>	<b>22,888</b>	<b>556</b>	<b>20,628</b>	<b>69,463</b>	<b>10,513</b>
<b>YTD</b>		<b>2,722</b>	<b>6,071</b>	<b>1,848</b>	<b>2,006</b>	<b>3,040,451</b>	<b>954,292</b>	<b>325,817</b>	<b>12,268</b>	<b>476,206</b>	<b>2,571,873</b>	<b>220,143</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)	
05/04/2012 *	---	0	0	36	0	0	1	678	---	54,944	7,135	
05/05/2012 *	3	0	0	33	1,636	0	3	811	51,787	45,137	9,081	
05/06/2012 *	2	0	0	21	324	2	698	2,399	---	53,580	3,697	
05/07/2012 *	0	0	0	12	262	1,154	473	4,408	117,158	36,228	14,349	
05/08/2012 *	0	0	0	7	265	583	522	7,009	---	26,865	31,692	
05/09/2012	0	---	0	5	945	336	247	3,603	122,720	29,526	51,186	
05/10/2012 *	0	---	0	2	710	0	211	1,788	---	51,105	30,704	
05/11/2012	0	---	0	5	1,003	286	517	4,147	211,377	33,897	55,338	
05/12/2012 *	---	---	0	1	747	286	201	3,103	---	38,141	55,150	
05/13/2012 *	---	---	0	6	1,518	286	275	2,920	76,205	36,443	70,663	
05/14/2012 *	---	---	0	1	383	571	307	1,916	---	20,103	89,476	
05/15/2012	---	---	0	81	124	1,143	354	1,317	82,242	15,389	91,626	
05/16/2012 *	---	---	0	130	627	1,429	397	1,187	---	27,847	53,803	
05/17/2012 *	---	---	0	66	1,300	761	154	778	113,554	33,120	36,158	
05/18/2012	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>406</b>	<b>9,844</b>	<b>6,837</b>	<b>4,360</b>	<b>36,064</b>	<b>775,043</b>	<b>502,325</b>	<b>600,058</b>	
<b># Days:</b>	<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>703</b>	<b>488</b>	<b>311</b>	<b>2,576</b>	<b>110,720</b>	<b>35,880</b>	<b>42,861</b>	
<b>YTD</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>429</b>	<b>12,798</b>	<b>7,865</b>	<b>4,378</b>	<b>41,992</b>	<b>964,344</b>	<b>628,833</b>	<b>607,610</b>	

COMBINED LAMPREY JUVENILES												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR† (Coll)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
05/04/2012 *	---	0	0	0	0	1,600	1	1	---	7,571	300	
05/05/2012 *	0	0	0	0	0	400	0	0	7,800	8,571	50	
05/06/2012 *	0	0	0	0	0	0	5	0	---	10,429	180	
05/07/2012 *	0	0	0	0	0	0	0	0	5,000	7,429	0	
05/08/2012 *	0	0	0	0	0	0	0	1	---	4,986	100	
05/09/2012	0	---	0	0	0	0	0	1	4,600	4,143	214	
05/10/2012 *	0	---	0	0	0	0	0	0	---	5,429	286	
05/11/2012	0	---	0	0	0	0	0	0	2,200	2,029	286	
05/12/2012 *	---	---	0	0	0	0	0	0	---	1,600	286	
05/13/2012 *	---	---	0	0	0	0	0	0	2,000	880	0	
05/14/2012 *	---	---	0	0	0	0	0	0	---	750	286	
05/15/2012	---	---	0	0	0	0	0	0	2,200	804	286	
05/16/2012 *	---	---	0	0	0	200	0	1	---	1,001	100	
05/17/2012 *	---	---	0	0	0	0	0	0	1,000	938	0	
05/18/2012	---	---	---	---	---	---	---	---	---	---	---	
<b>Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,200</b>	<b>6</b>	<b>4</b>	<b>24,800</b>	<b>56,560</b>	<b>2,374</b>	
<b># Days:</b>	<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	
<b>Average:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>157</b>	<b>0</b>	<b>0</b>	<b>3,543</b>	<b>4,040</b>	<b>170</b>	
<b>YTD</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,115</b>	<b>3,541</b>	<b>53</b>	<b>80</b>	<b>60,730</b>	<b>204,023</b>	<b>25,038</b>	

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

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's),

subyearling chinook (chinook 0's), steelhead, coho, 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

## Two-Week Summary of Passage Indices

### 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:

5/18/12 8:48 AM

		05/04/12		TO		05/18/12			
Site	Data	Species					Grand Total		
		CH0	CH1	CO	ST	SO			
<b>LGR</b>	Sum of NumberCollected	17,800	600,428	13,800	470,072	7,000	1,109,100		
	Sum of NumberBarged	17,731	594,306	13,790	457,341	6,982	1,090,150		
	Sum of NumberBypassed	10	5,296	0	12,623	0	17,929		
	Sum of Numbertrucked	0	0	0	0	0	0		
	Sum of SampleMorts	5	32	0	16	1	54		
	Sum of FacilityMorts	54	770	10	72	17	923		
	Sum of ResearchMorts	0	24	0	20	0	44		
	Sum of TotalProjectMorts	59	826	10	108	18	1,021		
<b>LGS</b>	Sum of NumberCollected	2,000	819,085	16,701	323,022	4,701	1,165,509		
	Sum of NumberBarged	1,993	818,746	16,699	322,997	4,699	1,165,134		
	Sum of NumberBypassed	7	0	1	0	0	8		
	Sum of Numbertrucked	0	0	0	0	0	0		
	Sum of SampleMorts	0	5	0	4	0	9		
	Sum of FacilityMorts	0	334	1	21	2	358		
	Sum of ResearchMorts	0	0	0	0	0	0		
	Sum of TotalProjectMorts	0	339	1	25	2	367		
<b>LMN</b>	Sum of NumberCollected	45	367,165	4,204	229,927	3,163	604,504		
	Sum of NumberBarged	45	362,446	4,192	225,823	3,158	595,664		
	Sum of NumberBypassed	0	4,360	9	4,038	1	8,408		
	Sum of Numbertrucked	0	0	0	0	0	0		
	Sum of SampleMorts	0	22	0	16	1	39		
	Sum of FacilityMorts	0	337	3	49	3	392		
	Sum of ResearchMorts	0	0	0	0	0	0		
	Sum of TotalProjectMorts	0	359	3	65	4	431		
<b>MCN</b>	Sum of NumberCollected	24,200	523,397	22,200	70,053	389,428	1,029,278		
	Sum of NumberBarged	0	0	0	0	0	0		
	Sum of NumberBypassed	24,198	523,332	22,200	70,050	389,378	1,029,158		
	Sum of Numbertrucked	0	0	0	0	0	0		
	Sum of SampleMorts	2	12	0	1	15	30		
	Sum of FacilityMorts	0	53	0	2	35	90		
	Sum of ResearchMorts	0	0	0	0	0	0		
	Sum of TotalProjectMorts	2	65	0	3	50	120		
Total Sum of NumberCollected		44,045	2,310,075	56,905	1,093,074	404,292	3,908,391		
Total Sum of NumberBarged		19,769	1,775,498	34,681	1,006,161	14,839	2,850,948		
Total Sum of NumberBypassed		24,215	532,988	22,210	86,711	389,379	1,055,503		
Total Sum of Numbertrucked		0	0	0	0	0	0		
Total Sum of SampleMorts		7	71	0	37	17	132		
Total Sum of FacilityMorts		54	1,494	14	144	57	1,763		
Total Sum of ResearchMorts		0	24	0	20	0	44		
Total Sum of TotalProjectMorts		61	1,589	14	201	74	1,939		



### YTD Transportation Summary

Source: Fish Passage Center

Updated:

5/18/12 8:48 AM

TO: 05/18/12

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
<b>LGR</b>	Sum of NumberCollected	30,980	2,473,313	23,735	9,095	2,001,237	4,538,360
	Sum of NumberBarged	19,617	773,400	15,559	7,648	610,110	1,426,334
	Sum of NumberBypassed	11,302	1,698,483	8,163	1,421	1,390,963	3,110,332
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	6	165	1	3	45	220
	Sum of FacilityMorts	55	1,217	12	23	94	1,401
	Sum of ResearchMorts	0	48	0	0	25	73
	Sum of TotalProjectMorts	61	1,430	13	26	164	1,694
<b>LGS</b>	Sum of NumberCollected	2,092	1,207,465	18,301	5,394	610,559	1,843,811
	Sum of NumberBarged	1,993	818,746	16,699	4,699	322,997	1,165,134
	Sum of NumberBypassed	97	388,249	1,601	689	287,507	678,143
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	18	0	1	6	25
	Sum of FacilityMorts	2	452	1	5	49	509
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	2	470	1	6	55	534
<b>LMN</b>	Sum of NumberCollected	53	372,465	4,214	3,176	233,501	613,409
	Sum of NumberBarged	45	362,446	4,192	3,158	225,823	595,664
	Sum of NumberBypassed	8	9,635	19	13	7,605	17,280
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	46	0	2	23	71
	Sum of FacilityMorts	0	338	3	3	49	393
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	384	3	5	72	464
<b>MCN</b>	Sum of NumberCollected	50,021	813,619	26,700	471,230	216,141	1,577,711
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	50,011	813,519	26,700	471,172	216,125	1,577,527
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	10	31	0	20	9	70
	Sum of FacilityMorts	0	69	0	38	7	114
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	10	100	0	58	16	184
Total Sum of NumberCollected		83,146	4,866,862	72,950	488,895	3,061,438	8,573,291
Total Sum of NumberBarged		21,655	1,954,592	36,450	15,505	1,158,930	3,187,132
Total Sum of NumberBypassed		61,418	2,909,886	36,483	473,295	1,902,200	5,383,282
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		16	260	1	26	83	386
Total Sum of FacilityMorts		57	2,076	16	69	199	2,417
Total Sum of ResearchMorts		0	48	0	0	25	73
Total Sum of TotalProjectMorts		73	2,384	17	95	307	2,876

Cumulative Adult Passage at Mainstem Dams Through: 05/18

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	05/17	130684	4890	154030	32413	132752	13935	0	0	0	0	0	0	0	0	0	0	0	0
TDA	05/17	79966	3671	111204	23127	91471	9891	0	0	0	0	0	0	0	0	0	0	0	0
JDA	05/17	66784	2918	88930	19240	74189	8222	0	0	0	0	0	0	0	0	0	0	0	0
MCN	05/17	50911	1555	75940	10224	61776	5481	0	0	0	0	0	0	0	0	0	0	0	0
IHR	05/17	34518	771	51605	4409	40910	2949	0	0	0	0	0	0	0	0	0	0	0	0
LMN	05/17	20200	467	42751	3016	35731	1983	0	0	0	0	0	0	0	0	0	0	0	0
LGS	05/17	10625	332	29772	2369	28235	1563	0	0	0	0	0	0	0	0	0	0	0	0
LGR	05/17	6872	261	22286	913	25976	1292	0	0	0	0	0	0	0	0	0	0	0	0
PRD	05/15	2347	35	5953	145	9628	96	0	0	0	0	0	0	0	0	0	0	0	0
RIS	05/15	1153	4	2874	85	6160	131	0	0	0	0	0	0	0	0	0	0	0	0
RRH	05/15	253	1	744	10	1724	11	0	0	0	0	0	0	0	0	0	0	0	0
WEL	05/16	90	3	212	21	791	11	0	0	0	0	0	0	0	0	0	0	0	0
WFA	05/13	10498	270	11189	207	23852	283	-	-	-	-	-	-	0	0	0	0	0	0

DAM	Coho						Sockeye			Steelhead					
	2012		2011		10-Yr Avg.		2012	2011	10-Yr Avg.	10-Yr			Wild 2011	10-Yr Avg.	
	Adult	Jack	Adult	Jack	Adult	Jack				2012	2011	Avg.			
BON	0	0	0	0	0	0	1	6	0	3400	3088	3382	1028	1113	940
TDA	0	0	0	0	0	0	0	0	0	745	1347	1349	368	735	579
JDA	0	0	0	0	0	0	0	0	0	1790	2696	2695	1199	1728	1279
MCN	-1	0	0	0	0	0	0	0	0	1661	2550	2162	977	1572	976
IHR	0	0	0	0	0	0	0	0	0	2321	3035	2623	1073	1198	949
LMN	0	0	0	0	0	0	0	0	0	3545	3802	3075	1902	2154	1452
LGS	0	0	0	0	0	0	0	0	0	3866	6125	3287	2266	3275	1474
LGR	0	0	0	0	0	0	0	0	0	8834	12189	9938	3863	5685	3118
PRD	0	0	0	0	0	0	0	0	0	78	38	20	0	0	0
RIS	0	0	0	0	0	0	0	0	0	134	59	61	91	41	38
RRH	0	0	0	0	0	0	0	0	0	643	452	248	542	406	175
WEL	0	0	0	0	0	0	0	0	0	83	88	44	66	69	29
WFA	0	0	0	0	0	0	-	-	-	10443	10024	12500	-	-	-

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: 05/18/12

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