



Fish Passage Center

Weekly Report #14 - 13

June 13, 2014

847 NE 19th Ave., Suite 250
 Portland, OR 97232
 phone: (503) 833-3900
 fax: (503) 232-1259

Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 0% and 98% of average at individual sub-basins over early June. Precipitation above The Dalles has been 33% of average over June. Over the 2014 water year, precipitation has ranged between 74% and 96% of average.

Table 1. Summary of June precipitation and cumulative October through June 12, 2014 precipitation with respect to average (1971–2000), at select locations within the Columbia and Snake River Basins.

Location	Water Year 2014		Water Year 2014	
	June 1–4, 2014		October 1, 2013 to June 12, 2014	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	0.25	59	19.3	87
Sneke River Above Ice Harbor	0.02	9	14.6	78
Columbia Above The Dalles	0.09	33	18.6	82
Kootenai	0.21	43	29.0	96
Clark Fork	0.09	27	17.2	78
Flathead	0.41	98	27.1	93
Pend Oreille River Basin above Waneta Dam	0.25	67	22.7	85
Salmon River Basin	0.03	9	17.6	74
Upper Snake Tributaries	0.01	6	19.3	87
Clearwater	0.06	16	31.0	89
Willamette River above Portland	0.00	0	49.3	83

Table 2 displays the June 12th ESP runoff volume forecasts for multiple reservoirs along with the June COE forecasts at Libby and Dworshak. The June 12th ESP forecast at The Dalles between January and July is 106,577 Kaf (105% of average).

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

Location	June 12, 2014, 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Jan–July)	105	106577
Grand Coulee (Jan–July)	107	63955
Libby Res. Inflow, MT (Apr–Aug)	116	6842 7074*
Hungry Horse Res. Inflow, MT (Jan–July)	122	2559
Lower Granite Res. Inflow (Apr–July)	100	19862
Brownlee Res. Inflow (Apr–July)	64	3530
Dworshak Res. Inflow (Apr–July)	120	2900 2933*

* Denotes COE June Forecast

Grand Coulee Reservoir is at 1282.0 feet (6-12-14) and has refilled 7.8 feet over the last week. Outflows at Grand Coulee have ranged between 103.4 and 157.8 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2425.9 feet (6-12-14) and has refilled 5.2 feet over the previous week. The daily average outflows at Libby Dam have been decreased from 26.0 Kcfs to 20.0 over the last week as part of the sturgeon pulse operation.

Hungry Horse is currently at an elevation of 3539.6 feet (6-12-14) and has refilled 7.3 feet over the previous week. Outflows at Hungry Horse have been 3.0 Kcfs over the last week.

Dworshak is currently at an elevation of 1583.7 feet (6-12-14) and has refilled 7.9 feet over the previous week. Outflows at Dworshak have been reduced from 4.4 to 1.6 Kcfs over the last week.

The Brownlee Reservoir was at an elevation of 2075 feet on June 12, 2014. Inflows to Brownlee Dam have ranged between 12.3 and 16.0 Kcfs last week.

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast (April 8, 2014), the flow objective this spring is 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 103.1 Kcfs over the last week and 93.8 Kcfs over the spring season.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives will be 260 Kcfs at McNary Dam (which began April 10th) and 135 Kcfs at Priest Rapids Dam (which began April 10th). Over the last week, flows at McNary Dam averaged 294.9 Kcfs and 292.2 over the spring period. Flows at Priest Rapids Dam have averaged 183.1 Kcfs over the last week and 186.3 Kcfs over the spring period.

Spill

The 2014 fish spill program was initiated at the lower Snake River projects beginning on April 3rd and on April 10th at the lower Columbia River projects.

Flows in the lower Snake River decreased by about 25 Kcfs over the past week. Consequently, excess spill decreased and the Spring Fish Operations Plan (FOP) was implemented. Spill greater than 20 Kcfs occurred at Lower Granite Dam at the beginning of the week, but decreased to 20 Kcfs for the second half of the week. Spill at Little Goose Dam averaged close to the 30% of total flow volume as specified in the FOP. At Lower Monumental Dam spill was at the gas cap levels associated with the higher gas producing bulk spill pattern specified in the FOP. Lower Monumental Dam returned to the bulk spill pattern on the afternoon of June 5th, at which time the spill cap was reduced from 36 Kcfs to about 26 Kcfs. On April 28th the “test-like” conditions, where spill alternates between 30% instantaneous and 45 Kcfs/Gas Cap, were initiated at Ice Harbor Dam. A small amount of excess generation spill occurred at this project, primarily at the beginning of the past week. However, in general, the net effect of the “test-like” operation is an overall decrease in spill levels during the implementation period.

Project	Spill Level Day/Night
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	April 28–June 1: 30%/30% vs. 45 Kcfs/Gas Cap

At the Middle Columbia River projects, McNary Dam initially was spilling above 40% due to limited hydraulic capacity and excess generation spill. However, by week’s end spill decreased to 40% as flows decreased. At John Day Dam the testing of the 30% and 40% spill levels occurred over the past week. Spill at The Dalles Dam averaged 40% of total daily flow. Bonneville Dam spilled an instantaneous 100 Kcfs over the past week.

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

New this year is a change in the way the U.S. Army Corps of Engineers will assess whether a project is in compliance with the total dissolved gas variances in place. The States of Oregon and Washington use different methodologies to estimate the 12-hour average TDG. For Oregon, the 12-hour average is based on the 12 highest hourly TDG measurements in a single calendar day (not necessarily consecutive). For Washington, the 12-hour average is based on 12-hour rolling averages. The highest of the rolling averages is what is reported as the 12-hour average for a given day. In 2014, the location of a TDG monitor and/or type of monitor will dictate which of these methodologies is used for compliance monitoring. The Washington methodology will apply to all the lower Snake River projects, as well as the lower Columbia River forebay monitors (since Oregon does not have a forebay TDG requirement). On any given day the compliance of the tailrace monitors at the lower Columbia River projects will be determined using either the Washington or Oregon methodology, whichever is the most restrictive, and spill may be decreased if needed.

Monitoring for signs of gas bubble trauma (GBT) occurred at Little Goose, Lower Monumental, McNary, Bonneville, and Rock Island dams over the past week. Sampling at Lower Granite Dam ended for the season, as fish numbers declined. At Rock Island Dam 1% of fish were affected with Rank 1 signs on 6/10; and at Bonneville Dam 1% of fish were affected with Rank 1 signs on 6/11. The action criterion for GBT is 15% of total fish with any signs of GBT in the fins, or 5% with severe signs (Rank 3 or greater).

Smolt Monitoring

Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, LGR). Sampling at the Imnaha River Trap (IMN) was suspended from May 30th through June 5th due to damaged equipment. Sampling resumed on the evening of June 5th. Sampling at the Salmon River (WTB), Snake River (LEW), and Grande Ronde River (GRN) traps has been terminated for the 2014 season.

Passage of spring migrants (e.g., yearling Chinook, steelhead, coho, and sockeye) decreased at all SMP sites this week, when compared to last week. Subyearling Chinook dominated the collections at all the SMP dam sites this week. Passage of subyearling Chinook increased at all SMP sites in the Lower and Upper Columbia River this week while subyearling passage decreased at all but one of the Snake River sites this week, when compared to last week.

At Bonneville Dam (BON), subyearling Chinook passage increased this week while passage of all other salmonid species decreased. In fact, subyearling Chinook were the dominate species in this week's samples at BON. The daily average passage index for subyearling Chinook at BON this week was about 7,000 per day. Last week's daily average passage index was about 6,400 per day. This week's daily average passage indices for yearling Chinook, steelhead, coho, and sockeye were about 2,200, 800, 2,300, and 1,900 per day, respectively. Finally, Pacific lamprey macrophthalmia were collected at BON every day this week. This week's daily average collection for Pacific lamprey macrophthalmia at BON was about 260 per day, which is an increase over last week's daily average collection of 150 per day.

Passage of spring migrants at John Day Dam (JDA) continued to decrease this week when compared to last week. This week's daily average passage indices for yearling Chinook, steelhead, coho, and sockeye at JDA were about 1,800, 1,000, 730, and 2,000 per day, respectively. Last week's daily average passage indices were about 7,800 for yearling Chinook, 3,300 for steelhead, 3,200 for coho, and 9,100 for sockeye. The daily average passage index for subyearling Chinook was about 9,300 per day this week, which is an increase over last week's daily average passage index of 6,100 per day. Pacific lamprey ammocoetes were encountered in only three of this week's samples while Pacific lamprey macrophthalmia were present every day this week. The daily average collection for Pacific lamprey macrophthalmia this week was about 2,000 per day, which is a decrease from last week's daily average collection of about 5,300 per day.

Sampling at McNary Dam (MCN) is every-other-day for the entire 2014 SMP season. Subyearling Chinook passage increased substantially this week when compared to last week. In fact, subyearling Chinook dominated the samples at MCN this week. The daily average passage index for subyearling Chinook at MCN this week was nearly 29,000 per day. Last week's daily average for subyearling Chinook was only 7,800 per day. Passage of spring migrants continued to decrease this week. This week's daily average passage indices for yearling Chinook, steelhead, coho, and sockeye at MCN were about 4,100, 640, 1,300, and 1,450 per day. Last week's daily average passage indices for these species were 5,200 for yearling Chinook, 1,550 for steelhead, 3,650 for coho, and 9,000 for sockeye. Lamprey collections so far this year have consisted of Pacific lamprey macrophthalmia only. Pacific macrophthalmia were encountered every day this week. The daily average collection for Pacific lamprey macrophthalmia this week was about 3,600 per day, which is very similar to last week's daily average collection of 3,100.

Operations at MCN have been in the normal 1% range since the morning of June 6th. Since this time, descaling levels have been variable. For example, overall descaling this week has ranged from a low of 3.8% on June 8th to as high as 9.2% on June 6th. Subyearling Chinook are the only salmonid juveniles that have been sampled at consistently high

numbers this week. Over the last week, descaling for subyearling Chinook at MCN has ranged from a low of 3.2% on June 8th to as high as 9.7% on June 6th.

Subyearling Chinook continued to dominate the collections at Lower Granite Dam (LGR) this week. This week's daily average passage index for subyearling Chinook at LGR was about 17,000 per day, which is a decrease over last week's daily average passage index of about 30,000 per day. Passage of yearling Chinook, steelhead, sockeye, and coho continued to decrease this week, when compared to last week. This week's daily average passage indices for these species were about 1,600 for yearling Chinook, 4,400 for steelhead, 30 for sockeye, and 60 for coho. Pacific lamprey ammocoetes were encountered in only two of the seven samples at LGR this week. Pacific lamprey macrophthalmia were not encountered in any of this week's samples.

This week's samples at Little Goose Dam (LGS) were again dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 25,400 per day, which is a decrease over last week's daily average passage index of nearly 38,000 per day. As with LGR, passage of all other species of salmonids decreased this week, when compared to last week. This week's daily average passage indices for other salmonids at LGS were 700 for yearling Chinook, 2,900 for steelhead, 40 for sockeye, and 30 for coho. Finally, both Pacific lamprey ammocoetes and macrophthalmia were collected at LGS this week.

Subyearling Chinook continued to dominate the samples at Lower Monumental Dam (LMN) this week. This week's daily average passage index for subyearling Chinook at LMN was 15,000 per day, which is an increase over last week's daily average passage index of 11,500 per day. As with all other sites, passage of spring migrants at LMN continued to decrease this week. The daily average passage indices for these species were about 500 for yearling Chinook, 1,300 for steelhead, and less than 100 for sockeye and coho. Finally, only Pacific lamprey macrophthalmia have been collected so far this year at LMN. Pacific macrophthalmia were present in five of this week's samples. This week's daily average collection for Pacific lamprey macrophthalmia at LMN was nearly 200 per day.

Collections at Rock Island Dam (RIS) this week were dominated by subyearling Chinook. This week's daily average passage index for subyearling Chinook was about 575 per day, which was an increase over last week's daily average passage index of about 300 per day. Coho passage at RIS decreased substantially this week, when compared to last week. This week's daily average passage index for coho at RIS was about 250 per day. Last week's daily average passage index for coho was about 1,370 per day. Passage of yearling Chinook, steelhead, and sockeye also decreased this week. In fact, the daily average passage indices for these three species were all less than 100 per day. Finally, Pacific lamprey macrophthalmia were not encountered in this week's samples at RIS.

The Imnaha River Trap (IMN) is located at river kilometer 7 and is operated by the Nez Perce Tribe. Sampling at IMN is year-round, however the FPC typically receives data only from early March through June. Due to the remote nature of the trap, the Nez Perce Tribe is able to send collection data to the FPC only periodically. Therefore, data for IMN may be several days behind. Sampling at IMN was suspended between May 30th and June 5th due to damaged equipment. Trapping resumed on the evening of June 5th. Since sampling resumed, steelhead have continued to dominate the sample at IMN. The daily average collection for steelhead during the period of June 6th through June 10th was about 130 per day. The daily average collection for yearling Chinook during this same time was about 30 per day.

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 1.23 million subyearling fall Chinook juveniles were scheduled for release to this zone this week. Of these, about 84% were scheduled to be released from the Nez Perce Tribal Hatchery or Nez Perce Tribal acclimation facilities in the Clearwater River Basin. The remaining 16% were scheduled to be released directly into the Snake River, near Captain Johns Rapids Acclimation Pond. The only new release that is scheduled for this zone over the next 2 weeks is a release of about 400,000 spring Chinook parr from the Nez Perce Tribal Hatchery to Meadow Creek, a

tributary of the Selway River. These spring Chinook parr are 100% unmarked and are not expected to out-migrate until the spring of 2015.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. A release of about 7.2 million subyearling fall Chinook juveniles from Priest Rapids Hatchery was scheduled to begin this week. Approximately 61% of these fall Chinook juveniles were unmarked and another 8% were marked with coded-wire tags only. The remaining 31% were expected to be clipped. This release is expected to run through about June 15th.

Many of the volitional releases of coho and summer steelhead juveniles that began several weeks ago are scheduled to end over the next 2 weeks. In addition, approximately 3.45 million subyearling fall Chinook juveniles are scheduled for release from Ringold Springs Hatchery next week.

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 scheduled for this zone this week. Furthermore, there are no releases scheduled for this zone over the next 2 weeks.

Adult Passage

The summer Chinook count began June 1st at Bonneville Dam. Daily passage numbers at Bonneville Dam ranged between 2,497 and 2,973 adult summer Chinook in the last week. The 2014 summer Chinook count of 30,105 is about 1.3 times greater than the 2013 count and 1.4 times greater than the 10-year average. The 2014 Bonneville Dam summer Chinook jack count of 4,863 is 71.3% of the 2013 count, while having 328 more fish than the 10-year average count. At Willamette Falls 21,792 adult spring Chinook have been counted so far this year. In 2013, 21,293 adult spring Chinook were counted at Willamette. This year's count is has 499 more fish than the 2013 count, while being 72.3% of the 10-year average count of 30,069. As of June 12th, a total of 107,147 adult spring Chinook have been counted at McNary Dam and 76,496 have been counted at Lower Granite Dam. The 2014 McNary Dam adult spring Chinook count is about 2 times greater than the 2013 count and 1.3 times greater than

the 10-year average count. The Lower Granite Dam 2014 adult spring Chinook count is about 2.3 times greater than 2013 and 1.7 times greater than the 10-year average count.

The 2014 Bonneville Dam adult steelhead count of 7,795 is about 1.9 times greater than the 2013 count of 4,158 and has 443 more fish than the 10-year average count of 7,352. The 2014 Bonneville Dam adult wild steelhead count of 1,999 is about 1.8 times greater than the 2013 count of 1,084 and has 139 more fish than the 10-year average count of 1,860. Daily adult steelhead counts at Lower Granite Dam ranged from 1 to 12 adults per day last week. This year's Lower Granite steelhead count of 7,576 has 122 more fish than the 2013 count of 7,454, while being about 85.7% of the 10-year average count of 8,836. The 2014 Lower Granite Dam adult wild steelhead count of 3,480 has 244 more fish than the 2013 count of 3,480 and is about 1.1 times greater than the 10-year average count of 3,157. At Willamette Falls, the 2014 count for steelhead was 14,447 as of June 9th. This year's steelhead count is about 1.1 times greater than the 2013 count of 13,057, while being about 83.9% of the 10-year average count of 17,227.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 399 and 3,725 last week. The 2014 adult sockeye count at Bonneville Dam of 11,273 is about 1.2 times greater than the 2013 count and about 1.9 times greater than the 10-year average count.

Wanapum Dam Update

At Wanapum Dam a significant crack (65-feet long by 2-inches wide) was discovered in a spillway monolith (#4) on February 27, 2014. This discovery has led to an emergency drawdown of the Wanapum pool to an elevation range of 541–545 feet, which is over 20 feet below its typical forebay elevation. Preliminary results of an investigation by Grant PUD and its consultants have determined that the primary contributing factor to a fracture developing within the dam's spillway was a mathematical error during the pre-construction design of Wanapum Dam.

The drawdown of Wanapum pool had caused the adult fishways at Wanapum Dam to not be operational. The adult fishways exits have been approximately 10 feet above the forebay water level. Grant County has designed adult fishway retrofits that involve the use of weir boxes and chutes to deliver adult fish into the forebay of Wanapum Dam. On April 15, 2014, the weir and chute retrofit was operational at the left bank fishway. A weir and chute has also been installed at the right bank fishway at Wanapum and was operational on April 26, 2014.

Visual observations of the exit retrofits have been promising. During Wanapum Dam site visits on May 7 and 21 and June 4, 2014, several hundred adult fish have been seen passing the left bank fishway weir and chute. During these observations, fish generally pass the left bank weir quickly and there were no signs of stress or mortality upon entry into the forebay. On the dates of observation, no adult fish have been seen passing the right bank weir structure. Over the last week, Grant County PUD installed a spiral flume on the left bank fishway that reduced the elevation of the chute outflow from approximately 10 feet down to several feet. Grant PUD plans to install the spiral flume at the right bank fishway next week.

The drawdown of Wanapum pool has also had a significant impact on the adult fishways at Rock Island Dam, operated by Chelan PUD. With the lower than normal tailrace levels, Chelan PUD has constructed extensions or denils at several ladder entrances. Chelan County PUD currently has all three denils in place, two at the right bank fishway and one of the left bank fishway.

The WDFW has noticed an unusually large percentage of adult fish at the Wells Dam Trap with significant injuries. The WDFW has sampled fish from the trap at Wells Dam for approximately 4 weeks and the last weeks of available sampling indicated that approximately 15% of fish had notable injuries. The source of these injuries continues to be investigated. The PUDs have all been reviewing video counts and recording significant injuries. Based on one week of video counts, the significant injury rate at Priest Rapids dam is at approximately 1%. At Rock Island, based on count review between April 26, 2014, and June 5, 2014, the overall project significant injury rate is 0.6%;

at Rocky Reach over the same dates, the rate is 0.3%. Additionally, the Leavenworth Hatchery has noted that of 778 adult spring Chinook collected, all looked in good shape, with nothing out of the ordinary. The fish coming into Leavenworth Hatchery would have to pass all dams below and including Rock Island Dam. Video Counts and injury rates at each ladder of Wells Dam are now available from 5-28-14 to 6-10-14. This count review has shown an injury rate of 2.6% on the west ladder and 1.0% on the east ladder. Because the trapping operation has been occurring on the west ladder, the west ladder trap was dewatered this week and is being inspected for any obstructions or sharp edges that could be contributing to west ladder elevated injury rates.

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	5/30/2014		to		06/12/14				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe	Chief Joseph Hatchery	CH0	SU	2014	180,000	05-15-14	06-01-14	Omak Creek	Okanogan River
Colville Tribe Total					180,000				
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2014	252,889	06-10-14	06-10-14	Cedar Flats Acclim.	Selway River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2014	255,283	06-10-14	06-10-14	Lukes Gulch Acclim.	S Fk Clearwater River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2014	526,278	06-11-14	06-11-14	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					1,034,450				
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2014	209,117	04-01-14	06-01-14	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					209,117				
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2014	225	05-25-14	05-31-14	Crab Creek	Mid-Columbia River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2014	4,700	05-01-14	05-31-14	Above McNary Dam	Mid-Columbia River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2014	175	05-01-14	05-31-14	Methow River	Methow River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2014	225	05-01-14	05-31-14	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2014	200,000	06-12-14	06-12-14	Cpt John Acclim Pond	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH0	FA	2014	209,972	06-03-14	06-03-14	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2014	100,000	05-05-14	06-15-14	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2014	7,229,543	06-10-14	06-15-14	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					7,744,840				
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	72,750	04-15-14	06-15-14	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	92,105	04-15-14	06-15-14	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	92,376	04-15-14	06-15-14	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	94,680	04-15-14	06-15-14	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	140,342	04-15-14	06-15-14	Easton Pond	Yakima River
Yakama Tribe	Klickitat Hatchery	CH0	FA	2014	4,000,000	06-01-14	06-01-14	Klickitat Hatchery	Klickitat River
Yakama Tribe	Marion Drain Hatchery	CH0	FA	2014	80,000	06-01-14	06-01-14	Nelson Springs	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	43,408	04-15-14	06-15-14	Yakama River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	108,570	04-15-14	06-15-14	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	221,567	04-15-14	06-15-14	Prosser Acclim Pond	Yakima River
Yakama Tribe Total					4,945,798				
Grand Total					14,114,205				

Hatchery Releases Next Two Weeks

Agency	Hatchery	Hatchery Release Summary			NumRel	RelStart	RelEnd	RelSite	RelRiver
		From:	6/13/2014	to					
		Species	Race	MigYr					
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	SP	2015	400,000	06-25-14	07-01-14	Meadow Creek - SELW	Selway River
Nez Perce Tribe Total					400,000				
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2014	100,000	05-05-14	06-15-14	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Priest Rapids Hatchery	CH0	FA	2014	7,229,543	06-10-14	06-15-14	Priest Rapids Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	CH0	FA	2014	3,450,000	06-20-14	06-30-14	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife Total					10,779,543				
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	72,750	04-15-14	06-15-14	Easton Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	92,105	04-15-14	06-15-14	Holmes Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	92,376	04-15-14	06-15-14	Stiles Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	94,680	04-15-14	06-15-14	Lost Creek Acclim Pond	Yakima River
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	140,342	04-15-14	06-15-14	Easton Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	43,408	04-15-14	06-15-14	Yakama River	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	108,570	04-15-14	06-15-14	Stiles Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CO	UN	2014	221,567	04-15-14	06-15-14	Prosser Acclim Pond	Yakima River
Yakama Tribe Total					865,798				
Grand Total					12,045,341				

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
05/29/2014	159.4	3.9	162.6	49.5	195.1	53.4	197.7	50.3	193.5	128.2	202.9	79.2	224.7	104.7
05/30/2014	169.3	3.9	165.7	20.7	180.3	77.2	178.8	62.1	183.4	83.1	178.8	62.5	200.0	64.8
05/31/2014	174.3	4.0	171.8	35.4	200.5	29.2	195.7	41.8	195.9	65.9	188.7	73.0	192.6	91.7
06/01/2014	175.2	5.9	186.8	57.0	216.3	56.9	216.3	69.8	220.5	76.3	212.3	99.4	237.0	110.3
06/02/2014	176.3	10.0	171.1	46.5	191.1	33.4	189.6	44.7	197.5	50.4	194.9	80.4	228.2	93.9
06/03/2014	168.2	6.2	174.6	49.9	201.9	25.2	200.3	28.6	205.5	46.7	195.2	76.2	205.2	104.6
06/04/2014	166.9	0.1	166.5	40.8	191.2	16.0	189.5	27.7	198.0	43.1	196.4	76.6	214.6	105.5
06/05/2014	167.8	1.2	169.1	35.8	197.9	19.6	198.5	30.4	207.2	43.5	198.1	74.6	213.2	100.2
06/06/2014	157.7	0.1	156.7	30.2	181.2	10.0	180.6	25.0	188.9	43.7	192.9	68.5	212.0	80.9
06/07/2014	157.8	0.1	156.7	18.7	169.8	10.0	165.8	19.6	174.2	43.0	170.5	41.8	182.3	40.2
06/08/2014	156.5	0.1	152.4	2.5	171.7	12.3	166.7	20.7	174.6	41.1	172.6	50.3	182.8	43.8
06/09/2014	151.7	0.1	155.9	9.2	178.2	11.3	175.7	21.5	183.6	39.5	179.2	57.1	193.5	71.4
06/10/2014	140.8	0.1	144.1	0.0	161.9	10.0	158.8	17.1	166.9	38.4	168.3	46.8	181.6	39.7
06/11/2014	142.7	0.1	144.1	0.0	159.7	10.0	154.8	16.3	165.2	36.1	161.0	28.6	171.7	22.5

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

Date	Dworshak		Brownlee		Hells Canyon		Lower Granite		Little Goose		Lower Monumental		Ice Harbor	
	Flow	Spill	Inflow	Outflow	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
05/29/2014	2.3	0.0	19.7	16.0	136.6	45.6	130.0	34.6	130.7	35.5	137.0	78.9		
05/30/2014	2.3	0.0	20.3	22.0	132.5	48.7	127.2	34.6	127.8	36.3	132.1	74.0		
05/31/2014	2.3	0.0	20.2	21.8	128.6	38.1	123.1	34.5	123.0	38.0	129.6	72.3		
06/01/2014	4.5	0.3	19.4	18.7	121.5	34.2	116.2	31.7	117.9	36.1	121.2	66.4		
06/02/2014	4.4	0.0	18.1	20.3	120.2	31.3	114.1	29.0	112.6	35.9	118.8	57.6		
06/03/2014	4.4	0.0	17.4	16.6	116.5	31.0	110.8	28.9	113.3	35.7	116.4	70.1		
06/04/2014	4.4	0.0	16.9	15.9	118.6	33.1	113.3	29.0	114.2	35.9	117.7	67.7		
06/05/2014	4.4	0.0	16.5	17.6	116.2	29.6	110.9	32.2	112.1	29.3	116.6	53.7		
06/06/2014	4.4	0.0	16.0	16.9	116.5	26.8	112.1	32.8	112.0	26.0	115.0	44.9		
06/07/2014	4.4	0.0	15.3	16.3	109.8	20.5	105.0	31.4	104.8	25.9	108.5	54.7		
06/08/2014	4.4	0.0	14.8	17.9	105.7	23.3	101.9	30.7	101.1	25.8	104.5	64.7		
06/09/2014	4.4	0.0	14.2	15.9	103.5	20.4	100.2	29.9	100.9	24.1	104.8	46.4		
06/10/2014	4.3	0.0	13.4	10.3	98.7	20.3	93.8	28.1	92.5	23.9	94.6	28.5		
06/11/2014	4.1	0.0	13.0	14.0	95.1	20.3	91.0	27.3	91.7	23.8	96.9	50.5		

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

Date	McNary		John Day		The Dalles		Bonneville		PH1	PH2
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill		
05/29/2014	348.7	207.6	356.9	140.3	340.3	129.2	358.6	157.6	98.8	89.8
05/30/2014	356.4	220.0	357.5	140.3	337.5	129.8	360.3	156.8	100.1	91.0
05/31/2014	332.0	193.3	332.8	116.3	314.2	105.9	335.3	135.4	97.2	90.3
06/01/2014	325.4	177.6	327.6	117.6	308.0	104.8	324.9	128.3	93.8	90.4
06/02/2014	365.7	219.0	355.9	144.6	336.7	126.4	357.9	147.4	96.8	101.3
06/03/2014	334.3	184.4	340.9	141.6	322.3	125.3	343.4	125.6	96.0	109.4
06/04/2014	329.7	186.4	325.1	109.9	309.5	118.7	333.2	118.1	94.5	108.3
06/05/2014	334.5	193.2	329.8	112.3	314.4	123.2	333.2	113.8	95.6	111.4
06/06/2014	334.5	187.3	341.6	135.1	322.1	122.7	332.0	107.2	94.6	117.8
06/07/2014	306.6	154.9	306.3	117.3	290.1	115.5	313.5	100.7	90.3	110.0
06/08/2014	293.3	141.8	298.7	90.0	282.6	112.8	314.5	100.2	91.6	110.3
06/09/2014	293.8	144.9	285.8	90.8	269.2	107.7	289.2	100.0	71.5	105.3
06/10/2014	297.4	146.9	297.3	118.6	281.9	112.5	299.2	100.3	80.3	106.1
06/11/2014	278.9	130.3	280.8	107.5	262.7	105.3	285.9	100.6	70.8	102.0

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
Lower Granite Dam											
	06/05/14	Chinook + Steelhead	61	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	06/02/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/09/14	Chinook + Steelhead	99	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	06/04/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/11/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	05/30/14	Chinook + Steelhead	75	0	0	0.00%	0.00%	0	0	0	0
	06/01/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/05/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/09/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	05/31/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/03/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/07/14	Chinook + Steelhead	68	0	0	0.00%	0.00%	0	0	0	0
	06/11/14	Chinook + Steelhead	79	1	1	1.27%	0.00%	1	0	0	0
Rock Island Dam											
	05/30/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	06/03/14	Chinook + Steelhead	70	5	5	7.14%	0.00%	4	1	0	0
	06/05/14	Chinook + Steelhead	71	0	0	0.00%	0.00%	0	0	0	0
	06/10/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	06/12/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

Date	<u>Hungry H. Dnst</u>			#	<u>Boundary</u>			#	<u>Grand Coulee</u>			#	<u>Grand C. Tlwr</u>			#	<u>Chief Joseph</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
5/29	109.2	109.4	109.6	24	---	---	---	0	116.3	116.4	116.5	24	117.8	118.3	118.6	24	115.2	116.6	117.7	24
5/30	109.3	109.5	109.8	24	---	---	---	0	116.4	116.5	116.6	24	118.1	118.6	119.1	24	118.1	118.6	118.9	24
5/31	109.4	109.5	109.9	24	---	---	---	0	116.7	116.9	117.0	24	118.5	119.0	119.5	24	118.9	119.3	119.6	24
6/1	109.3	109.5	109.7	24	---	---	---	0	117.2	117.4	117.5	24	117.3	118.1	118.7	24	118.9	119.1	119.3	24
6/2	105.2	108.6	109.4	24	---	---	---	0	117.8	118.1	118.3	24	116.5	117.0	117.3	24	119.6	120.2	120.8	24
6/3	102.4	102.8	104.3	24	---	---	---	0	118.2	118.3	118.4	24	116.1	116.3	116.6	24	117.1	118.3	119.8	24
6/4	104.9	105.2	105.6	24	---	---	---	0	117.9	118.2	118.4	24	115.9	116.4	116.8	24	115.3	115.6	115.9	24
6/5	105.0	105.4	105.6	24	---	---	---	0	117.5	117.8	118.0	24	114.4	115.1	116.0	24	114.6	115.3	115.7	24
6/6	104.9	105.3	105.7	24	---	---	---	0	117.8	118.2	118.4	24	114.6	114.9	115.3	24	114.9	115.2	115.3	24
6/7	104.7	105.1	105.6	24	---	---	---	0	117.8	118.0	118.0	24	115.0	115.3	115.5	24	115.4	115.6	115.8	24
6/8	104.9	105.3	105.6	24	---	---	---	0	117.6	117.8	117.9	24	115.3	115.8	116.3	24	115.8	116.2	116.5	24
6/9	102.6	104.0	105.3	24	---	---	---	0	118.2	118.3	118.5	24	115.7	115.9	116.4	24	116.1	116.4	116.8	24
6/10	101.1	101.5	102.1	24	---	---	---	0	118.1	118.3	118.5	24	115.6	115.9	116.4	24	115.6	115.9	116.1	24
6/11	100.9	101.2	101.6	23	---	---	---	0	118.3	118.5	118.6	23	115.4	116.1	116.8	23	115.3	115.7	115.9	23

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

Date	<u>Chief J. Dnst</u>			#	<u>Wells</u>			#	<u>Wells Dwnstrm</u>			#	<u>Rocky Reach</u>			#	<u>Rocky R. Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
5/29	114.3	115.6	116.1	24	113.2	113.5	113.9	19	119.0	120.6	124.7	19	114.2	114.7	115.6	22	121.0	121.4	121.8	19
5/30	111.8	112.1	112.4	24	114.6	115.2	115.8	20	126.1	127.8	131.3	20	117.2	118.4	122.2	21	122.5	123.0	124.2	19
5/31	113.8	115.3	115.7	24	116.2	116.6	116.8	23	119.2	121.1	127.7	23	123.6	123.9	126.2	16	124.4	124.6	125.3	14
6/1	115.9	116.2	117.1	24	116.6	117.0	117.3	23	121.9	122.9	124.6	23	119.0	120.2	126.1	19	125.7	126.3	126.7	19
6/2	114.9	115.9	118.2	24	116.8	117.2	117.7	22	119.9	121.2	122.8	22	120.7	121.1	122.2	20	123.7	124.8	126.5	17
6/3	114.7	116.2	116.8	24	116.6	117.0	117.4	22	118.5	119.2	120.7	22	119.1	120.4	120.9	23	120.9	121.1	121.6	21
6/4	113.8	115.0	115.6	24	113.8	114.1	115.3	19	115.4	115.8	116.8	19	116.7	116.8	117.5	14	120.4	120.5	121.0	14
6/5	113.1	114.2	115.5	24	113.0	113.6	113.9	22	114.7	115.4	115.9	22	113.9	114.2	114.8	17	119.4	119.8	120.0	17
6/6	112.1	112.2	112.4	24	113.2	113.4	113.5	19	114.0	114.2	114.4	19	113.9	114.6	115.0	24	117.3	117.5	118.2	24
6/7	113.0	114.1	115.3	24	113.3	113.4	113.5	23	114.0	114.4	114.7	23	113.6	113.8	114.3	24	116.9	117.3	117.5	24
6/8	114.5	115.2	115.7	24	113.8	114.1	114.4	22	114.8	115.1	115.4	22	113.0	113.5	113.8	24	116.4	116.9	117.5	24
6/9	112.6	114.0	115.0	24	114.7	114.9	115.1	21	115.6	115.9	116.5	21	113.5	113.9	114.1	24	117.1	118.0	119.0	24
6/10	115.0	115.3	115.7	19	113.6	113.7	114.4	17	114.4	114.6	114.9	17	113.2	113.5	113.5	24	116.1	116.6	116.9	24
6/11	114.7	114.8	115.0	23	113.9	114.0	114.7	13	114.5	114.5	115.6	13	113.3	113.6	113.8	23	116.9	118.0	118.6	23

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			#	<u>Rock I. Tlwr</u>			#	<u>Wanapum</u>			#	<u>Wanapum Tlwr</u>			#	<u>Priest Rapids</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>		<u>Avg</u>	<u>Avg</u>	<u>High</u>	
5/29	115.3	115.7	116.4	20	122.8	123.7	124.6	20	116.4	119.4	120.2	24	120.0	121.3	121.9	24	117.0	118.5	119.3	24
5/30	117.4	118.3	119.0	20	121.9	122.7	123.6	20	121.0	121.3	121.7	24	120.9	122.2	122.5	24	121.3	122.7	123.6	24
5/31	120.8	121.3	122.6	15	122.4	122.6	123.3	14	119.7	120.5	121.6	24	121.8	122.3	123.7	24	119.8	121.1	122.1	24
6/1	121.0	121.5	122.4	17	123.5	124.1	125.0	17	120.6	121.5	122.2	24	125.6	126.1	126.4	24	122.4	125.5	126.5	24
6/2	120.4	120.6	122.2	13	121.9	122.0	123.9	13	121.3	122.1	122.6	24	123.9	126.0	126.5	24	125.6	126.6	127.4	24
6/3	117.7	118.6	119.6	23	120.0	120.7	122.4	23	118.9	120.2	120.3	24	121.7	122.6	124.1	24	119.3	120.7	123.9	24
6/4	115.7	115.8	116.9	14	118.0	118.2	119.9	14	116.4	117.4	117.9	24	120.3	121.0	121.4	24	118.5	120.2	121.2	24
6/5	114.9	115.2	116.1	16	118.2	118.6	119.1	16	115.4	116.3	116.6	24	119.5	119.9	120.6	24	117.6	119.4	120.7	24
6/6	113.5	114.1	114.6	23	116.8	117.6	118.0	22	115.6	116.2	116.5	24	118.7	120.2	120.5	24	119.0	120.6	121.4	24
6/7	113.3	113.8	114.2	24	116.4	117.2	117.6	24	114.4	115.5	116.1	24	114.5	115.6	116.9	24	114.5	116.0	119.5	24
6/8	112.7	113.7	114.5	24	115.6	116.6	117.0	24	113.7	114.7	115.2	24	115.5	116.4	117.4	24	113.8	115.1	117.4	24
6/9	113.0	113.8	114.9	24	115.7	116.7	117.5	24	112.7	113.7	114.4	24	115.9	116.4	116.7	24	113.5	114.2	114.9	24
6/10	112.1	112.6	113.0	24	115.9	117.3	118.3	24	112.2	113.4	114.4	24	113.9	115.0	115.9	24	112.6	113.2	114.0	24
6/11	112.7	113.9	114.8	23	116.2	118.0	118.7	23	---	---	---	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	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					
5/29	118.7	119.4	119.7	24	---	---	---	0	100.7	101.7	102.5	24	102.9	103.6	104.7	24	108.2	109.2	109.9	24
5/30	119.5	119.7	120.1	24	---	---	---	0	101.6	102.6	103.2	24	103.7	104.7	105.4	24	108.5	109.1	109.5	24
5/31	119.5	120.4	120.5	24	---	---	---	0	130.5	130.7	130.9	24	103.3	104.3	105.0	24	107.2	107.7	108.3	24
6/1	121.4	122.4	123.0	24	---	---	---	0	132.4	132.8	133.0	24	103.3	104.4	105.0	24	106.8	107.5	108.0	24
6/2	122.9	123.3	123.9	24	---	---	---	0	115.5	129.9	132.9	24	103.4	104.3	105.0	24	106.8	107.4	108.0	24
6/3	119.7	120.3	120.8	24	---	---	---	0	100.9	101.4	101.8	24	103.1	103.8	104.5	24	106.4	106.9	107.4	24
6/4	119.3	119.9	120.3	24	---	---	---	0	101.7	103.3	104.7	24	103.4	104.7	105.5	24	106.2	107.0	107.6	24
6/5	118.8	119.8	120.4	24	---	---	---	0	100.4	101.0	101.5	24	103.3	104.3	104.8	24	106.1	106.8	107.3	24
6/6	118.9	119.4	120.0	24	---	---	---	0	100.3	100.9	101.5	24	103.1	104.1	104.7	24	106.1	106.8	107.4	24
6/7	114.4	115.3	117.2	24	---	---	---	0	100.2	100.8	101.4	24	102.8	103.7	104.3	24	106.0	106.7	107.1	24
6/8	114.2	115.2	115.8	24	---	---	---	0	100.2	100.8	101.4	24	102.9	104.0	104.6	24	106.0	106.9	107.5	24
6/9	115.8	116.1	116.3	24	---	---	---	0	100.7	101.3	101.7	24	103.0	104.0	104.5	24	105.9	106.7	107.3	24
6/10	113.6	114.7	115.6	24	---	---	---	0	100.6	101.2	101.7	24	102.8	103.7	104.3	24	105.4	106.1	106.7	24
6/11	---	---	---	0	---	---	---	0	100.9	101.6	102.1	23	103.0	104.1	104.9	23	105.6	106.5	107.1	23

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					
5/29	102.5	103.1	103.8	24	105.5	105.7	106.1	24	118.4	118.6	119.6	24	114.1	114.5	115.4	24	116.2	116.2	116.4	24
5/30	103.7	104.3	104.9	24	106.5	107.0	107.7	24	119.8	121.5	123.3	24	115.0	115.8	116.6	24	116.5	116.7	116.9	24
5/31	103.1	103.7	104.3	24	107.5	107.7	107.8	24	117.4	118.1	118.3	24	116.3	116.8	116.9	24	116.7	116.9	117.1	24
6/1	103.0	103.8	104.3	24	106.8	107.0	107.6	24	116.3	117.4	118.0	24	117.2	117.5	117.9	24	116.1	116.9	117.1	24
6/2	103.3	103.9	104.5	24	106.3	106.5	106.6	24	115.1	115.8	117.5	24	115.8	116.0	116.6	24	115.1	115.3	115.4	24
6/3	102.9	103.3	103.7	24	106.0	106.2	106.6	24	115.3	116.7	118.2	24	114.5	115.3	116.1	24	114.5	114.8	115.1	24
6/4	103.1	104.1	104.8	24	105.3	105.5	105.7	24	115.9	117.2	117.5	24	112.1	112.5	113.1	24	114.0	114.1	114.2	24
6/5	103.0	103.5	104.3	24	104.8	105.0	105.2	24	114.7	116.3	117.6	24	111.4	111.8	112.1	24	114.8	115.7	115.8	24
6/6	102.9	103.7	104.2	24	105.1	105.2	105.3	24	114.1	115.1	117.0	24	112.1	112.5	113.3	24	115.5	116.2	116.3	24
6/7	102.8	103.4	104.0	24	105.0	105.1	105.2	24	111.2	111.5	113.8	24	111.9	112.2	112.4	24	115.2	115.7	116.1	24
6/8	103.0	103.9	104.6	24	105.0	105.1	105.3	24	111.9	112.9	117.1	24	111.0	111.7	112.1	24	114.7	115.3	115.5	24
6/9	103.0	103.9	104.6	24	105.4	105.5	105.7	24	110.9	111.1	111.4	24	110.5	110.8	111.6	24	114.4	114.9	115.1	24
6/10	102.7	103.5	103.9	24	105.5	105.6	105.7	24	111.0	111.1	111.6	24	109.9	110.1	110.2	24	113.9	114.1	114.3	24
6/11	102.9	103.9	104.6	23	104.7	104.9	105.1	23	110.7	111.1	111.4	23	108.8	109.1	109.3	23	113.3	113.5	113.6	23

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					
5/29	115.3	115.5	115.8	24	116.6	116.7	117.1	24	113.9	114.1	114.3	24	119.7	120.2	120.4	24	---	---	---	0
5/30	116.4	117.0	117.3	24	116.9	117.2	117.4	24	115.1	115.8	116.2	24	119.7	119.9	120.1	24	---	---	---	0
5/31	117.2	117.6	117.8	24	117.3	117.4	117.6	24	116.2	116.6	116.7	24	119.7	120.0	120.5	24	---	---	---	0
6/1	117.4	117.8	118.1	24	116.8	116.9	117.2	24	116.5	116.9	117.2	24	118.6	119.2	119.6	24	---	---	---	0
6/2	118.3	118.8	119.3	24	116.6	116.8	117.1	24	117.4	117.8	118.0	24	117.9	118.9	119.6	24	---	---	---	0
6/3	116.5	117.0	117.9	24	116.3	116.5	116.7	24	117.0	117.3	117.6	24	118.4	119.3	119.6	24	---	---	---	0
6/4	114.7	114.9	115.3	24	116.5	116.7	116.8	24	115.8	116.0	116.6	24	118.7	119.7	120.2	24	---	---	---	0
6/5	113.8	114.0	114.2	24	117.7	118.8	119.3	24	115.0	115.3	115.4	24	117.3	118.1	120.0	24	---	---	---	0
6/6	113.9	114.4	115.1	24	119.0	119.4	119.6	24	115.0	115.3	115.4	24	117.1	117.9	118.8	24	---	---	---	0
6/7	115.4	115.8	116.2	24	118.9	119.4	119.8	24	115.1	115.4	115.5	24	117.7	118.7	119.8	24	---	---	---	0
6/8	115.6	115.9	116.1	24	119.1	119.3	119.7	24	115.8	116.3	116.6	24	117.7	118.5	119.6	24	---	---	---	0
6/9	115.9	116.2	116.4	24	117.8	119.4	119.9	24	116.7	117.1	117.4	24	117.4	117.9	119.3	24	---	---	---	0
6/10	114.7	115.0	115.8	24	114.4	114.6	115.0	24	116.6	116.8	116.9	24	117.0	117.2	117.5	24	---	---	---	0
6/11	113.9	114.1	114.3	23	115.6	117.0	118.8	23	115.6	115.8	116.2	23	116.9	117.2	117.6	23	---	---	---	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 Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High	
5/29	112.4	112.7	113.1	24	123.6	126.7	129.2	24	111.1	111.8	112.4	24	118.2	118.3	118.4	24	114.3	114.3	114.4	6
5/30	113.1	113.7	114.2	24	123.7	126.0	134.0	24	113.1	113.6	113.9	24	118.6	118.8	119.1	24	114.8	115.6	116.6	22
5/31	114.6	115.1	115.8	24	120.1	120.4	120.6	24	113.6	113.9	114.1	24	117.7	118.2	118.7	24	114.9	114.9	115.5	4
6/1	116.4	116.7	117.0	24	119.2	119.6	120.3	24	115.9	117.6	118.8	24	117.8	118.4	119.2	24	111.9	111.9	111.9	1
6/2	116.4	116.9	117.0	24	121.4	122.0	122.4	24	120.3	121.1	121.6	24	119.6	120.0	120.9	24	118.2	118.3	118.9	13
6/3	116.6	116.8	116.9	24	119.6	120.1	120.5	24	116.6	117.8	119.5	24	119.0	119.3	120.0	24	114.7	115.9	118.0	24
6/4	116.2	116.6	116.8	24	119.7	120.0	120.5	24	114.4	114.7	115.0	24	117.7	118.3	118.6	24	113.1	114.3	115.2	24
6/5	115.2	115.7	116.3	24	119.9	120.3	120.5	24	113.7	114.0	114.5	24	117.9	118.3	119.3	24	112.8	114.5	115.4	24
6/6	114.9	115.3	115.8	24	120.0	120.5	120.7	24	113.3	113.6	113.9	24	118.7	119.1	120.0	24	113.8	114.9	115.5	24
6/7	114.5	115.2	115.7	24	118.1	118.7	119.2	24	114.2	114.9	115.3	24	118.0	118.6	118.9	24	113.6	114.2	114.7	24
6/8	115.2	115.6	115.9	24	117.5	117.6	117.7	24	115.5	116.4	116.9	24	116.1	116.8	117.4	24	113.6	114.3	114.7	24
6/9	114.2	114.7	115.8	24	120.3	121.7	121.9	24	116.1	116.4	116.6	24	115.6	117.1	118.0	24	112.5	113.0	113.7	24
6/10	112.4	112.9	113.3	24	121.5	122.1	122.7	24	114.3	114.9	115.7	24	117.8	118.2	118.5	24	111.7	112.1	112.3	24
6/11	112.5	113.0	114.0	23	119.8	120.2	120.5	23	113.2	113.7	114.2	23	117.3	117.8	118.1	23	113.6	114.8	115.7	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	The Dalles Dnst			#	Bonneville			#	Warrendale			#	Camas\Washougal			#	Cascade Island			#
	24 h Avg	12 h Avg	High		24 h Avg	12 h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High		24h Avg	12h Avg	High	
5/29	117.8	118.4	119.2	24	114.7	115.4	116.0	24	117.4	118.0	118.6	24	117.2	117.5	118.0	24	123.3	123.5	123.7	24
5/30	119.6	120.2	120.5	24	117.6	117.6	118.4	11	119.2	119.2	119.6	11	118.6	118.6	119.9	11	123.3	123.3	124.3	11
5/31	117.9	118.3	119.8	24	116.9	117.8	118.3	24	118.3	119.1	119.7	24	118.0	118.9	119.7	24	122.3	123.5	124.3	24
6/1	117.0	118.0	118.8	24	113.7	114.0	115.2	24	115.9	116.1	116.4	24	115.5	116.2	116.8	24	120.9	121.5	123.2	24
6/2	120.0	121.8	122.4	24	114.3	114.8	115.1	24	116.9	117.5	117.7	24	115.4	116.3	116.9	24	123.7	124.0	124.2	24
6/3	119.4	121.0	122.5	24	113.9	114.2	114.5	24	115.7	116.2	116.7	24	114.5	114.7	115.0	24	122.1	123.6	124.0	24
6/4	117.9	119.0	119.4	24	112.7	113.2	113.4	24	114.7	115.0	115.3	24	114.2	114.7	115.5	24	120.3	121.2	121.4	24
6/5	118.3	119.2	120.1	24	113.0	113.6	114.6	24	114.5	115.0	115.4	24	113.0	114.0	114.6	24	119.6	120.5	123.3	24
6/6	118.4	118.9	119.4	24	114.9	115.3	115.5	24	115.6	116.2	116.7	24	113.8	114.9	115.9	24	119.5	120.1	120.7	24
6/7	118.6	119.0	119.4	24	113.9	114.5	115.5	24	115.0	115.4	116.0	24	114.1	114.7	115.6	24	120.0	120.3	120.9	24
6/8	118.5	118.9	119.3	24	113.3	113.6	113.9	24	114.4	114.6	114.7	24	113.5	114.3	115.2	24	119.8	120.3	120.4	24
6/9	118.1	118.3	118.6	24	112.9	113.3	113.9	24	114.4	114.6	114.8	24	112.9	113.6	114.5	24	118.4	118.6	118.6	24
6/10	117.4	117.8	118.2	24	111.0	111.4	111.8	24	113.3	113.4	113.6	24	112.3	113.0	113.8	24	118.9	119.5	120.1	24
6/11	118.7	119.6	120.3	23	113.7	115.0	115.8	23	115.1	116.0	116.4	23	113.0	114.6	115.6	23	118.7	118.9	119.3	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 6/13/2014 8:16

Two-Week Summary of Passage Indices

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

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

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

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

COMBINED YEARLING CHINOOK												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/30/2014	*	---	---	---	---	3,975	4,364	2,943	223	---	12,916	6,653
05/31/2014	*	---	---	---	---	3,353	2,733	1,729	67	5,240	11,301	7,025
06/01/2014	*	---	---	---	---	2,016	1,434	1,403	82	---	7,499	6,469
06/02/2014	*	---	---	---	---	1,921	1,490	1,149	67	4,208	7,612	4,264
06/03/2014	*	---	---	---	---	2,210	672	736	41	---	7,011	6,308
06/04/2014	*	---	---	---	---	810	1,907	590	41	6,106	3,666	5,593
06/05/2014	*	---	---	---	---	2,344	2,019	426	28	---	4,362	3,975
06/06/2014	*	---	26	---	---	2,587	712	1,175	26	4,379	3,427	4,384
06/07/2014	*	---	32	---	---	3,039	850	263	27	---	2,240	2,791
06/08/2014	*	---	24	---	---	1,399	430	331	10	7,003	1,933	1,830
06/09/2014	*	---	21	---	---	1,124	787	206	19	---	1,445	2,477
06/10/2014	*	---	42	---	---	1,620	788	660	10	3,275	1,472	1,872
06/11/2014	*	---	---	---	---	189	931	749	10	---	1,279	1,329
06/12/2014	*	---	---	---	---	1,091	215	279	14	1,715	691	1,008
06/13/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		0	145	0	0	27,678	19,332	12,639	665	31,926	66,854	55,978
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	29	0	0	1,977	1,381	903	48	4,561	4,775	3,998
YTD		65,404	63,270	25,420	10,159	4,801,545	2,832,257	1,966,771	26,391	2,015,896	2,309,920	2,144,498

COMBINED SUBYEARLING CHINOOK												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/30/2014	*	---	---	---	---	34,541	32,322	3,901	330	---	7,452	8,121
05/31/2014	*	---	---	---	---	41,148	32,179	7,134	102	6,169	6,438	7,506
06/01/2014	*	---	---	---	---	20,740	27,244	4,062	324	---	5,155	5,809
06/02/2014	*	---	---	---	---	28,259	52,271	13,433	247	5,237	5,785	5,685
06/03/2014	*	---	---	---	---	43,508	49,898	17,065	299	---	5,258	5,448
06/04/2014	*	---	---	---	---	20,798	25,203	16,390	328	12,121	6,665	6,621
06/05/2014	*	---	---	---	---	21,648	46,299	18,734	392	---	6,017	5,475
06/06/2014	*	---	0	---	---	20,177	36,597	24,991	437	15,509	7,919	7,331
06/07/2014	*	---	0	---	---	23,795	19,986	13,534	1,233	---	5,890	7,149
06/08/2014	*	---	0	---	---	22,443	10,750	6,416	785	26,575	6,016	6,043
06/09/2014	*	---	0	---	---	13,925	23,192	9,523	168	---	9,429	6,811
06/10/2014	*	---	0	---	---	11,032	32,384	15,234	505	29,754	12,199	6,097
06/11/2014	*	---	---	---	---	18,216	40,018	23,903	552	---	14,860	6,978
06/12/2014	*	---	---	---	---	9,502	14,604	11,585	331	44,016	8,637	8,716
06/13/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	329,732	442,947	185,905	6,033	139,381	107,720	93,790
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	23,552	31,639	13,279	431	19,912	7,694	6,699
YTD		0	19	4	332	492,014	485,556	190,535	9,801	199,372	176,066	1,918,898

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)
05/30/2014	*	---	---	---	---	611	409	684	3,999	---	4,090	7,044
05/31/2014	*	---	---	---	---	610	555	0	1,453	5,024	3,101	5,870
06/01/2014	*	---	---	---	---	0	141	148	1,472	---	5,312	6,441
06/02/2014	*	---	---	---	---	137	0	72	772	2,808	2,740	5,923
06/03/2014	*	---	---	---	---	0	268	147	828	---	1,870	5,919
06/04/2014	*	---	---	---	---	0	272	73	558	3,105	3,083	5,322
06/05/2014	*	---	---	---	---	276	135	142	509	---	2,031	5,175
06/06/2014	*	---	0	---	---	259	0	131	450	2,002	1,751	3,522
06/07/2014	*	---	0	---	---	0	142	0	234	---	1,078	3,881
06/08/2014	*	---	0	---	---	64	0	0	200	721	343	2,101
06/09/2014	*	---	0	---	---	62	0	0	226	---	760	2,601
06/10/2014	*	---	0	---	---	62	0	0	257	1,317	497	2,032
06/11/2014	*	---	---	---	---	0	72	0	201	---	573	1,218
06/12/2014	*	---	---	---	---	0	0	0	182	1,143	125	976
06/13/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	2,081	1,994	1,397	11,341	16,120	27,354	58,025
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	149	142	100	810	2,303	1,954	4,145
YTD		0	0	0	267	74,031	59,230	27,309	65,739	143,464	222,998	768,342

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)
05/30/2014	*	---	---	---	---	15,129	11,594	7,118	227	---	4,725	978
05/31/2014	*	---	---	---	---	13,716	6,539	3,603	67	1,608	7,344	1,444
06/01/2014	*	---	---	---	---	13,971	7,618	2,585	84	---	2,500	1,718
06/02/2014	*	---	---	---	---	10,289	9,205	3,161	65	1,739	2,335	1,777
06/03/2014	*	---	---	---	---	6,077	2,989	2,060	98	---	3,038	2,075
06/04/2014	*	---	---	---	---	6,077	4,359	2,102	74	1,322	1,666	1,257
06/05/2014	*	---	---	---	---	4,274	7,268	2,058	105	---	1,429	1,650
06/06/2014	*	---	115	---	---	6,934	3,987	1,958	107	1,136	914	791
06/07/2014	*	---	135	---	---	7,630	2,551	1,183	90	---	1,908	613
06/08/2014	*	---	116	---	---	5,404	3,583	1,587	66	103	1,153	907
06/09/2014	*	---	124	---	---	3,434	3,329	1,096	64	---	712	1,004
06/10/2014	*	---	164	---	---	3,366	3,245	1,385	60	1,121	811	749
06/11/2014	*	---	---	---	---	2,395	2,292	1,172	41	---	840	886
06/12/2014	*	---	---	---	---	1,477	1,360	698	22	191	727	585
06/13/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	654	0	0	100,173	69,919	31,766	1,170	7,220	30,102	16,434
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	131	0	0	7,155	4,994	2,269	84	1,031	2,150	1,174
YTD		2,080	42,618	4,243	12,842	3,357,495	1,956,767	1,177,414	27,072	575,471	1,029,261	449,632

Two-Week Summary of Passage Indices

COMBINED SOCKEYE												
	WTB	IMN	GRN	LEW	LGR	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)	(INDEX)
05/30/2014	*	---	---	---	---	0	682	890	73	---	12,775	10,958
05/31/2014	*	---	---	---	---	610	416	288	53	13,607	11,612	8,950
06/01/2014	*	---	---	---	---	144	564	443	31	---	12,498	5,160
06/02/2014	*	---	---	---	---	137	271	503	28	5,919	8,424	5,447
06/03/2014	*	---	---	---	---	414	134	441	18	---	7,712	5,006
06/04/2014	*	---	---	---	---	0	681	367	16	7,660	5,249	6,606
06/05/2014	*	---	---	---	---	138	269	142	13	---	5,265	3,900
06/06/2014	*	---	0	---	---	65	142	131	15	3,003	4,112	3,593
06/07/2014	*	---	0	---	---	65	0	263	10	---	2,157	2,179
06/08/2014	*	---	0	---	---	64	72	66	6	1,651	1,761	2,118
06/09/2014	*	---	0	---	---	0	72	0	187	---	1,506	1,679
06/10/2014	*	---	0	---	---	0	0	66	10	409	2,203	1,818
06/11/2014	*	---	---	---	---	0	0	0	10	---	1,913	941
06/12/2014	*	---	---	---	---	0	0	0	10	762	593	802
06/13/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	1,637	3,303	3,600	480	33,011	77,780	59,157
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	117	236	257	34	4,716	5,556	4,226
YTD		0	0	2	0	180,766	87,138	69,257	37,949	1,488,368	574,105	583,158

COMBINED LAMPREY JUVENILES												
	WTB	IMN	GRN	LEW	LGR [†]	LGS	LMN	RIS	MCN	JDA	BO2	
Date	(Coll)	(Coll)	(Coll)	(Coll)	(Samp)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)	(Coll)
05/30/2014	*	---	---	---	---	2	1,800	2,150	0	---	3,050	25
05/31/2014	*	---	---	---	---	4	1,400	3,600	0	1,300	4,600	25
06/01/2014	*	---	---	---	---	0	1,000	950	0	---	10,700	103
06/02/2014	*	---	---	---	---	0	500	2,400	0	1,725	4,400	133
06/03/2014	*	---	---	---	---	0	300	1,000	0	---	4,600	100
06/04/2014	*	---	---	---	---	0	100	300	0	6,350	5,400	335
06/05/2014	*	---	---	---	---	0	100	900	0	---	4,450	325
06/06/2014	*	---	0	---	---	0	300	800	0	1,650	2,850	350
06/07/2014	*	---	0	---	---	0	100	0	0	---	2,250	250
06/08/2014	*	---	0	---	---	0	150	100	0	2,400	2,490	292
06/09/2014	*	---	0	---	---	1	0	150	0	---	1,711	515
06/10/2014	*	---	0	---	---	0	50	150	0	2,400	2,094	120
06/11/2014	*	---	---	---	---	0	50	0	0	---	1,483	140
06/12/2014	*	---	---	---	---	2	250	100	0	8,100	1,040	148
06/13/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	9	6,100	12,600	0	23,925	51,118	2,861
# Days:		0	5	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	1	436	900	0	3,418	3,651	204
YTD		1	3	0	0	96	12,863	29,217	28	28,255	77,011	15,044

Two-Week Summary of Passage Indices

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

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's,) subyearling chinook (chinook 0's), steelhead, coho, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:

Two classes of fish counts are shown in these tables:

Sample counts (Samp) are provided for juvenile lamprey at LGR. See note below for details †.

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.

† In 2013 it was confirmed that juvenile lamprey can escape the sample tank at LGR which would lead to unreliable estimates of collection. Therefore, only sample counts are provided in this report.

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.

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.

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

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

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

6/13/14 8:18 AM

		05/30/14 TO 06/13/14					
		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	240,700	20,151	1,450	72,110	1,150	335,561
	Sum of NumberBarged	231,000	19,003	1,450	68,261	1,145	320,859
	Sum of NumberBypassed	2,052	280	0	2,844	0	5,176
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	51	3	0	3	0	57
	Sum of FacilityMorts	475	17	0	12	5	509
	Sum of ResearchMorts	2	0	0	0	0	2
	Sum of TotalProjectMorts	528	20	0	15	5	568
LGS	Sum of NumberCollected	319,210	13,991	1,450	50,490	2,400	387,541
	Sum of NumberBarged	308,649	13,646	1,449	49,490	2,388	375,622
	Sum of NumberBypassed	18	0	0	0	0	18
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	14	1	0	3	0	18
	Sum of FacilityMorts	346	194	1	49	12	602
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	360	195	1	52	12	620
LMN	Sum of NumberCollected	134,830	9,062	1,000	22,758	2,550	170,200
	Sum of NumberBarged	126,253	8,824	1,000	22,171	2,543	160,791
	Sum of NumberBypassed	130	12	0	58	0	200
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	2	0	1	0	5
	Sum of FacilityMorts	151	24	0	28	7	210
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	153	26	0	29	7	215
Total Sum of NumberCollected		694,740	43,204	3,900	145,358	6,100	893,302
Total Sum of NumberBarged		665,902	41,473	3,899	139,922	6,076	857,272
Total Sum of NumberBypassed		2,200	292	0	2,902	0	5,394
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		67	6	0	7	0	80
Total Sum of FacilityMorts		972	235	1	89	24	1,321
Total Sum of ResearchMorts		2	0	0	0	0	2
Total Sum of TotalProjectMorts		1,041	241	1	96	24	1,403

YTD Transportation Summary

Source: Fish Passage Center

Updated:

6/13/14 8:18 AM

TO: 06/13/14

		Species					
Site	Data	CH0	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	346,000	3,438,062	52,622	130,100	2,390,759	6,357,543
	Sum of NumberBarged	327,292	1,934,343	48,892	70,010	1,312,631	3,693,168
	Sum of NumberBypassed	10,958	1,501,395	3,722	59,638	1,076,899	2,652,612
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	85	132	1	43	55	316
	Sum of FacilityMorts	543	1,285	7	409	95	2,339
	Sum of ResearchMorts	2	59	0	0	89	150
	Sum of TotalProjectMorts	630	1,476	8	452	239	2,805
LGS	Sum of NumberCollected	350,369	1,947,214	41,692	60,334	1,356,514	3,756,123
	Sum of NumberBarged	339,525	1,763,723	40,792	53,994	1,135,435	3,333,469
	Sum of NumberBypassed	283	182,657	890	6,109	220,102	410,041
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	14	34	1	13	15	77
	Sum of FacilityMorts	364	650	9	218	144	1,385
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	378	684	10	231	159	1,462
LMN	Sum of NumberCollected	138,233	1,324,333	19,900	48,018	788,446	2,318,930
	Sum of NumberBarged	128,252	1,136,493	17,500	44,756	682,024	2,009,025
	Sum of NumberBypassed	134	177,066	0	2,568	89,933	269,701
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	2	25	0	1	16	44
	Sum of FacilityMorts	151	961	0	299	177	1,588
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	153	986	0	300	193	1,632
Total Sum of NumberCollected		834,602	6,709,609	114,214	238,452	4,535,719	12,432,596
Total Sum of NumberBarged		795,069	4,834,559	107,184	168,760	3,130,090	9,035,662
Total Sum of NumberBypassed		11,375	1,861,118	4,612	68,315	1,386,934	3,332,354
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		101	191	2	57	86	437
Total Sum of FacilityMorts		1,058	2,896	16	926	416	5,312
Total Sum of ResearchMorts		2	59	0	0	89	150
Total Sum of TotalProjectMorts		1,161	3,146	18	983	591	5,899

Cumulative Adult Passage at Mainstem Dams Through: 06/12

DAM	END DATE	Spring Chinook 2013						Summer Chinook 2013						Fall Chinook 2013					
		2014		2013		10-Yr Avg.		2014		2013		10-Yr Avg.		2014		2013		10-Yr Avg.	
		Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack	Adult	Jack
BON	06/12	188083	26094	83345	33820	130283	22257	30105	4863	22773	6820	21659	4535	0	0	0	0	0	0
TDA	06/12	143142	21080	69202	32311	99813	18973	18223	2736	16607	4349	13222	2651	0	0	0	0	0	0
JDA	06/12	123224	19103	56991	28957	87036	17743	14255	1905	12756	3151	8742	1877	0	0	0	0	0	0
MCN	06/12	107147	16033	52176	22279	79413	14950	7600	1072	6858	1530	4802	987	0	0	0	0	0	0
IHR	06/12	79298	12428	38017	18611	54814	9602	627	174	423	175	454	84	0	0	0	0	0	0
LMN	06/12	79160	13750	35984	18757	53560	8352	0	0	0	0	0	0	0	0	0	0	0	0
LGS	06/12	76719	13095	33363	18441	47524	9031	0	0	0	0	0	0	0	0	0	0	0	0
LGR	06/12	76496	12762	32599	18311	45666	9872	0	0	0	0	0	0	0	0	0	0	0	0
PRD	06/11	21789	2551	13199	1272	14181	1421	0	0	0	0	0	0	0	0	0	0	0	0
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	06/11	20221	2767	10527	2829	12312	2143	0	0	0	0	0	0	0	0	0	0	0	0
RRH	06/11	10294	2237	4915	1988	4767	892	0	0	0	0	0	0	0	0	0	0	0	0
WEL	06/11	8469	2091	3085	2523	3070	869	0	0	0	0	0	0	0	0	0	0	0	0
WFA	06/09	21792	837	21293	1098	30069	720	0	0	0	0	0	0	0	0	0	0	0	0

DAM	END DATE	Coho						Sockeye			Steelhead						Lamprey		
		2014		2013		10-Yr Avg.		2014	2013	10-Yr Avg.	2014	2013	10-Yr Avg.	2014	Wild 2013	10-Yr Avg.	2014	2013	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	06/12	5	-2	0	0	0	0	11273	9194	6038	7795	4158	7352	1999	1084	1860	6095	3482	2624
TDA	06/12	0	0	0	0	0	0	4936	4401	2935	1440	1122	3047	331	410	1045	94	143	59
JDA	06/12	0	1	0	0	0	0	3231	3378	1881	3675	1216	5389	1340	564	1702	152	55	63
MCN	06/12	0	0	1	0	1	0	938	1162	663	1185	1693	5819	403	732	1897	11	30	11
IHR	06/12	0	0	0	0	0	0	1	5	0	2015	3957	4690	790	1505	1373	7	11	0
LMN	06/12	0	0	0	0	0	0	1	1	0	1935	2599	6842	963	1390	2859	3	3	1
LGS	06/12	0	0	0	0	0	0	0	2	0	1685	2232	6792	1028	1187	2335	0	3	0
LGR	06/12	0	0	0	0	0	0	0	3	0	7576	7454	8836	3480	3236	3157	1	1	0
PRD	06/11	0	0	0	0	0	0	71	91	53	125	67	65	0	0	0	10	36	7
WAN		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	06/11	0	0	0	0	0	0	5	14	4	290	118	112	157	86	65	0	0	0
RRH	06/11	0	0	0	0	0	0	4	4	1	261	169	376	160	144	277	0	0	0
WEL	06/11	0	0	0	0	0	0	0	0	0	132	76	73	77	69	51	0	0	2
WFA	06/09	9	0	2	0	0	0	0	0	0	14447	13057	17227	0	0	0	0	0	0

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.