



Fish Passage Center

Weekly Report #14 - 7

May 2, 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 77% and 122% of average at individual sub-basins over April. Precipitation above The Dalles has been 101% of average over April. Over the 2014 water year, precipitation has ranged between 82% and 101% of average.

Table 1. Summary of April precipitation and cumulative October through April 30, 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	
	April 1–30, 2014		October 1, 2013 to April 30, 2014	
	Observed (inches)	% Average	Observed (inches)	% Average
Columbia above Coulee	2.69	106	23.5	94
Snake River above Ice Harbor	1.89	100	13.5	85
Columbia above The Dalles	2.04	101	16.6	86
Kootenai	2.66	104	25.0	99
Clark Fork	1.77	77	15.6	87
Flathead	2.61	93	24.3	101
Pend Oreille River Basin above Waneta Dam	2.28	90	20.4	92
Salmon River Basin	2.49	102	16.1	82
Upper Snake Tributaries	2.84	122	17.8	96
Clearwater	2.96	87	28.8	97
Willamette River above Portland	5.25	104	45.3	83

Snowpack within the Columbia Basin has been variable. Average snowpack in the Columbia River for basins above the Snake River confluence is 136% of average. For Snake River Basins the average snowpack is 106% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 68% of average.

Table 2 displays the May 1st ESP runoff volume forecasts for multiple reservoirs along with the April COE forecasts at Libby and Dworshak. The May 1st ESP forecast at The Dalles between January and July is 106,718 Kaf (105% of average).

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

Location	May 1, 2014 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Jan–July)	105	106718
Grand Coulee (Jan–July)	105	62590
Libby Res. Inflow, MT (Apr–Aug)	114	6699 6868*
Hungry Horse Res. Inflow, MT (Jan–July)	122	2022
Lower Granite Res. Inflow (Apr–July)	109	21692
Brownlee Res. Inflow (Apr–July)	66	3639
Dworshak Res. Inflow (Apr–July)	128	3102 3111*

* Denotes COE April Forecast

Grand Coulee Reservoir is at 1232.6 feet (5-1-14) and has drafted 3.7 feet over the last week. The April 30th FC Elevation at Grand Coulee was 1235.2 feet. Outflows at Grand Coulee have ranged between 152.0 and 158.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2386.5 feet (5-1-14) and has drafted 5.7 feet over the previous week. The April 30th FC Elevation at Libby was 2387.0 feet. Daily average outflows at Libby Dam have been 24.3–24.6 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3494.3 feet (5-1-14) and has refilled 2.0 feet over the previous week. The April 30th FC Elevation at Hungry Horse was 3495.4 feet. Outflows at Hungry Horse have been 10.2–13.1 Kcfs over the last week.

Dworshak is currently at an elevation of 1490.7 feet (4-24-14) and has refilled 2.0 feet over the previous week. Since the refill operation as begun, outflows from Dworshak have been 10.7 Kcfs. The current operational plan is to reduce outflows on May 3, 2014, to 5.0 Kcfs and on May 4, 2014, further reduce outflows to 2.4 Kcfs.

The Brownlee Reservoir was at an elevation of 2055.6 feet on May 1, 2014, refilling 1.5 feet over the last week. Inflows to Brownlee Dam have ranged between 14.9 and 16.3 Kcfs last week. The April 30th FC Elevation at Brownlee was 2056.3 feet.

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 will be 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 74.5 Kcfs over the last week and 74.3 Kcfs between April 3 and May 1, 2014.

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 264.5 Kcfs over the last week and 251.5 over the spring period. Flows at Priest Rapids Dam have averaged 175.3 Kcfs over the last week and 161.2 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.

All of the lower Snake River projects have spilled at or above the 2014 Fish Operations Plan (FOP) levels. The additional spill was due to the distribution of excess generation spill. On April 28th the “test-like” conditions,

where spill alternates between 30% instantaneous and 45 Kcfs/Gas Cap, were initiated at Ice Harbor Dam. The net effect of this operation is a decrease in spill levels during the “test-like” 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 3–April 28: 45 Kcfs/Gas Cap April 28–June 1: 30%/30% vs. 45 Kcfs/Gas Cap

All the middle Columbia River projects spilled at, or occasionally above, the 2014 FOP levels over the past week. The additional spill was due to the distribution of excess generation spill.

Project	Spill Level Day/Night
McNary	40%/40%
John Day	Pre-test: 30%/30% 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. 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 Lower Granite, Little Goose, Lower Monumental, McNary, Bonneville, and Rock Island dams over the past week. No fish were observed with signs of GBT in the Federal Columbia River Power System over the past week. A few fish were observed with signs of GBT at Rock Island Dam on 4/29; however, only 3% of fish were detected with signs, which is well below the action criteria of 15%.

Smolt Monitoring

Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, LGR) and three of the four traps (LEW, GRN, IMN). Sampling at the Salmon River Trap (WTB) was terminated after the April 21st sample. Sampling at Little Goose and Lower Monumental dams remained limited most of this week.

This week's samples at Bonneville Dam (BON) continued to be dominated by yearling Chinook juveniles. This week's daily average passage index for yearling Chinook was about 45,000 per day, which is an increase over last week's daily average passage index of only about 34,200 per day. Passage of coho and steelhead also increased again this week, when compared to last week. The daily average passage indices for these two species were about 15,500 and 4,500 per day, respectively. Passage of subyearling Chinook decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at BON this week was about 1,570 per day. Sockeye passage this week was similar to last week. So far, no Pacific lamprey ammocoetes have been sampled at BON. Pacific lamprey macrophthalmia were encountered in only two of this week's samples, April 25th and April 29th.

Yearling Chinook continued to dominate the collections at John Day (JDA) this week. In fact yearling Chinook passage increased substantially again this week, when compared to the previous week. This week's daily average passage index for yearling Chinook at JDA was about 39,000 per day. Last week's daily average passage index was about 14,500 per day. Passage of coho, steelhead, and sockeye also increased this week. This week's daily average passage indices for these three species were about 1,600, 16,750, and 1,200 per day, respectively. Last week's daily average

passage indices for these three species were about 50, 5,400, and 350 per day, respectively. Passage of subyearling Chinook remained relatively low this week. Both Pacific lamprey ammocoetes and macrophthalmia were collected at JDA this week. This week's daily average collection for Pacific lamprey ammocoetes was about 20 per day, while that for Pacific macrophthalmia was about 250 per day.

Sampling at McNary Dam (MCN) is every-other-day for the entire 2014 SMP season. Yearling Chinook continued to dominate the collections at MCN this week. This week's daily average passage index for yearling Chinook at MCN was about 68,500 per day, which is an increase over last week's daily average passage index of about 26,000. Steelhead, sockeye, coho, and subyearling Chinook passage also increased this week when compared to last week. This week's daily average passage indices for these four species were about 39,200, 23,300, 3,000, and 625 per day, respectively. So far, all subyearling Chinook collected at MCN this season have been fry. Finally, only Pacific lamprey macrophthalmia have been collected so far this year. The daily average collection of Pacific macrophthalmia this week was about 125 per day.

As with last week, this week's samples at Lower Granite Dam were dominated by yearling Chinook. This week's daily average passage index for yearling Chinook at LGR was about 150,000 per day, which is an increase over last week's daily average passage index of about 105,000 per day. A very small proportion (approximately 1.1%) of this week's total yearling Chinook passage index were hatchery yearling fall Chinook. These hatchery yearling fall Chinook were released from acclimation ponds above LGR in recent weeks. Steelhead passage increased substantially this week, when compared to last week. The daily average passage index for steelhead this week was about 128,000 per day. Last week's daily average passage index for steelhead was about 69,000 per day. Sockeye and coho passage at LGR also increased this week. This week's daily average passage indices for these two species were about 6,000 and about 600 per day, respectively. Passage of subyearling Chinook fry decreased this week. No lamprey juveniles have been sampled at Lower Granite Dam this year. Finally, collections for transportation began on May 1st, with the first barge expected to leave LGR on May 2nd.

Sampling at Little Goose (LGS) and Lower Monumental (LMN) dams was limited for most of this week. Collections for transportation at these two sites began on May 1st, with the first barge expected to leave on May 2nd. With the initiation of transportation, sampling at LGS and LMN will no longer be limited and, thus, will change to daily 24-hour samples. The limited sampling at LGS was one 24-hour sample every 5 days from April 1st through May 1st. The limited sampling at LMN was every 3 days for a limited number of hours, to collect condition and GBT fish only, through about April 29th. Steelhead and yearling Chinook continued to dominate this week's samples at LGS and LMN. LGS did one 24-hour sample this week. The passage indices from this week's sample at LGS were about 97,500 for yearling Chinook and nearly 140,000 for steelhead. Both sites also collected sockeye in this week's samples and LGS sampled a few coho. Finally, no lamprey juveniles were collected in this week's samples at LGS or LMN

Sockeye and yearling Chinook dominated this week's samples at Rock Island Dam (RIS). However, passage of sockeye continued to decrease this week when compared to last week. This week's daily average passage index for sockeye at RIS was about 240 per day while last week's daily average passage index was about 320 per day. The daily average passage index for yearling Chinook at RIS this week was about 375 per day, compared to last week's daily average passage index of about 100 per day. Steelhead, coho, and subyearling Chinook passage at RIS remained relatively low this week. All subyearling Chinook juveniles that were sampled this week were fry. Finally, no lamprey juveniles were sampled at RIS this week.

The Grande Ronde Trap (GRN) is operated by the Oregon Department of Fish and Wildlife and is located at river kilometer 2 in the Grande Ronde River. Yearling Chinook continued to dominate the collections this week with a daily average collection of about 580 per day, which was an increase over the previous week's daily average collection of about 400 per day. The increase in passage this week is largely due to a spike in yearling Chinook collections on April 25th and April 26th. During these 2 days, 81–96% of the daily yearling Chinook collection was of known hatchery origin. For the entire week, about 58–96% of the daily yearling

Chinook collection was of known hatchery origin. Steelhead collections at GRN this week were similar to last week with a daily average collection of about 80 per day.

The Snake River Trap (LEW) is located at river kilometer 225 and operated by Idaho Department of Fish and Game. Collections of yearling Chinook decreased this week, when compared to last week. This week's daily average collection for yearling Chinook was about 180 per day. Last week's daily average collection for yearling Chinook was about 250 per day. This week's daily average collection for steelhead at LEW was about 650 per day, which is an increase over last week's daily average collection of about 450 per day. As with LGR, a portion of the yearling Chinook (3%) collected at LEW this week were likely yearling fall Chinook. These yearling fall Chinook include hatchery yearling fall Chinook that were released from acclimation ponds above LEW in recent weeks or individuals that overwintered in the LGR pool and are now out-migrating.

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. To date, we have received data through April 29th. For the period of April 23–29, the average daily collection for yearling Chinook was about 263 per day, which is a decrease from the previous week's daily average collection of about 775 per day. Steelhead collections over this period increased when compared to the previous week. The daily average collection for steelhead for the period of April 23–29 was about 1,000 per day. Approximately 86% of the steelhead collected over the period of April 23–29 were clipped.

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 193,000 yearling spring Chinook juveniles were scheduled to be released into the Yankee Fork of the Salmon River this week. These yearling spring Chinook are 100% unclipped but are tagged with coded-wire tags. In addition, about 276,500 summer steelhead were scheduled for release in this zone this week. These releases were scheduled to take place in the Imnaha (78%) and Salmon (22%) rivers. The summer steelhead juveniles that were scheduled to be released into the Salmon River were 100% unclipped but were tagged with coded-wire tags.

On or around May 14th, about 470,000 subyearling fall Chinook juveniles are scheduled to be released into Lapwai Creek, a tributary of the Clearwater River. Of these subyearling fall Chinook juveniles, approximately 42% are going to be unclipped but tagged with coded-wire tags and 36% are going to be unmarked. Approximately 276,000 sockeye juveniles are scheduled to be released into Redfish Lake Creek over the next 2 weeks. Finally, about 280,000 summer steelhead are scheduled for release to this zone over the next 2 weeks. These releases are scheduled to take place in the Grande Ronde (57%) and Wallowa (43%) rivers.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Three releases of subyearling fall Chinook juveniles were scheduled for this zone this week. Two of these three releases were Yakama Tribal releases to the Yakima River that were expected to total about 1.72 million fall Chinook juveniles. The third release was part of the WDFW Cooperative Program. This release consisted of about 4,700 fall Chinook juveniles that were released near Pasco, Washington. The Yakama Tribal Program to reintroduce coho to the Wenatchee, Methow, and Yakima rivers was scheduled to release about 930,000 coho juveniles this week. The releases that were scheduled to begin this week were scheduled to occur in the Methow (57%) and Wenatchee (43%) rivers. As with many of the releases that have already started, these releases are volitional and are expected to run for several weeks.

Four releases of subyearling fall Chinook juveniles are scheduled for this zone over the next 2 weeks. Two of these four releases are Yakama Tribal releases to the

Yakima River that are expected to total about 567,000 fall Chinook juveniles. The other two releases are part of the WDFW Cooperative Program and are expected to total about 19,150 fall Chinook juveniles. The vast majority (99%) of these fall Chinook juveniles are scheduled to be released into the Yakima River, with just a small proportion (1%) scheduled for release into the Wenatchee River. In addition, about 420,000 subyearling summer Chinook juveniles are scheduled for release to this zone over the next 2 weeks. All of these summer Chinook juveniles were reared at Chief Joseph Hatchery, a new hatchery operated by the Colville Tribe. Of the 420,000 subyearling summer Chinook that are scheduled to be released over the next 2 weeks, about 43% are scheduled to be released into the Okanogan River while 57% are scheduled to be released directly from the hatchery, which is located below Chief Joseph Dam. Approximately 125,000 summer steelhead are scheduled for release into this zone over the next 2 weeks. Of these, about 80% are scheduled to be released into the Methow River while 20% are scheduled to be released into the Okanogan River. Finally, several volitional releases of yearling spring Chinook, yearling summer Chinook, and summer steelhead that began in March and April are scheduled to end over the next 2 weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. Approximately 926,000 coho juveniles were scheduled to be released into the Klickitat River this week. In addition, about 90,000 summer steelhead were scheduled to be released to the Klickitat River and 37,500 winter steelhead were scheduled to be released into Hood River this week.

On May 6th, Spring Creek NFH is scheduled to release about 4.5 million subyearling fall Chinook tules into Bonneville Pool. This is the second and final release of fall Chinook tules from Spring Creek NFH this year. In addition, about 600,000 subyearling fall Chinook juveniles are scheduled to be released into the Umatilla River, on or around May 14th. Approximately 240,000 yearling spring Chinook juveniles are scheduled to be released into the Deschutes River, on or around May 11th. Finally, about 12,500 winter steelhead juveniles are scheduled for release into Hood River in mid-May.

Adult Passage

Adult counts at Bonneville Dam have been updated through May 1st. Daily adult spring Chinook counts at Bonneville Dam ranged from 3,906 to 14,011 adult salmon per day. As of May 1st, a total of 92,673 spring Chinook have been counted at Bonneville Dam. In 2013, 31,217 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2014 adult spring Chinook count at Bonneville Dam is about 3 times greater than the 2013 count and 1.8 times greater than the 10-year average count of 50,157. The 2014 spring Chinook jack count of 1,874 is 81% of the 2013 count of 2,313, while being 2 times greater than the 10-year average count of 922. At Willamette Falls, 3,124 adult spring Chinook have been counted so far this year. In 2013, 7,706 adult spring Chinook were counted at Willamette Falls. This year's count is about 40.5 % of the 2013 count and 34.7% of the 10-year average count of 8,984. As of May 1st, a total of 41,283 adult spring Chinook have been counted at The Dalles Dam and 13,579 have been counted at McNary Dam. The Dalles Dam 2014 adult spring Chinook count is 2 times greater than the 2013 and 1.4 times greater than the 10-year average count. The 2014 McNary Dam adult spring Chinook count is about 1.9 times greater than the 2013 count, while being only 95% of the 10-year average count.

The 2014 Bonneville Dam adult steelhead count of 3,904 is about 1.5 times greater than the 2013 count of 2,650 and has 320 more fish than the 10-year average count of 3,584. The 2014 Bonneville Dam adult wild steelhead count of 1,177 is about 1.4 times greater than the 2013 count of 813 and 1.1 times greater than the 10-year average count of 1,015. 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 20 to 31 adults per day last week. This year's Lower Granite steelhead count of 7,126 has 40 fewer fish than the 2013 count of 7,166 and is about 84.4% of the 10-year average count of 8,444. The 2014 Lower Granite Dam adult wild steelhead count of 3,230 has 176 more fish than the 2013 count of 3,054 and is about 1.1 times greater

than the 10-year average count of 2,907. At Willamette Falls, the 2014 count for steelhead was 5,943 as of April 30th. This year's steelhead count is about 84.5% of the 2013 count of 7,031 and about 71.6% of the 10-year average count of 8,297.

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.

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. Visual observations of the retrofit have been promising. A weir and chute has also been installed at the right bank fishway at Wanapum and was operational on April 23, 2014. Grant County PUD has plans to modify the exit chutes to include a spiral flume that will reduce the elevation of the chute outflow from approximately 10 feet down to several feet. As numbers of migrating adults are currently low, it remains uncertain as to how well these retrofits will effectively pass larger numbers of adult fish. These modifications will need to be vigilantly monitored throughout the period of their use to observe (1) accumulations of adults below the structures, (2) if adults pass evenly over the weir or seem to prefer certain areas to pass, and (3) how well they exit the structure. Grant County has also modified their Off Ladder Adult Fish Trap (OLAFT) at Priest Rapids Dam and has begun a Trap and Haul operation at Priest Rapids. Two hundred hatchery Chinook traveling through the trap are scheduled to be pit-tagged and fifty additional hatchery Chinook will be acoustic tagged; these fish will be returned to the ladder to migrate through the Priest

Rapids reservoir and through the Wanapum project Rapids Dam. This operation is expected to continue until the tagged chinook passage at Wanapum Dam can be evaluated. The right bank fish ladder at Priest Rapids is currently operating at a reduced but passable level, to provide an additional route of passage around Priest Rapids Dam.

At the current time, Grant County will not be capable of counting adult fish at either the left or right bank fishways at Wanapum Dam. Temporary PIT-tag detectors have been installed at the Wanapum fishways to help track adult fish passage over the project. 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 two denils in place at the right bank fishway. A denil extension is also planned to be in place at the left bank fishway in June.

Hatchery Releases Last Two Weeks

Agency	Hatchery	Species	Race	MigYr	Hatchery Release Summary				
					From:	4/18/2014	to	05/01/14	
					NumRel	RelStart	RelEnd	RelSite	RelRiver
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	505,449	04-18-14	04-23-14	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Rapid River Hatchery	CH1	SP	2014	2,500,000	03-17-14	04-25-14	Rapid River Hatchery	Little Salmon River
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2014	193,000	04-29-14	04-29-14	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game Total					3,198,449				
Nez Perce Tribe	Dworshak NFH	ST	SU	2014	240,000	04-18-14	04-22-14	Lolo Creek	Clearwater River M F
Nez Perce Tribe	Lookingglass Hatchery	CH1	SP	2014	233,061	03-21-14	04-22-14	Lostine Accim Pond	Wallowa River
Nez Perce Tribe Total					473,061				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	50,000	04-30-14	04-30-14	Big Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	165,000	04-30-14	04-30-14	Little Sheep Creek	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2015	300,000	04-30-14	04-30-14	Crooked River (OR)	Deschutes River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2015	300,000	04-30-14	04-30-14	Wychus Creek	Deschutes River
Oregon Dept. of Fish and Wildlife	Umatilla Hatchery	ST	SU	2014	54,800	04-24-14	04-24-14	Meacham Creek	Umatilla River
Oregon Dept. of Fish and Wildlife Total					869,800				
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2014	61,500	04-28-14	04-30-14	East Fk Salmon River	Salmon River (ID)
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2014	1,166,550	04-02-14	04-25-14	Sawtooth Hatchery	Salmon River (ID)
U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2014	1,200,000	04-22-14	04-23-14	Icicle Creek	Wenatchee River
U.S. Fish and Wildlife Service	Winthrop NFH	CH1	SP	2014	560,000	04-15-14	04-30-14	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2014	53,000	04-15-14	05-15-14	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2014	96,000	04-15-14	05-15-14	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					3,137,050				
Umatilla Tribe	Cascade Hatchery	CO	UN	2014	750,000	04-20-14	04-20-14	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2014	54,800	04-20-14	04-20-14	Minthorn Acclimation Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	ST	SU	2014	54,800	04-20-14	04-20-14	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe Total					859,600				
Warm Springs Tribe	Oak Springs Hatchery	ST	WI	2014	25,000	04-30-14	04-30-14	E Fk Irrig Dist Sand Trap	Hood River
Warm Springs Tribe	Parkdale Acclim. Pond	ST	WI	2014	12,500	04-30-14	04-30-14	Parkdale Acclim Pond	Hood River
Warm Springs Tribe Total					37,500				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2014	222,300	04-15-14	04-25-14	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	ST	SU	2014	205,000	04-25-14	05-15-14	Chiwawa Hatchery	Wenatchee 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	Eastbank Hatchery	CH1	SU	2014	90,000	04-25-14	04-25-14	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	CH1	SU	2014	450,000	04-25-14	04-25-14	Dryden Acclim Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2014	25,000	04-20-14	05-20-14	Blackbird Island Acc Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	41,000	04-20-14	04-20-14	Tucannon River	Tucannon River

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	4/18/2014	to	05/01/14						
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	210,000	04-08-14	04-30-14	Cottonwood Acclim Pond	Grande Ronde River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2014	49,162	04-15-14	04-30-14	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SP	2014	203,330	04-15-14	04-20-14	Methow Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	CH1	SU	2014	200,000	04-15-14	04-25-14	Carlton Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2014	50,000	04-10-14	04-30-14	Twisp Acclim Pond	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2014	150,000	04-10-14	04-20-14	Ringold Springs Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Similkameen Hatchery	CH1	SU	2014	115,000	04-15-14	05-10-14	Similkameen Acclim Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2014	90,000	05-01-14	05-10-14	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	CH1	SP	2014	256,000	04-01-14	04-25-14	Curl Lake Acclim Pond	Tucannon River
Washington Dept. of Fish and Wildlife	Tucannon Hatchery	ST	SU	2014	50,000	04-20-14	04-30-14	Tucannon River	Tucannon River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2014	320,000	04-15-14	05-15-14	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2014	80,000	04-25-14	05-10-14	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife Total					2,811,892				
Yakama Tribe	Cascade Hatchery	CO	UN	2014	49,841	05-01-14	05-30-14	Methow River	Methow River
Yakama Tribe	Cascade Hatchery	CO	UN	2014	49,892	05-01-14	05-30-14	Winthrop Hatchery	Methow River
Yakama Tribe	Cascade Hatchery	CO	UN	2014	64,822	05-01-14	05-30-14	Biddle Pond	Methow River
Yakama Tribe	Cascade Hatchery	CO	UN	2014	89,748	05-01-14	05-30-14	Twisp Acclim Pond	Methow River
Yakama Tribe	Cascade Hatchery	CO	UN	2014	97,683	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	258,316	03-15-14	05-15-14	Clark Flat Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	270,653	03-15-14	05-15-14	Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	277,151	03-15-14	05-15-14	Easton Pond	Yakima River
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	CO	NO	2014	926,000	05-01-14	05-01-14	Klickitat Hatchery	Klickitat River
Yakama Tribe	Marion Drain Hatchery	CH0	FA	2014	50,000	04-21-14	04-21-14	Roza Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2014	22,000	04-29-14	04-29-14	Prosser Acclim Pond	Yakima River
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2014	1,700,000	04-26-14	04-26-14	Prosser Acclim 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	Willard Hatchery	CO	UN	2014	17,280	05-01-14	05-30-14	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	33,608	05-01-14	05-30-14	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	62,997	05-01-14	05-30-14	Coulter Creek	Wenatchee River

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	4/18/2014		to		05/01/14				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Yakama Tribe	Willard Hatchery	CO	UN	2014	63,979	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	72,081	05-01-14	05-30-14	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	92,364	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	96,368	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	96,975	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	98,104	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	100,786	04-18-14	04-20-14	Leavenworth Hatchery	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	101,921	05-01-14	05-30-14	Rolfings Acclim Pond	Wenatchee River
Yakama Tribe	Willard Hatchery	CO	UN	2014	109,688	05-01-14	05-30-14	Butcher Creek Acclim. Pond	Wenatchee River
Yakama Tribe	Winthrop NFH	CO	UN	2014	279,377	05-01-14	05-30-14	Winthrop Hatchery	Methow River
Yakama Tribe Total					5,947,432				
Grand Total					17,334,784				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	5/2/2014		to		5/15/2014				
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	Chief Joseph Hatchery	CH0	SU	2014	240,000	05-15-14	06-01-14	Chief Joseph Hatchery	Mid-Columbia River
Colville Tribe Total					420,000				
Idaho Dept. of Fish and Game	Oxbow-Oregon	SO	UN	2014	110,000	05-07-14	05-07-14	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2014	1,320	05-07-14	05-07-14	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	SO	UN	2014	165,000	05-07-14	05-07-14	Redfish Lake Creek	Salmon River (ID)
Idaho Dept. of Fish and Game Total					276,320				
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH0	FA	2014	470,000	05-14-14	05-14-14	Lapwai Creek	Clearwater River M F
Nez Perce Tribe Total					470,000				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	120,000	05-04-14	05-04-14	Wallowa Acclim Pond Big Canyon Acclim.Pd	Wallowa River
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	160,000	05-08-14	05-08-14	(Grande Ronde)	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	CH1	SP	2014	240,000	05-11-14	05-11-14	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Total					520,000				
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2014	4,500,000	05-06-14	05-06-14	Spring Creek Hatchery	L Col R (D/s McN Dam)
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2014	53,000	04-15-14	05-15-14	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service	Winthrop NFH	ST	SU	2014	96,000	04-15-14	05-15-14	Winthrop Hatchery	Methow River
U.S. Fish and Wildlife Service Total					4,649,000				
Umatilla Tribe	Bonneville Hatchery	CH0	FA	2014	600,000	05-14-14	05-14-14	Umatilla River	Umatilla River
Umatilla Tribe Total					600,000				
Warm Springs Tribe	Parkdale Acclim. Pond	ST	WI	2014	12,500	05-14-14	05-14-14	Parkdale Acclim Pond	Hood River
Warm Springs Tribe Total					12,500				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	ST	SU	2014	205,000	04-25-14	05-15-14	Chiwawa Hatchery	Wenatchee River
Washington Dept. of Fish and Wildlife	COOP	CH0	FA	2014	175	05-15-14	05-15-14	Wenatchee River	Wenatchee 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	FA	2014	18,975	05-15-14	05-15-14	Yakama River	Yakima River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2014	175	05-01-14	05-31-14	Methow River Similkameen Acclim	Methow River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2014	225	05-01-14	05-31-14	Pd Blackbird Island Acc	Okanogan River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2014	25,000	04-20-14	05-20-14	Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Methow Hatchery	ST	SU	2014	100,000	05-05-14	06-15-14	Methow Hatchery Similkameen Acclim	Methow River
Washington Dept. of Fish and Wildlife	Similkameen Hatchery	CH1	SU	2014	115,000	04-15-14	05-10-14	Pd	Okanogan River
Washington Dept. of Fish and Wildlife	Skamania Hatchery	ST	SU	2014	90,000	05-01-14	05-10-14	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife	Wells Hatchery	CH1	SU	2014	320,000	04-15-14	05-15-14	Wells Hatchery	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2014	25,000	05-15-14	05-15-14	Omak Creek	Okanogan River
Washington Dept. of Fish and Wildlife	Wells Hatchery	ST	SU	2014	80,000	04-25-14	05-10-14	Okanogan River	Okanogan River
Washington Dept. of Fish and Wildlife Total					984,250				

Hatchery Releases Next Two Weeks

Agency	Hatchery	Hatchery Release Summary									
		From:	5/2/2014	to	5/15/2014	Species	Race	MigYr	NumRel	RelStart	RelEnd
Yakama Tribe	Cascade Hatchery	CO	UN	2014	49,841	05-01-14	05-30-14	Methow River	Methow River		
Yakama Tribe	Cascade Hatchery	CO	UN	2014	49,892	05-01-14	05-30-14	Winthrop Hatchery	Methow River		
Yakama Tribe	Cascade Hatchery	CO	UN	2014	64,822	05-01-14	05-30-14	Biddle Pond	Methow River		
Yakama Tribe	Cascade Hatchery	CO	UN	2014	89,748	05-01-14	05-30-14	Twisp Acclim Pond	Methow River		
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	258,316	03-15-14	05-15-14	Clark Flat Acclim Pond Jack Creek Acclim	Yakima River		
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	270,653	03-15-14	05-15-14	Pond	Yakima River		
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	277,151	03-15-14	05-15-14	Easton Pond	Yakima River		
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 Lost Creek Acclim	Yakima River		
Yakama Tribe	Eagle Creek NFH	CO	UN	2014	94,680	04-15-14	06-15-14	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	Marion Drain Hatchery	CH0	FA	2014	117,000	05-15-14	05-15-14	Prosser Acclim Pond	Yakima River		
Yakama Tribe	Prosser Acclim. Pond	CH0	FA	2014	450,000	05-14-14	05-14-14	Prosser Acclim 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 Butcher Creek Acclim.	Yakima River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	17,280	05-01-14	05-30-14	Pond	Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	33,608	05-01-14	05-30-14	Butcher Creek Acclim. Pond	Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	62,997	05-01-14	05-30-14	Coulter Creek Butcher Creek Acclim.	Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	72,081	05-01-14	05-30-14	Pond	Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	101,921	05-01-14	05-30-14	Rolfings Acclim Pond Butcher Creek Acclim.	Wenatchee River		
Yakama Tribe	Willard Hatchery	CO	UN	2014	109,688	05-01-14	05-30-14	Pond	Wenatchee River		
Yakama Tribe	Winthrop NFH	CO	UN	2014	279,377	05-01-14	05-30-14	Winthrop Hatchery	Methow River		
Yakama Tribe Total					3,170,173						
Grand Total					11,102,243						

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

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

Date	Grand Coulee		Chief Joseph		Wells		Rocky Reach		Rock Island		Wanapum		Priest Rapids	
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill
04/18/2014	145.3	1.8	142.5	22.0	150.0	17.7	148.5	8.0	147.3	32.2	159.4	43.6	177.1	43.0
04/19/2014	149.5	4.8	149.2	25.0	160.6	16.5	154.1	0.0	161.8	24.2	159.4	35.8	170.2	45.9
04/20/2014	148.9	4.8	152.2	25.3	156.8	10.5	151.7	0.0	159.8	23.5	152.2	31.8	160.8	39.2
04/21/2014	148.6	4.8	146.8	25.3	154.7	17.9	148.5	0.0	155.6	20.9	156.8	30.7	167.6	33.5
04/22/2014	145.3	4.8	146.4	23.8	158.4	20.8	158.6	15.8	159.1	24.5	155.6	41.9	165.8	53.1
04/23/2014	145.7	4.8	152.2	21.6	164.1	15.2	160.9	12.2	164.5	41.8	163.3	56.8	175.5	65.5
04/24/2014	149.6	4.8	146.9	17.9	151.4	14.0	151.2	6.5	157.9	44.6	156.0	52.0	167.5	63.8
04/25/2014	154.4	7.3	160.1	15.3	167.8	25.2	154.8	3.2	155.2	44.7	156.0	36.7	159.7	45.9
04/26/2014	154.7	0.0	151.0	15.1	162.5	25.3	162.0	0.0	166.4	24.6	168.4	59.1	179.9	65.1
04/27/2014	152.0	0.0	156.2	15.1	163.6	16.0	156.3	0.0	162.5	24.2	159.4	53.3	169.0	60.1
04/28/2014	154.9	0.0	147.9	15.0	160.5	12.8	162.6	0.0	170.1	26.2	168.8	64.2	184.0	62.7
04/29/2014	158.8	0.0	160.0	15.2	167.0	17.8	162.4	0.0	168.1	25.4	166.0	60.1	171.8	48.5
04/30/2014	154.8	4.0	159.6	21.4	167.9	18.7	160.1	0.0	165.6	28.1	164.6	56.8	175.0	57.6
05/01/2014	158.1	8.2	157.0	23.4	170.4	20.0	170.3	7.6	170.1	28.0	173.5	57.6	188.0	70.5

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
04/18/2014	14.8	3.9	14.8	18.0	72.4	21.6	74.1	22.9	74.9	29.6	77.7	55.3		
04/19/2014	10.8	0.0	14.1	19.3	70.2	24.8	68.4	24.1	69.1	29.6	70.9	55.2		
04/20/2014	10.8	0.0	14.1	16.3	70.6	22.9	72.4	23.8	71.6	29.6	74.4	53.1		
04/21/2014	10.8	0.0	13.4	21.1	73.4	20.6	70.9	21.3	70.6	29.6	72.9	52.9		
04/22/2014	10.8	0.0	13.2	13.3	77.3	20.4	80.3	24.0	82.5	29.6	83.8	58.2		
04/23/2014	10.7	0.0	13.9	14.3	74.7	20.5	73.4	22.0	73.0	29.9	74.9	56.4		
04/24/2014	10.8	0.0	14.7	17.9	77.7	21.3	76.4	23.7	75.9	29.9	79.5	58.2		
04/25/2014	10.7	0.0	15.5	17.1	83.1	22.8	81.3	25.6	83.0	29.1	85.9	58.9		
04/26/2014	10.7	0.0	15.5	15.4	82.0	20.5	78.7	23.7	78.3	28.0	80.8	55.6		
04/27/2014	10.7	0.0	15.7	13.9	79.5	30.7	61.8	28.9	63.8	28.9	66.8	54.3		
04/28/2014	10.7	0.0	16.2	16.4	73.7	23.8	76.7	26.2	79.4	30.0	81.7	31.4		
04/29/2014	10.7	0.0	15.9	12.2	71.3	20.5	79.4	23.8	79.4	30.0	81.2	24.4		
04/30/2014	10.7	0.0	15.7	14.8	65.7	20.5	67.3	20.0	68.8	29.9	71.8	43.7		
05/01/2014	10.7	0.0	14.9	19.0	66.4	20.4	65.4	19.6	64.2	29.9	65.3	51.6		

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		
04/18/2014	253.9	112.8	246.3	73.8	226.9	90.6	245.0	100.4	43.3	89.0
04/19/2014	258.4	111.1	256.3	77.2	243.5	96.9	261.1	100.5	60.6	87.6
04/20/2014	256.7	106.1	264.3	79.3	249.8	100.0	272.0	100.5	69.5	89.6
04/21/2014	247.1	102.0	246.2	79.2	232.6	92.7	255.9	100.4	55.2	87.9
04/22/2014	250.0	108.1	252.7	77.2	237.7	97.2	256.9	100.7	62.1	81.7
04/23/2014	258.0	107.7	266.4	90.0	247.4	113.0	270.9	100.8	77.7	80.1
04/24/2014	262.7	114.7	248.6	96.5	234.9	119.6	264.6	100.5	74.4	77.3
04/25/2014	264.5	147.6	271.4	110.0	254.1	130.6	270.0	100.8	77.0	79.8
04/26/2014	265.7	150.3	268.9	105.4	254.1	122.6	272.9	101.2	81.3	78.0
04/27/2014	263.5	115.0	256.1	89.0	245.1	101.6	276.6	106.7	77.0	80.5
04/28/2014	258.9	108.2	268.0	82.7	249.7	99.9	291.9	100.3	84.7	94.5
04/29/2014	282.8	133.7	290.6	87.2	276.3	110.6	276.0	101.0	83.9	78.7
04/30/2014	264.2	120.9	261.3	87.1	244.8	103.0	279.2	100.8	81.7	84.3
05/01/2014	252.1	114.7	254.4	102.1	239.0	95.7	273.1	100.1	81.9	78.7

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											
	04/24/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/01/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	04/21/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/26/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	05/01/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	04/19/14	Chinook + Steelhead	100	2	2	2.00%	0.00%	2	0	0	0
	04/22/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	04/25/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/29/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
	04/20/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/24/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	04/28/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Bonneville Dam											
	04/19/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/22/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/26/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
	04/29/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Rock Island Dam											
	04/21/14	Chinook + Steelhead	56	1	1	1.79%	0.00%	1	0	0	0
	04/24/14	Chinook + Steelhead	100	1	1	1.00%	0.00%	1	0	0	0
	04/29/14	Chinook + Steelhead	100	3	3	3.00%	0.00%	2	1	0	0
	05/01/14	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
4/18	114.8	114.9	115.0	24	---	---	---	0	108.3	108.6	109.0	24	106.6	107.1	109.5	24	106.5	106.7	106.9	24
4/19	114.7	114.8	115.0	24	---	---	---	0	108.4	108.6	109.0	24	112.0	112.9	113.3	24	106.4	106.7	107.1	24
4/20	114.6	114.7	114.9	24	---	---	---	0	107.6	107.8	107.9	24	112.9	113.2	113.4	24	107.3	109.1	111.6	24
4/21	114.1	114.4	114.7	24	---	---	---	0	108.6	109.1	109.3	24	114.0	114.6	115.0	24	113.4	114.3	114.6	24
4/22	114.2	114.5	115.0	24	---	---	---	0	108.6	109.2	109.4	24	114.0	114.8	115.1	24	114.9	115.1	115.3	24
4/23	114.7	114.9	115.0	24	---	---	---	0	108.3	108.6	109.4	24	114.3	114.7	115.2	24	114.5	114.7	115.0	24
4/24	114.8	114.8	114.9	24	---	---	---	0	108.1	108.2	108.4	24	115.2	115.3	115.5	24	114.5	114.7	114.8	24
4/25	114.9	115.0	115.1	24	---	---	---	0	108.1	108.3	109.0	24	116.1	116.6	116.7	24	114.2	114.4	114.8	24
4/26	114.9	114.9	115.2	24	---	---	---	0	108.3	108.4	108.6	24	108.9	110.3	114.8	24	114.8	115.1	115.4	24
4/27	114.8	114.9	115.1	24	---	---	---	0	108.0	108.2	108.3	24	106.9	107.2	107.4	24	114.5	115.8	116.1	24
4/28	114.6	114.7	114.7	24	---	---	---	0	106.4	106.7	107.0	24	105.1	105.4	106.1	24	106.1	107.1	108.6	24
4/29	114.4	114.6	114.7	24	---	---	---	0	105.7	106.0	106.3	24	104.1	104.3	104.5	24	104.2	104.4	104.6	24
4/30	114.6	114.7	116.0	24	---	---	---	0	106.3	106.7	106.9	24	106.8	109.6	113.9	24	104.9	105.4	105.7	24
5/1	105.3	111.0	114.5	23	---	---	---	0	107.8	108.5	108.9	23	115.4	116.0	116.5	23	106.1	106.6	106.9	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>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
4/18	---	---	---	0	106.3	106.4	106.8	17	106.2	108.6	110.1	16	108.1	108.3	108.8	24	110.0	111.5	115.9	24
4/19	109.4	109.6	109.9	24	106.7	106.9	107.4	19	107.6	110.0	111.2	19	108.9	109.7	110.2	24	108.8	109.2	109.6	24
4/20	109.7	110.1	110.2	24	106.1	106.3	106.3	19	108.3	108.5	108.6	19	108.3	109.2	109.7	24	108.2	109.0	109.7	24
4/21	110.5	110.8	111.0	24	109.3	110.9	112.7	20	109.1	109.6	110.1	20	109.0	109.7	110.1	24	109.3	109.8	110.2	24
4/22	111.4	111.8	112.0	24	113.0	113.1	113.7	14	110.4	111.4	114.8	14	110.4	111.1	112.2	24	112.4	115.0	117.3	24
4/23	111.7	112.1	112.6	24	113.0	113.2	113.6	19	111.3	114.9	116.2	19	112.9	113.6	113.9	24	115.7	117.5	118.2	24
4/24	110.9	111.1	111.4	24	113.4	113.4	113.5	3	114.9	114.9	115.0	3	113.7	113.8	114.0	24	115.3	116.4	117.7	24
4/25	111.2	111.5	112.0	24	---	---	---	0	---	---	---	0	113.8	114.0	114.2	24	114.0	114.6	115.7	24
4/26	111.0	111.2	111.4	24	---	---	---	0	---	---	---	0	114.3	114.6	114.6	24	113.9	114.3	114.5	24
4/27	110.8	111.8	112.6	24	---	---	---	0	---	---	---	0	114.2	114.4	114.5	24	114.1	114.3	114.5	24
4/28	107.0	107.3	107.7	24	---	---	---	0	---	---	---	0	111.6	112.5	113.5	24	111.2	111.8	112.8	24
4/29	106.2	106.4	106.6	24	---	---	---	0	---	---	---	0	111.1	111.5	111.8	24	110.9	111.4	111.7	24
4/30	108.2	109.0	109.8	24	---	---	---	0	---	---	---	0	109.5	110.0	110.7	24	109.3	109.8	110.5	23
5/1	109.4	110.3	110.6	23	---	---	---	0	---	---	---	0	110.4	111.0	111.8	21	111.6	112.7	113.6	18

Total Dissolved Gas Saturation at Mid Columbia River Sites

Date	<u>Rock Island</u>			<u>Rock I. Tlwr</u>			<u>Wanapum</u>			<u>Wanapum Tlwr</u>			<u>Priest Rapids</u>							
	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>	<u>24 h</u>	<u>12 h</u>	<u>#</u>					
	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>				
4/18	107.7	108.5	110.7	24	112.8	114.5	117.8	24	110.1	110.9	111.3	24	113.1	114.6	116.7	24	112.5	113.4	115.5	24
4/19	107.6	108.5	109.3	24	110.2	111.3	113.2	24	111.6	113.4	115.5	24	112.7	114.0	115.4	24	111.6	112.0	113.7	24
4/20	107.0	107.9	108.4	24	109.7	110.3	111.0	24	108.3	109.1	109.4	24	109.9	110.4	111.5	24	110.7	111.4	112.1	24
4/21	108.0	108.3	108.4	24	110.2	110.7	110.9	24	110.0	110.6	111.2	24	110.6	111.2	111.6	24	110.5	111.0	112.2	24
4/22	108.3	109.1	110.5	24	110.7	111.9	113.2	24	109.8	110.4	111.1	24	112.8	114.1	115.6	24	110.8	111.1	112.1	24
4/23	112.8	113.4	113.9	24	114.8	115.8	117.1	23	109.9	110.7	111.9	24	115.2	116.7	120.1	24	113.5	114.9	118.8	24
4/24	113.3	113.6	114.0	24	115.7	116.3	118.6	24	113.8	114.3	114.8	24	116.9	118.4	119.5	24	114.7	115.4	117.0	24
4/25	112.8	113.3	113.8	24	114.6	116.3	120.2	24	114.0	114.6	115.0	24	114.9	116.0	117.8	24	115.4	116.8	117.1	24
4/26	112.9	113.9	114.4	24	114.1	114.8	115.4	24	114.1	114.6	115.1	24	117.8	118.8	119.5	24	114.9	116.8	118.4	24
4/27	113.1	113.4	113.6	24	114.3	114.5	114.8	24	112.1	112.5	112.6	24	115.9	116.7	117.2	24	115.3	116.3	117.6	24
4/28	110.7	111.6	112.0	23	112.7	113.4	115.0	24	111.0	111.6	112.1	24	116.5	117.2	117.8	24	114.5	116.2	117.1	24
4/29	108.6	111.3	112.0	23	111.8	113.7	114.3	24	110.8	111.1	111.4	24	116.4	116.7	117.0	24	115.6	116.3	117.4	24
4/30	110.6	111.7	111.8	23	111.5	112.2	113.8	23	---	---	---	0	---	---	---	0	---	---	---	0
5/1	110.1	110.3	111.4	15	111.8	112.9	114.1	21	---	---	---	0	---	---	---	0	---	---	---	0

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

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

Date	<u>Priest R. Dnst</u>			#	<u>Pasco</u>			#	<u>Dworshak</u>			#	<u>Clrwr-Peck</u>			#	<u>Anatone</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/18	113.4	114.7	115.1	24	---	---	---	0	107.1	115.5	117.5	24	104.7	108.0	108.9	24	102.4	103.1	103.8	24
4/19	112.9	113.6	114.3	24	---	---	---	0	99.2	99.8	100.4	24	100.9	101.7	102.4	24	102.6	103.5	104.3	24
4/20	112.2	113.6	114.1	24	---	---	---	0	98.3	98.5	98.7	24	100.6	101.6	102.2	24	102.6	103.5	104.2	24
4/21	111.5	112.1	112.5	24	---	---	---	0	99.3	99.8	100.2	24	101.3	102.0	102.3	24	103.3	103.9	104.2	24
4/22	113.0	113.9	114.2	24	---	---	---	0	99.0	99.3	99.7	24	100.4	100.7	101.5	24	102.7	103.0	103.3	24
4/23	114.7	115.6	116.7	24	---	---	---	0	99.8	100.3	100.5	24	100.6	101.3	101.5	24	102.5	103.2	103.4	24
4/24	115.4	116.1	116.5	24	---	---	---	0	100.6	100.7	100.9	24	100.9	101.1	101.2	24	102.8	103.0	103.3	24
4/25	115.5	115.8	116.2	24	---	---	---	0	101.1	101.2	101.6	24	101.4	102.0	102.4	24	102.4	102.6	102.8	24
4/26	116.3	116.9	117.6	24	---	---	---	0	101.1	101.3	101.5	24	101.1	101.5	101.8	24	102.2	102.6	103.0	24
4/27	116.0	116.4	116.9	24	---	---	---	0	101.1	101.4	101.7	24	100.9	101.3	101.6	24	102.0	102.4	103.1	24
4/28	115.6	116.0	116.5	24	---	---	---	0	99.7	99.9	100.0	24	100.5	100.9	101.4	24	101.8	102.6	103.2	24
4/29	115.3	116.5	116.9	24	---	---	---	0	98.8	99.0	99.6	24	100.7	101.8	102.4	24	102.4	103.5	104.9	24
4/30	---	---	---	0	---	---	---	0	99.4	100.0	100.4	24	101.2	102.0	102.7	24	102.9	104.0	104.9	24
5/1	---	---	---	0	---	---	---	0	100.3	100.8	101.2	23	101.4	102.3	103.0	23	103.3	104.3	105.1	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	<u>Clrwr-Lewiston</u>			#	<u>Lower Granite</u>			#	<u>L. Granite Tlwr</u>			#	<u>Little Goose</u>			#	<u>L. Goose Tlwr</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/18	105.2	106.2	106.7	24	104.0	104.3	104.7	24	111.6	112.3	115.0	24	110.3	110.5	110.8	24	111.0	111.4	113.9	24
4/19	104.4	105.2	106.0	24	104.3	104.5	104.6	24	112.2	113.7	116.9	24	110.4	110.9	111.4	24	111.5	112.6	115.7	24
4/20	101.4	102.3	103.0	24	102.8	103.0	103.4	24	112.1	112.9	116.3	24	108.4	108.8	109.3	24	110.8	111.6	115.1	24
4/21	102.3	103.1	103.6	24	103.6	103.8	103.9	24	110.9	111.4	112.0	24	109.5	110.1	110.7	24	110.4	110.7	111.3	24
4/22	101.3	102.0	102.7	24	103.1	103.3	103.5	24	110.9	111.3	111.7	24	110.3	110.5	111.0	24	110.8	111.1	113.1	24
4/23	99.5	100.3	100.7	24	102.9	103.1	103.3	24	111.1	111.6	112.2	24	110.2	110.6	111.3	24	110.6	110.8	111.5	24
4/24	100.0	100.3	100.6	24	102.4	102.6	102.9	24	110.7	111.2	114.8	24	108.9	109.5	109.7	24	111.5	112.3	114.8	24
4/25	100.1	100.4	100.6	24	101.8	102.0	102.3	24	110.9	111.9	116.7	24	107.8	108.2	108.6	24	112.2	112.7	115.9	24
4/26	100.9	101.2	101.4	24	102.3	102.5	102.7	24	110.0	110.2	110.7	24	108.7	109.0	109.3	24	112.3	112.7	113.0	24
4/27	100.2	100.8	101.3	24	101.9	102.2	102.4	24	113.2	116.1	116.8	24	108.5	108.7	108.9	24	115.2	117.1	118.0	24
4/28	98.7	99.4	99.6	24	100.1	100.4	101.0	24	110.1	111.3	116.0	24	106.1	106.5	107.2	24	114.4	115.6	117.3	24
4/29	99.1	101.0	102.0	24	99.6	100.1	100.6	24	109.4	109.8	110.4	24	104.6	104.8	105.0	24	111.9	112.1	112.3	24
4/30	101.8	103.7	104.9	24	100.9	101.6	102.0	24	110.1	110.8	112.2	24	106.8	108.5	109.5	24	111.8	112.3	112.7	24
5/1	102.7	104.3	105.4	23	103.1	103.8	104.4	23	110.8	111.4	112.1	23	110.5	110.9	111.7	23	113.4	113.9	114.3	23

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

Date	<u>Lower Mon.</u>			#	<u>L. Mon. Tlwr</u>			#	<u>Ice Harbor</u>			#	<u>Ice Harbor Tlwr</u>			#	<u>McNary-Oregon</u>			#
	<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>			<u>24 h</u>	<u>12 h</u>		
	Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High		Avg	Avg	High	
4/18	111.1	111.7	113.0	24	119.2	119.6	119.9	24	113.0	113.3	114.0	24	115.5	115.8	116.1	24	---	---	---	0
4/19	110.1	110.3	110.4	24	119.4	119.8	120.3	24	112.4	112.8	113.0	24	115.4	115.8	116.2	24	---	---	---	0
4/20	109.4	109.9	110.3	24	119.0	119.3	119.5	24	111.1	111.6	112.3	24	115.5	115.7	115.9	24	---	---	---	0
4/21	111.1	111.9	112.6	24	119.6	119.9	120.2	24	113.4	114.1	114.7	24	115.5	115.8	116.3	24	---	---	---	0
4/22	112.9	113.3	113.5	24	119.7	120.0	120.9	24	114.6	114.8	115.3	24	116.2	116.6	118.7	24	---	---	---	0
4/23	110.9	111.2	111.5	24	119.7	120.1	120.3	24	113.6	113.8	114.2	24	115.5	116.0	116.2	24	---	---	---	0
4/24	110.5	110.7	110.8	24	119.8	120.0	120.3	24	113.1	113.3	113.6	24	115.6	116.0	116.1	24	---	---	---	0
4/25	110.7	110.9	110.9	24	119.6	120.2	120.4	24	113.2	113.6	113.8	24	116.0	116.1	116.3	24	---	---	---	0
4/26	111.2	111.3	111.4	24	118.6	118.8	119.1	24	113.5	113.7	113.8	24	115.9	116.2	116.4	24	---	---	---	0
4/27	111.2	111.4	111.6	24	118.7	118.9	119.6	24	112.9	113.7	114.2	24	115.5	115.9	116.2	24	---	---	---	0
4/28	109.2	109.5	110.3	24	119.4	119.9	120.5	24	110.1	110.3	110.8	24	114.4	115.0	115.6	24	---	---	---	0
4/29	110.2	111.6	112.6	24	120.1	120.4	120.7	24	110.5	111.4	111.9	24	113.9	114.3	114.7	24	---	---	---	0
4/30	113.9	114.3	114.4	24	120.1	120.4	120.8	24	113.3	114.0	114.6	24	115.0	115.6	115.8	24	---	---	---	0
5/1	114.6	114.8	115.1	23	119.8	120.2	120.9	23	116.3	117.3	118.0	23	115.4	115.6	116.0	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	<u>McNary-Wash</u>			#	<u>McNary Tlwr</u>			#	<u>John Day</u>			#	<u>John Day Tlwr</u>			#	<u>The Dalles</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
4/18	109.1	109.6	110.9	24	114.7	115.4	115.9	24	109.1	109.4	110.2	24	113.6	114.4	115.1	24	110.1	110.4	110.8	24
4/19	109.0	109.2	109.4	24	114.0	114.3	114.5	24	108.0	108.2	108.4	24	114.2	114.9	115.3	24	110.0	110.6	110.7	24
4/20	108.8	109.9	111.1	24	113.8	114.3	115.3	24	107.5	108.0	108.3	24	114.1	114.8	115.6	24	109.1	110.1	110.8	24
4/21	110.8	111.1	111.3	24	113.8	114.1	114.4	24	109.2	109.8	110.1	24	114.6	115.7	116.8	24	110.9	111.2	111.4	24
4/22	111.2	111.6	111.9	24	114.0	114.3	114.3	24	109.1	109.6	109.9	24	114.2	115.3	116.2	24	110.2	111.1	112.2	24
4/23	110.1	110.4	111.1	24	113.8	114.3	114.5	24	109.0	109.3	109.5	24	115.9	116.1	117.0	24	110.3	111.6	112.1	24
4/24	109.3	109.6	110.2	24	114.3	114.5	115.7	24	109.8	110.0	110.1	24	116.4	117.1	117.9	24	111.4	111.8	112.4	24
4/25	109.9	110.8	111.6	24	116.7	117.8	118.0	24	109.6	109.8	110.0	24	118.0	118.1	118.3	24	111.9	112.4	112.6	24
4/26	110.8	111.0	111.2	24	117.3	117.9	118.0	24	108.4	108.7	108.9	24	117.6	118.1	118.3	24	111.3	111.6	112.0	24
4/27	110.0	110.6	111.1	24	114.7	115.3	116.4	24	108.6	108.9	109.1	24	115.5	116.9	118.0	24	110.7	111.7	112.1	24
4/28	107.4	107.9	108.8	24	113.8	114.4	116.2	24	107.3	107.4	107.8	24	114.5	114.9	116.4	24	110.0	110.4	110.9	24
4/29	107.7	108.8	109.7	24	116.2	116.5	116.7	24	107.7	108.3	108.8	24	115.2	115.5	115.9	24	109.8	110.3	110.7	24
4/30	111.3	113.0	113.7	24	115.4	116.6	116.9	24	108.6	108.9	109.2	24	114.9	116.2	117.8	24	110.9	111.5	111.9	24
5/1	114.2	115.3	116.3	23	115.3	115.7	116.6	23	109.3	109.7	110.1	23	116.8	117.5	118.1	23	112.7	113.5	114.0	23

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

Date	<u>The Dalles Dnst</u>			#	<u>Bonneville</u>			#	<u>Warrendale</u>			#	<u>Camas\Washougal</u>			#	<u>Cascade Island</u>			#
	<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24 h</u>	<u>12 h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>		<u>24h</u>	<u>12h</u>	<u>High</u>	
4/18	116.0	116.4	116.6	24	113.7	114.4	114.9	24	115.8	116.2	116.4	24	113.9	115.6	116.6	24	117.9	118.1	118.3	24
4/19	116.0	116.5	117.0	24	114.5	115.2	115.6	24	115.8	116.3	116.5	24	112.8	113.6	115.2	24	118.1	118.3	118.5	24
4/20	115.6	116.2	116.8	24	113.0	113.6	114.2	24	114.9	115.4	115.7	24	113.5	114.8	115.4	24	118.2	118.5	118.6	24
4/21	116.7	117.0	117.8	24	115.4	116.1	116.4	24	116.7	117.2	117.7	24	115.0	116.1	116.9	24	118.1	118.2	118.5	24
4/22	116.5	117.1	117.5	24	114.2	114.9	115.9	24	115.7	116.1	116.6	24	114.1	114.5	115.2	24	118.0	118.3	118.6	24
4/23	118.0	118.8	119.3	24	113.2	113.7	114.5	24	114.7	115.0	115.2	24	112.9	113.4	113.8	24	118.3	118.6	119.6	24
4/24	119.9	120.9	122.8	24	115.7	116.3	116.9	24	116.0	116.5	116.9	24	113.5	114.0	114.3	24	118.4	118.6	118.7	24
4/25	120.9	121.7	122.4	24	115.9	116.4	117.5	24	116.3	116.9	117.3	24	115.4	115.8	116.1	24	118.6	118.7	118.8	24
4/26	119.2	119.8	120.2	24	117.1	117.5	117.7	24	117.2	117.5	117.7	24	115.8	116.7	117.3	24	118.9	119.0	119.2	24
4/27	116.7	117.4	118.2	24	115.8	116.3	116.9	24	116.5	117.1	118.2	24	114.7	115.2	116.2	24	119.1	119.6	121.5	24
4/28	115.8	116.5	116.9	24	113.8	114.7	115.1	24	114.8	115.3	115.5	24	114.7	115.6	116.4	24	118.9	119.3	119.7	24
4/29	116.3	116.7	117.3	24	114.1	114.4	114.6	24	115.2	115.6	116.0	24	113.4	114.1	114.5	24	118.4	118.5	118.6	24
4/30	117.2	118.4	119.0	24	114.8	115.4	116.1	24	115.9	116.4	116.6	24	113.1	114.1	114.7	24	118.6	118.7	118.8	24
5/1	117.8	118.3	119.0	23	116.0	116.9	117.9	23	116.6	117.0	117.5	23	114.2	115.5	116.6	23	118.6	118.7	119.0	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 5/2/2014 7:42

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)	
04/18/2014	*	1,310	1,482	340	177	66,884	---	---	58	---	5,521	10,403
04/19/2014	*	1,463	761	434	115	58,653	---	2,341	78	19,883	6,929	30,527
04/20/2014	*	1,179	352	484	163	85,195	---	---	67	---	8,650	50,134
04/21/2014	*	1,652	353	237	150	64,941	---	---	85	27,511	19,888	44,409
04/22/2014	*	---	408	490	562	122,001	125,764	1,999	89	---	16,881	38,521
04/23/2014	*	---	691	411	214	159,568	---	---	125	30,165	19,427	29,740
04/24/2014	*	---	296	504	310	174,408	---	---	209	---	24,156	35,712
04/25/2014	*	---	130	2,592	519	190,608	---	2,350	414	52,654	29,850	44,599
04/26/2014	*	---	155	863	302	217,065	---	---	294	---	23,897	36,618
04/27/2014	*	---	183	240	154	181,630	97,458	---	251	58,670	29,246	32,073
04/28/2014	*	---	199	176	89	184,189	---	---	269	---	39,574	47,100
04/29/2014	*	---	189	67	122	134,302	---	139,515	524	58,358	39,242	53,244
04/30/2014	*	---	---	50	12	86,963	---	142,889	434	---	58,164	41,050
05/01/2014	*	---	---	57	40	51,724	---	34,362	457	104,182	52,344	60,877
05/02/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		5,604	5,199	6,945	2,929	1,778,131	223,222	323,456	3,354	351,423	373,769	555,007
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		1,401	433	496	209	127,009	111,611	53,909	240	50,203	26,698	39,643
YTD		65,404	60,698	21,718	4,606	2,150,664	260,385	324,040	4,070	375,582	393,771	599,553

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)	
04/18/2014	*	0	0	0	4	0	---	---	46	---	0	2,219
04/19/2014	*	0	0	0	0	572	---	0	38	800	19	2,125
04/20/2014	*	0	0	0	0	968	---	---	69	---	57	3,450
04/21/2014	*	0	0	0	3	285	---	---	25	344	0	2,439
04/22/2014	*	---	0	0	1	1,911	287	0	16	---	59	1,818
04/23/2014	*	---	0	0	0	1,114	---	---	13	175	0	2,381
04/24/2014	*	---	0	0	0	275	---	---	16	---	75	1,202
04/25/2014	*	---	0	0	1	284	---	0	16	0	0	1,082
04/26/2014	*	---	0	0	1	0	---	---	19	---	0	1,821
04/27/2014	*	---	0	0	1	545	0	---	13	626	0	3,113
04/28/2014	*	---	0	0	0	1,748	---	---	7	---	0	659
04/29/2014	*	---	0	0	1	279	---	0	15	727	36	1,389
04/30/2014	*	---	---	0	0	286	---	0	12	---	0	1,213
05/01/2014	*	---	---	0	0	0	---	0	2	1,149	105	1,714
05/02/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	12	8,267	287	0	307	3,821	351	26,625
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		0	0	0	1	591	144	0	22	546	25	1,902
YTD		0	10	1	69	12,047	324	0	1,397	4,967	418	761,081

Two-Week Summary of Passage Indices

COMBINED COHO												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
04/18/2014	*	0	0	0	1	0	---	---	3	---	72	5,299
04/19/2014	*	0	0	0	0	0	---	0	3	89	19	4,696
04/20/2014	*	0	0	0	1	0	---	---	16	---	0	5,426
04/21/2014	*	0	0	0	0	0	---	---	8	1,203	86	7,710
04/22/2014	*	---	0	0	8	0	287	0	9	---	59	9,462
04/23/2014	*	---	0	0	7	278	---	---	4	1,226	0	7,258
04/24/2014	*	---	0	0	12	825	---	---	9	---	75	10,923
04/25/2014	*	---	0	0	28	284	---	0	5	905	33	18,360
04/26/2014	*	---	0	0	7	1,056	---	---	5	---	29	9,681
04/27/2014	*	---	0	0	2	545	583	---	2	1,670	338	11,830
04/28/2014	*	---	0	0	11	699	---	---	4	---	347	11,857
04/29/2014	*	---	0	0	9	557	---	0	2	2,551	1,971	33,336
04/30/2014	*	---	---	0	1	858	---	0	16	---	3,080	8,148
05/01/2014	*	---	---	0	7	292	---	390	18	6,895	5,432	15,003
05/02/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	94	5,394	870	390	104	14,539	11,541	158,989
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		0	0	0	7	385	435	65	7	2,077	824	11,356
YTD		0	0	0	97	5,464	870	390	145	15,145	11,582	185,207

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
04/18/2014	*	220	310	23	194	30,252	---	---	15	---	2,327	1,137
04/19/2014	*	113	291	42	56	37,767	---	1,003	25	13,471	2,024	1,621
04/20/2014	*	182	262	35	58	66,155	---	---	18	---	2,435	1,884
04/21/2014	*	298	330	6	295	47,282	---	---	36	13,110	5,645	1,367
04/22/2014	*	---	419	152	808	42,851	139,470	1,314	27	---	8,441	1,720
04/23/2014	*	---	1,188	245	589	131,998	---	---	31	11,037	8,710	1,651
04/24/2014	*	---	1,130	53	1,095	127,642	---	---	54	---	8,228	1,311
04/25/2014	*	---	1,158	154	1,327	131,807	---	497	42	19,231	9,939	2,268
04/26/2014	*	---	911	251	1,207	128,074	---	---	55	---	7,357	4,500
04/27/2014	*	---	824	61	310	189,799	139,410	---	40	26,927	9,899	3,378
04/28/2014	*	---	1,060	50	536	171,607	---	---	61	---	14,619	4,776
04/29/2014	*	---	761	5	533	126,779	---	66,738	54	30,585	20,857	5,247
04/30/2014	*	---	---	15	233	86,963	---	77,202	99	---	26,790	4,703
05/01/2014	*	---	---	4	373	59,906	---	41,000	78	80,037	27,791	6,858
05/02/2014	*	---	---	---	---	---	---	---	---	---	---	---
Total:		813	8,644	1,096	7,614	1,378,882	278,880	187,754	635	194,398	155,062	42,421
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		203	720	78	544	98,492	139,440	31,292	45	27,771	11,076	3,030
YTD		2,080	17,365	1,621	8,513	1,528,480	303,789	188,315	759	205,477	166,223	50,760

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)	
04/18/2014	*	0	0	0	0	1,997	---	---	617	---	101	444
04/19/2014	*	0	0	0	0	572	---	224	256	2,318	162	447
04/20/2014	*	0	0	0	0	0	---	---	315	---	172	205
04/21/2014	*	0	0	0	0	1,424	---	---	201	9,462	229	682
04/22/2014	*	---	0	0	0	1,911	1,721	128	227	---	826	479
04/23/2014	*	---	0	0	0	2,506	---	---	161	16,125	520	822
04/24/2014	*	---	0	0	0	2,476	---	---	465	---	377	655
04/25/2014	*	---	0	0	0	2,839	---	32	224	28,072	569	648
04/26/2014	*	---	0	0	0	5,017	---	---	525	---	733	683
04/27/2014	*	---	0	0	0	9,803	1,166	---	87	26,305	677	1,391
04/28/2014	*	---	0	0	0	9,786	---	---	282	---	1,234	659
04/29/2014	*	---	0	0	0	8,080	---	2,013	412	19,284	1,684	926
04/30/2014	*	---	---	0	0	3,433	---	1,737	101	---	2,364	55
05/01/2014	*	---	---	0	0	2,630	---	0	55	19,534	1,149	215
05/02/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	52,474	2,887	4,134	3,928	121,100	10,797	8,311
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		0	0	0	0	3,748	1,444	689	281	17,300	771	594
YTD		0	0	0	0	83,260	8,456	4,192	12,585	123,600	11,318	21,040

COMBINED LAMPREY JUVENILES												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR [†] (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
04/18/2014	*	0	0	0	0	0	---	---	0	---	320	10
04/19/2014	*	0	0	0	0	0	---	0	0	50	201	0
04/20/2014	*	0	0	0	0	0	---	---	0	---	120	133
04/21/2014	*	0	0	0	0	0	---	---	0	100	180	67
04/22/2014	*	---	0	0	0	0	10	0	0	---	320	0
04/23/2014	*	---	0	0	0	0	---	---	0	200	200	4
04/24/2014	*	---	0	0	0	0	---	---	0	---	150	0
04/25/2014	*	---	0	0	0	0	---	0	0	100	160	67
04/26/2014	*	---	0	0	0	0	---	---	0	---	83	0
04/27/2014	*	---	0	0	0	0	---	---	0	0	229	0
04/28/2014	*	---	0	0	0	0	---	---	0	---	450	0
04/29/2014	*	---	0	0	0	0	---	0	0	400	950	50
04/30/2014	*	---	---	0	0	0	---	0	0	---	50	0
05/01/2014	*	---	---	0	0	0	---	0	0	0	0	0
05/02/2014		---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	0	10	0	850	3,413	331	
# Days:		4	12	14	14	14	2	6	14	7	14	14
Average:		0	0	0	0	0	2	0	121	244	24	
YTD		1	0	0	0	0	162	17	5	2,330	11,352	11,701

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:

5/2/14 7:45 AM

04/18/14 TO 05/02/14

		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	5,600	1,247,150	3,800	961,050	36,400	2,254,000
	Sum of NumberBarged	28	20,428	28	13,422	283	34,189
	Sum of NumberBypassed	5,535	1,211,522	3,652	931,354	35,423	2,187,486
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	10	32	0	18	10	70
	Sum of FacilityMorts	0	13	0	3	6	22
	Sum of ResearchMorts	0	17	0	4	0	21
	Sum of TotalProjectMorts	10	62	0	25	16	113
LGS	Sum of NumberCollected	200	154,541	600	192,879	2,000	350,220
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	200	154,528	600	192,874	2,000	350,202
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	2	0	0	0	2
	Sum of FacilityMorts	0	11	0	5	0	16
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	0	13	0	5	0	18
LMN	Sum of NumberCollected		194,050		110,260	2,530	306,840
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		176,438		89,249	2,530	268,217
	Sum of Numbertrucked		0		0	0	0
	Sum of SampleMorts		9		10	0	19
	Sum of FacilityMorts		3		1	0	4
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		12		11	0	23
Total Sum of NumberCollected		5,800	1,595,741	4,400	1,264,189	40,930	2,911,060
Total Sum of NumberBarged		28	20,428	28	13,422	283	34,189
Total Sum of NumberBypassed		5,735	1,542,488	4,252	1,213,477	39,953	2,805,905
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		10	43	0	28	10	91
Total Sum of FacilityMorts		0	27	0	9	6	42
Total Sum of ResearchMorts		0	17	0	4	0	21
Total Sum of TotalProjectMorts		10	87	0	41	16	154

YTD Transportation Summary

Source: Fish Passage Center

Updated:

5/2/14 7:45 AM

TO: 05/02/14

		Species					
Site	Data	CHO	CH1	CO	SO	ST	Grand Total
LGR	Sum of NumberCollected	8,600	1,523,245	3,870	60,650	1,072,715	2,669,080
	Sum of NumberBarged	28	20,428	28	283	13,422	34,189
	Sum of NumberBypassed	8,522	1,487,569	3,722	59,638	1,043,013	2,602,464
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	23	67	0	37	24	151
	Sum of FacilityMorts	0	26	0	14	3	43
	Sum of ResearchMorts	0	17	0	0	4	21
	Sum of TotalProjectMorts	23	110	0	51	31	215
LGS	Sum of NumberCollected	226	180,560	600	5,914	210,500	397,800
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	225	180,543	600	5,910	210,493	397,771
	Sum of NumberTrucked	0	0	0	0	0	0
	Sum of SampleMorts	0	6	0	4	2	12
	Sum of FacilityMorts	1	11	0	0	5	17
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	1	17	0	4	7	29
LMN	Sum of NumberCollected		194,441		2,568	110,621	307,630
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		176,824		2,568	89,608	269,000
	Sum of NumberTrucked		0		0	0	0
	Sum of SampleMorts		10		0	10	20
	Sum of FacilityMorts		3		0	1	4
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		13		0	11	24
Total Sum of NumberCollected		8,826	1,898,246	4,470	69,132	1,393,836	3,374,510
Total Sum of NumberBarged		28	20,428	28	283	13,422	34,189
Total Sum of NumberBypassed		8,747	1,844,936	4,322	68,116	1,343,114	3,269,235
Total Sum of NumberTrucked		0	0	0	0	0	0
Total Sum of SampleMorts		23	83	0	41	36	183
Total Sum of FacilityMorts		1	40	0	14	9	64
Total Sum of ResearchMorts		0	17	0	0	4	21
Total Sum of TotalProjectMorts		24	140	0	55	49	268

Cumulative Adult Passage at Mainstem Dams Through: 05/01

DAM	END DATE	Spring Chinook						Summer Chinook						Fall Chinook					
		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	05/01	92673	1874	31217	2313	50157	992	0	0	0	0	0	0	0	0	0	0	0	0
TDA	05/01	41283	557	20011	1459	28733	527	0	0	0	0	0	0	0	0	0	0	0	0
JDA	05/01	27603	425	14454	1209	21638	420	0	0	0	0	0	0	0	0	0	0	0	0
MCN	05/01	13579	181	6954	286	14323	215	0	0	0	0	0	0	0	0	0	0	0	0
IHR	05/01	6966	76	3304	109	8966	120	0	0	0	0	0	0	0	0	0	0	0	0
LMN	05/01	4801	62	1470	54	6898	50	0	0	0	0	0	0	0	0	0	0	0	0
LGS	05/01	2644	67	758	60	4847	68	0	0	0	0	0	0	0	0	0	0	0	0
LGR	05/01	1634	26	336	38	3944	25	0	0	0	0	0	0	0	0	0	0	0	0
PRD	04/30	593	0	162	0	1263	0	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	04/30	62	0	58	0	396	2	0	0	0	0	0	0	0	0	0	0	0	0
RRH	04/30	22	0	18	0	81	0	0	0	0	0	0	0	0	0	0	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/30	3124	18	7706	275	8984	72	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.	Wild 2014	Wild 2013	10-Yr Avg.	2014	2013	10-Yr Avg.
		Adult	Jack	Adult	Jack	Adult	Jack												
BON	05/01	5	-2	0	0	0	0	4	0	0	3904	2650	3584	1177	813	1015	2	-1	1
TDA	05/01	0	0	0	0	0	0	0	1	0	373	644	2178	142	310	843	0	0	0
JDA	05/01	0	1	0	0	0	0	0	0	0	2764	763	4494	1095	427	1473	-1	0	2
MCN	05/01	0	0	1	0	1	0	0	0	0	525	1311	5277	317	656	1783	4	21	2
IHR	05/01	0	0	0	0	0	0	0	0	0	1420	3726	4445	688	1477	1311	0	8	0
LMN	05/01	0	0	0	0	0	0	1	0	0	1193	2327	6477	785	1310	2699	0	0	0
LGS	05/01	0	0	0	0	0	0	0	0	0	1189	2036	6464	805	1082	2157	0	1	0
LGR	05/01	0	0	0	0	0	0	0	0	0	7126	7166	8444	3230	3054	2907	0	0	0
PRD	04/30	0	0	0	0	0	0	0	0	0	63	24	22	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	04/30	0	0	0	0	0	0	0	0	0	195	49	60	99	31	34	0	0	0
RRH	04/30	0	0	0	0	0	0	0	0	0	174	94	242	105	77	182	0	0	0
WEL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WFA	04/30	9	0	2	0	0	0	0	0	0	5943	7031	8297	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.