



Fish Passage Center

Weekly Report #14 - 4

April 11, 2014

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Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 33% and 108% of average at individual sub-basins over the first 9 days of April. Precipitation above The Dalles has been 70% of average over the first portion of April. Over the 2014 water year, precipitation has ranged between 79% and 100% of average.

Table 1. Summary of April precipitation and cumulative October through April 9, 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 October 1, 2013 to April 9, 2014	
	April 1–9, 2014		Observed (inches)	% Average
	Observed (inches)	% Average		
Columbia above Coulee	0.50	63	21.3	91
Snake River above Ice Harbor	0.47	80	12.0	83
Columbia above The Dalles	0.44	70	15.0	84
Kootenai	0.47	59	22.8	97
Clark Fork	0.24	33	14.1	86
Flathead	0.43	49	22.1	100
Pend Oreille River Basin above Waneta Dam	0.35	45	18.4	90
Salmon River Basin	0.59	78	14.2	79
Upper Snake Tributaries	0.78	108	15.7	92
Clearwater	0.62	59	26.5	97
Willamette River above Portland	0.83	50	40.9	80

Snowpack within the Columbia Basin has been variable. Average snowpack in the Columbia River for basins above the Snake River confluence is 120% of average. For Snake River Basins the average snowpack is 103% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 66% of average.

Table 2 displays the April 10th ESP runoff volume forecasts for multiple reservoirs along with the April COE forecasts at Libby and Dworshak. The April 10th ESP forecast at The Dalles between January and July is 104,724 Kaf (103% of average).

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

Location	April 10, 2014 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Jan–July)	103	104724
Grand Coulee (Jan–July)	104	61733
Libby Res. Inflow, MT (Apr–Aug)	111	6528 6868*
Hungry Horse Res. Inflow, MT (Jan–July)	112	2347
Lower Granite Res. Inflow (Apr–July)	112	22137
Brownlee Res. Inflow (Apr–July)	67	3662
Dworshak Res. Inflow (Apr–July)	129	3117 3111*

* Denotes COE April Forecast

Grand Coulee Reservoir is at 1249.0 feet (4-10-14) and has drafted 4.8 feet over the last week. The April 30th FC Elevation at Grand Coulee is 1235.2 feet. Outflows at Grand Coulee have ranged between 106.7 and 126.5 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2407.1 feet (4-10-14) and has drafted 6.3 feet over the previous week. The April 30th FC Elevation at Libby is 2387.0 feet. Daily average outflows at Libby Dam have been 25.2–25.8 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3510.0 feet (4-10-14) and has drafted 5.3 feet over the previous week. The April 30th FC Elevation at Hungry Horse is 3495.4 feet. Outflows at Hungry Horse have been 11.5–12.5 Kcfs over the last week.

Dworshak is currently at an elevation of 1496.5 feet (4-10-14) and has drafted 7.3 feet over the previous week. The COE has submitted and received a flood control deviation at Dworshak. The flood control deviation is based on flow, allowing the project to release outflows of 20 Kcfs until beginning the refill operation, when the project will reduce outflows to 10 Kcfs. Currently, it is anticipated that refill will begin on April 18th, 2014, and outflows will decrease to 10 Kcfs. The intent of the flood control deviation is to avoid excessively high outflows (i.e., 25 Kcfs) as well as high TDG levels below the project.

The Brownlee Reservoir was at an elevation of 2057.8 feet on April 10th, 2014, drafting 3.4 feet over the last week. Inflows to Brownlee Dam have ranged between 14.4 and 15.8 Kcfs last week. The April 30th FC Elevation at Brownlee is 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 8th, 2014), the flow objective this spring will be 100 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 70.6 Kcfs between April 3 and April 10, 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). On April 10th, flows at McNary Dam were 241.6 Kcfs and Priest Rapids Dam flows were 141.7 Kcfs.

Spill

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

Dworshak Dam has been spilling approximately 9 Kcfs as the project drafts to its flood control elevation. All of the lower Snake River projects have spilled at the 2014 Fish Operations Plan (FOP) levels.

Project	Spill Level Day/Night
Lower Granite	20 Kcfs/20 Kcfs
Little Goose	30%/30%
Lower Monumental	Gas Cap/Gas Cap
Ice Harbor	45 Kcfs/Gas Cap

On the first day of the 2014 fish spill operations in the lower Columbia River, all projects spilled at the levels specified in the 2014 FOP. Spill occurred at McNary and Bonneville dams prior to the implementation of planned spill due to the distribution of excess spill and due to turbine unit outages.

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

Total dissolved gas measurements from planned spill did not exceed the waiver limits. 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 will be decreased if needed.

Smolt Monitoring

As of this week, all Smolt Monitoring Program sites are sampling for 2014.

This week's samples at Bonneville Dam were dominated by yearling Chinook juveniles. The daily average passage index for yearling Chinook this week was just over 1,000 per day, which was a significant increase over last week's daily average passage index of about 520 per day. Passage of subyearling Chinook, coho, and sockeye decreased this week, when compared to last week. This week's daily average passage indices for these three species were about 370, 725, and 290 per day, respectively. All of the subyearling Chinook sampled at BON this week were fry. Steelhead passage increased this week, when compared to last week. The daily average passage index for steelhead this week was nearly 300 per day while last week's daily average passage index was only about 60 per day. So far, no Pacific lamprey ammocoetes have been sampled at BON. Samples of Pacific lamprey macrophthalmia decreased this week, when compared to last week. The daily average collection for Pacific lamprey macrophthalmia for this week was nearly 100 per day.

Yearling Chinook were the dominant species of salmonid in this week's samples at John Day Dam. The daily average passage index for yearling Chinook over the past week was 790 per day. The only other species of salmonid that passed JDA in comparable numbers were steelhead. This week's daily average passage index for steelhead at JDA was just over 500 per day. Passage of subyearling Chinook, coho, and sockeye 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 16 per day, while that for Pacific macrophthalmia was nearly 540 per day.

Sampling at McNary Dam began on April 6th, with the first sample worked up on April 7th. McNary Dam is no longer a transportation site and, therefore, sampling at MCN will occur every-other-day for the entire 2014 SMP season. So far, only 2 days' worth of data has been collected from MCN. Steelhead dominated both samples at MCN this week, with a passage index that has ranged from about 300 to 800. Yearling Chinook

were the second most dominate species, with a passage index that has ranged from about 125 to nearly 300 per day. Subyearling Chinook and sockeye are the only other species of salmonids that have been collected so far at MCN, but in relatively low numbers. All subyearling Chinook collected at MCN so far this year have been fry. Finally, Pacific lamprey macrophthalmia were collected in both samples from this week. Collections of Pacific macrophthalmia ranged from 10 to 90 per day.

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 14,500 per day, which is an increase over last week's daily average passage index of just over 7,100 per day. Steelhead passage also increased this week, when compared to last week. The daily average passage index for steelhead this week was nearly 5,400 per day. Sockeye passage increased slightly this week, with a daily average passage index of about 1,300 per day. Given that Dworshak Dam has been spilling water for flood control since March 11th, it is likely that the sockeye collected at Lower Granite this week are kokanee from Dworshak reservoir. Passage of subyearling Chinook fry decreased this week and no coho were sampled at LGR this week. Finally, no lamprey juveniles have been sampled at Lower Granite Dam this year.

Sampling at Little Goose and Lower Monumental dams is limited until transportation begins. This limited sampling will be every 5 days at Little Goose Dam and every 3 days at Lower Monumental Dam. During this time, the sample at LGS is a full 24-hour sample while that at LMN is a limited duration sample (3–4 hours) for condition fish only. Steelhead and yearling Chinook dominated this week's samples at LGS and LMN. The estimated passage indices from this week's sample at LGS were about 3,500 for yearling Chinook and nearly 5,200 for steelhead. Both sites also collected sockeye in this week's samples. Finally, Pacific lamprey macrophthalmia were collected at both sites this week, although in relatively low numbers.

Overall, collections at Rock Island Dam have remained relatively low since sampling began, with the exception of sockeye and subyearling Chinook.

Sockeye passage at RIS has increased this week. This week's daily average passage index for sockeye at RIS was just over 300 per day. The daily average passage index for subyearling Chinook this week was just over 100 per day. To date, all subyearling Chinook collected at RIS this year have been fry. Finally, only two Pacific lamprey macrophthalmia were sampled at Rock Island this week.

The Grande Ronde Trap is operated by the Oregon Department of Fish and Wildlife and is located at river kilometer 2 in the Grande Ronde River. Yearling Chinook collections continued to increase this week, with a daily average collection of about 800 per day. This increase in yearling Chinook collections is at least partially due to recent hatchery releases in the Grande Ronde River, upstream of the trap. Over the past week, 75%–96% of the daily yearling Chinook collection has been of known hatchery origin. The Grande Ronde Trap continued to sample only a few steelhead juveniles this week although collections seem to have increased in more recent days.

The Salmon River Trap is located at river kilometer 103 and operated by Idaho Department of Fish and Game. Yearling Chinook continued to dominate the collections at the Salmon River Trap this week, with a daily average collection of about 1,400 per day, which is an increase over last week's daily average collection of about 875 per day. Of the yearling Chinook that were collected this week, approximately 84% were of known hatchery origin. As with previous weeks, only a few steelhead were sampled at the Salmon River Trap this week. However, based on yesterday's collection, it appears steelhead passage may be increasing. No juvenile lamprey were sampled this week.

The Snake River Trap is located at river kilometer 225 and operated by Idaho Department of Fish and Game. To date, the Snake River Trap has collected mostly yearling Chinook and steelhead, with a few subyearling Chinook fry. Collections at the Snake River Trap have remained relatively low this week, with a maximum of 31 yearling Chinook in the sample from April 6th and 30 steelhead in the sample from April 5th.

The Imnaha River Trap is located at river kilometer 7 and is operated by the Nez Perce Tribe. Sampling at

the Imnaha River Trap 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 the Imnaha Trap may be several days behind. To date, we have received data through April 10th. Over the last week, collections at the Imnaha River trap have been dominated by yearling Chinook. The average daily collection for yearling Chinook this week was about 6,400 per day, which is a significant increase over last week's average of about 260 per day. The increase in yearling Chinook passage this week is largely due to hatchery releases above the trap. Of the yearling Chinook that were collected this week, over 99% were of known hatchery origin. Steelhead collections decreased this week, when compared to the previous week. The daily average collection for steelhead this week was nearly 130 per day. Last week's daily average steelhead collection was just over 900 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 500,000 yearling fall Chinook were scheduled for release this week from Lyons Ferry Hatchery, below Little Goose Dam. Of these, about 50% were unclipped but tagged with coded-wire tags. In addition, nearly 2.2 million yearling spring Chinook juveniles were scheduled for release into this zone this week. Of these, about 94% were scheduled for release from Dworshak National Fish Hatchery on the Clearwater River, beginning April 9th. The remaining 6% were scheduled to be released from the Grande Ronde Acclimation Pond on the Grande Ronde River. Approximately 50% of the yearling spring Chinook released to the Grande Ronde River this week were unclipped, but were tagged with coded-wire tags. Finally, just over 2.3 million summer steelhead were scheduled for release to this zone this week. Of these, nearly 51% were scheduled to be released into the Little Salmon River, 31% were scheduled to be released into the Grande Ronde River and its tributaries, and 18% were scheduled to be released into tributaries of the Clearwater River.

There are two releases of yearling fall Chinook juveniles scheduled to take place over the next 2 weeks. In all, these fall Chinook releases are expected to total about 326,000 juveniles. Of these, about 50% are scheduled for release into the Snake River at Pittsburg Landing Acclimation Facility, and 50% are scheduled for release into the Clearwater River at Big Canyon Creek Acclimation Facility. Over half of these yearling fall Chinook are unclipped but tagged with coded-wire tags. In addition, approximately 260,000 yearling spring Chinook are scheduled for release to this zone over the next 2 weeks. Of these, about 63% are scheduled to be released into the Imnaha River while the remaining 37% are scheduled to be released into the Grande Ronde River. Finally, nearly 3.7 million summer steelhead are scheduled for release to this zone over the next 2 weeks. Of these, about 72% are scheduled for release into the Clearwater River and its tributaries. The remaining 28% are scheduled for release throughout this zone, including: the Salmon River and its tributaries (19%), the Pahsimeroi River (4%), Lyons Ferry Hatchery (3%), and the Tucannon River (2%).

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Approximately 573,000 yearling summer Chinook were scheduled to be released from Chelan Hatchery this week. These summer Chinook juveniles were scheduled to be released at Chelan Falls. In addition, there were three releases of summer steelhead scheduled for this zone this week. In all, these three releases were expected to total about 290,000 summer steelhead juveniles. Of these, approximately 52% were scheduled to be released into the Mid-Columbia River from Ringgold Hatchery, 31% were scheduled to be released into the Touchet River, and 17% were scheduled to be released from the Twisp Acclimation Pond on the Methow River.

There are several releases of juvenile salmonids scheduled for this zone over the next 2 weeks. Approximately 50,000 subyearling fall Chinook are scheduled to be released into the Yakima River on or around April 21st. In addition, about 2.23 million yearling spring Chinook are scheduled to be released into this zone over the next 2 weeks. Of these, about

64% are scheduled to be released into the Wenatchee River while 36% are scheduled for release into the Methow River. Just over 1.0 million yearling summer Chinook are scheduled to be released into this zone over the next 2 weeks. These releases are scheduled to take place throughout this zone, including directly into the mid-Columbia River (31%), the Entiat River (38%), the Methow River (20%), and the Okanogan River (11%).

Over 1.5 million coho juveniles are scheduled to be released into the Wenatchee and Yakima rivers over the next 2 weeks. These coho juveniles are part of the Yakama Tribal Program to reintroduce coho to the Yakima, Methow, and Wenatchee rivers. This tribal program is expected to release approximately 2.44 million coho juveniles in 2014. Finally, approximately 331,500 summer steelhead are scheduled for release into this zone over the next 2 weeks. Of these, approximately 45% are scheduled to be released into the Methow River, 32% are scheduled to be released into the Walla Walla River, 15% are scheduled to be released into the Touchet River, and 8% are scheduled to be released into the Wenatchee River.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. On the morning of April 11th, approximately 6.0 million subyearling fall Chinook tules were released from Spring Creek National Fish Hatchery. It's likely that these fall Chinook tules will begin arriving at Bonneville Dam by late evening on April 11th or early morning on April 12th. In addition, about 79,000 yearling spring Chinook were scheduled to be released into Hood River this week. Finally, about 152,000 summer steelhead were scheduled to be released into the Deschutes River this week.

There are several releases of juvenile salmonids scheduled for this zone over the next 2 weeks. Over 2.5 million yearling spring Chinook are scheduled for release to this zone over the next 2 weeks. These releases are scheduled to take place throughout this zone, including: the Wind River (44%), the Little White Salmon River (39%), the Umatilla River (16%), and the Deschutes River (1%). In addition, about 750,000 coho are scheduled to be released from the Pendleton Acclimation Pond on the Umatilla River, beginning on

or around April 20th. Finally, nearly 178,000 summer steelhead are scheduled for release to this zone over the next 2 weeks. These summer steelhead releases are scheduled to take place on the Umatilla (92%) and Deschutes (8%) rivers.

Adult Passage

Bonneville Dam uses video counts from January 1st through March 31st and direct counting after this period. Bonneville Dam counts adult salmon and steelhead year round. Lower Granite Dam uses video counts from March 1st through March 31st and direct counting after this period. Lower Granite Dam counts adult salmon and steelhead through December 30th each year. Willamette Falls also uses video counts and reports adult counts year round.

Adult counts at Bonneville Dam have been updated through 4/10/14. The 2014 adult spring Chinook count at Bonneville Dam is 2,476 which is about 2.1 times greater than the 2013 count of 1,194 and 1.5 times greater than the 10-year average count of 1,636. At Willamette Falls 22 adult spring Chinook have been counted so far this season.

The 2014 Bonneville Dam adult steelhead count of 3,036 is about 1.3 times greater than the 2013 count of 2,244 and 1.1 times greater than the 10-year average count of 2,674. This year's Lower Granite steelhead count of 6,337 is about 1.1 times greater than the 2013 count of 5,959, while being 96.6% of the 10-year average count of 6,560. At Willamette Falls, the 2014 count for steelhead was 3,896 as of April 6th. This year's steelhead count is about 77% of the 2013 count of 5,060 and about 75.7% of the 10-year average count of 5,147.

Between March 1st and April 8th, a total of 115 steelhead and 18 other salmonid species were observed over the separator at the Bonneville Juvenile Monitoring Facility (JMF). 2014 Kelt passage at the Bonneville JMF can be found at: <http://www.fpc.org/adultsalmon/bonkeltcounts.htm>.

Wanapum Dam Update

At Wanapum Dam a significant crack (65 feet long by 2 inches wide) was discovered in a spillway monolith (#4) in late February/early March. 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. Currently, Grant County PUD is attempting to define why and how this crack at the project formed.

The drawdown of Wanapum pool has caused the adult fishways at Wanapum Dam to not be operational. The adult fishways exits are currently approximately 10 feet above the forebay water level. Grant County engineers have been designing adult fishway retrofits that involve the use of weir boxes and chutes to deliver adult fish into the forebay of Wanapum Dam. These fixes are expected to be in place at the left bank fishway (main passage route) by April 15th and on the right bank fishway by April 22nd. It is uncertain as to how well these retrofits will effectively pass adult fish. Grant County has also modified their Off Ladder Adult Fish Trap (OLAFT) at Priest Rapids Dam to begin a Trap and Haul operation at Priest Rapids. This option is expected to be operational by April 15th. 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 had to construct extensions at their ladder entrances and has limited use of fish pumps that ordinarily supply water to adult fishways.

In addition to the major impacts to adult fish passage, the crack and resultant drawdown of the Wanapum forebay is expected to have impacts on the juvenile migrations. To aid in juvenile passage, Grant County typically operates a bypass at Wanapum dam that discharges approximately 20 Kcfs. With forebay levels much lower than normal, this bypass is now discharging less than one half of its ordinary level. The impact of this lower discharge on juvenile fish survival will have to be assessed.

Hatchery Releases Last Two Weeks

Hatchery Release Summary									
From:	3/28/2014		to		04/10/14				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe Colville Tribe Total	Chief Joseph Hatchery	CH1	SU	2014	44,000	04-01-14	04-15-14	Omak Creek	Okanogan River
					44,000				
Idaho Dept. of Fish and Game	Clearwater Hatchery	CH1	SP	2014	1,186,000	03-25-14	04-01-14	Red River	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2014	188,000	04-07-14	04-16-14	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	93,268	04-08-14	04-08-14	Shoup Br (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	93,662	04-09-14	04-09-14	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	94,165	04-07-14	04-07-14	Salmon River (ID)	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	219,155	04-10-14	04-17-14	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2014	234,000	03-29-14	04-03-14	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	McCall Hatchery	CH1	SU	2014	814,000	03-29-14	04-03-14	Knox Bridge	Salmon River (ID)
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2014	2,300	03-30-14	03-30-14	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2014	547,700	03-24-14	03-30-14	Hells Canyon Dam	Snake River
Idaho Dept. of Fish and Game	Niagara Springs	ST	SU	2014	800,000	03-31-14	04-10-14	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2014	143,242	04-01-14	04-14-14	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2014	834,059	04-01-14	04-14-14	Pahsimeroi Hatchery	Pahsimeroi River
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	180,000	04-04-14	04-04-14	Sawtooth Hatchery	Salmon River (ID)
Idaho Dept. of Fish and Game	Sawtooth Hatchery	CH1	SP	2014	193,000	04-01-14	04-02-14	Yankee Fk (Salmon R)	Salmon River (ID)
Idaho Dept. of Fish and Game Idaho Dept. of Fish and Game Total	Sawtooth Hatchery	CH1	SP	2014	1,560,500	04-04-14	04-04-14	Sawtooth Hatchery	Salmon River (ID)
					9,683,051				
Nez Perce Tribe	Dworshak NFH	CO	UN	2014	328,523	04-01-14	04-05-14	Clear Creek	Clearwater River M F
Nez Perce Tribe	Eagle Creek NFH	CO	UN	2014	175,030	04-01-14	04-05-14	Clear Creek	Clearwater River M F
Nez Perce Tribe	Kooskia NFH	CH1	SP	2014	630,000	03-15-14	03-31-14	Clear 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	Lyons Ferry Hatchery	CH1	FA	2014	164,000	04-01-14	04-01-14	Cpt John Acclim Pond	Snake River
Nez Perce Tribe	Nez Perce Tribal Hatchery	CH1	SP	2014	269,000	04-01-14	04-11-14	Nez Perce Tribal Hatchery	Clearwater River M F
Nez Perce Tribe Total					1,799,614				
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	360,000	04-10-14	04-10-14	Wallowa Acclim Pond	Wallowa River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2014	116,307	04-03-14	04-03-14	Imnaha River	Imnaha River
Oregon Dept. of Fish and Wildlife	Round Butte Hatchery	ST	SU	2014	162,000	04-08-14	04-08-14	Deschutes River	Deschutes River
Oregon Dept. of Fish and Wildlife Oregon Dept. of Fish and Wildlife Total	Umatilla Hatchery	CH1	SP	2014	150,000	04-01-14	04-01-14	Umatilla River	Umatilla River
					788,307				
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SP	2014	2,042,652	04-09-14	04-10-14	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Dworshak NFH	CH1	SU	2014	487,000	03-24-14	04-05-14	Powell Acclim Pond	Lochsa River
U.S. Fish and Wildlife Service	Hagerman NFH	ST	SU	2014	126,000	04-03-14	04-04-14	McNabb/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	Warm Springs NFH	CH1	SP	2014	711,328	03-31-14	04-03-14	Warm Springs Hatchery	Deschutes River
U.S. Fish and Wildlife Service Total					4,533,530				
Umatilla Tribe	Carson NFH	CH1	SP	2014	249,091	04-01-14	04-01-14	Walla Walla River	Walla Walla River

Hatchery Releases Last Two Weeks

Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2014	120,000	04-06-14	04-15-14	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2014	122,000	03-22-14	04-03-14	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2014	138,000	03-21-14	04-15-14	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe Total					629,091				
Warm Springs Tribe	Round Butte Hatchery	CH1	SP	2014	75,000	04-09-14	04-09-14	W Fk Hood River	Hood River
Warm Springs Tribe Total					75,000				
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2014	141,000	04-10-14	04-10-14	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2014	142,000	04-10-14	04-10-14	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2014	143,000	04-10-14	04-10-14	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	Chelan Hatchery	CH1	SU	2014	147,000	04-10-14	04-10-14	Chelan Falls	Mid-Columbia River
Washington Dept. of Fish and Wildlife	COOP	CH0	SU	2014	225	03-30-14	03-30-14	Methow River	Methow River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	CH1	FA	2014	500,000	04-08-14	04-08-14	Lyons Ferry Hatchery	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	90,000	04-05-14	04-15-14	Dayton Acclim Pond	Touchet River
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	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	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	Washougal Hatchery	CO	NO	2014	2,500,000	03-20-14	04-01-14	Klickitat River	Klickitat River
Washington Dept. of Fish and Wildlife Total					4,329,225				
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 Total					806,120				
Grand Total					22,687,938				

Hatchery Releases Next Two Weeks

Hatchery Release Summary									
From:	4/11/2014		to		4/24/2014				
Agency	Hatchery	Species	Race	MigYr	NumRel	RelStart	RelEnd	RelSite	RelRiver
Colville Tribe Colville Tribe Total	Chief Joseph Hatchery	CH1	SU	2014	44,000	04-01-14	04-15-14	Omak Creek	Okanogan River
					44,000				
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2014	130,000	04-14-14	04-14-14	Newsome Creek	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2014	188,000	04-07-14	04-16-14	Meadow Creek - CLES Redhouse (SFk ClearH20 R)	S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2014	220,000	04-11-14	04-11-14		S Fk Clearwater River
Idaho Dept. of Fish and Game	Clearwater Hatchery	ST	SU	2014	287,000	04-15-14	04-15-14	Meadow Creek - CLES	S Fk Clearwater River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	138,018	04-16-14	04-18-14	Pahsimeroi River	Pahsimeroi River
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	186,561	04-14-14	04-16-14	Squaw Creek	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	219,155	04-10-14	04-17-14	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Magic Valley Hatchery	ST	SU	2014	237,353	04-11-14	04-14-14	Little Salmon River	Salmon River (ID)
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	Niagara Springs	ST	SU	2014	450,000	04-11-14	04-17-14	Little Salmon River	Salmon River (ID)
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2014	143,242	04-01-14	04-14-14	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game	Pahsimeroi Hatchery	CH1	SU	2014	834,059	04-01-14	04-14-14	Pahsimeroi Hatchery	Pahsimeroi River
Idaho Dept. of Fish and Game Idaho Dept. of Fish and Game Total	Rapid River Hatchery	CH1	SP	2014	2,500,000	03-17-14	04-25-14	Rapid River Hatchery	Little Salmon River
					6,038,837				
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 Big Canyon	Wallowa River
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2014	162,000	04-17-14	04-17-14	(Clearwater River) Pittsburg Landing	Clearwater River M F
Nez Perce Tribe	Lyons Ferry Hatchery	CH1	FA	2014	164,000	04-15-14	04-15-14	Acclim Pond Nez Perce Tribal	Snake River
Nez Perce Tribe Nez Perce Tribe Total	Nez Perce Tribal Hatchery	CH1	SP	2014	269,000	04-01-14	04-11-14	Hatchery	Clearwater River M F
					1,068,061			Big Canyon Acclim.Pd (Grande Ronde)	
Oregon Dept. of Fish and Wildlife	Irrigon Hatchery Complex	ST	SU	2014	160,000	04-11-14	04-11-14		Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2014	250,000	04-14-14	04-14-14	Lookingglass Creek	Grande Ronde River
Oregon Dept. of Fish and Wildlife	Lookingglass Hatchery	CH1	SP	2014	420,000	04-14-14	04-14-14	Imnaha Acclim Pond	Imnaha River
Oregon Dept. of Fish and Wildlife	Opal Springs Hatchery	ST	SU	2014	5,500	04-15-14	04-15-14	Wychus Creek	Deschutes River
Oregon Dept. of Fish and Wildlife	Opal Springs Hatchery	ST	SU	2014	8,000	04-15-14	04-15-14	Crooked River (OR)	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	Wizard Falls Hatchery	CH1	SP	2014	5,000	04-15-14	04-15-14	Wychus Creek	Deschutes River
Oregon Dept. of Fish and Wildlife	Wizard Falls Hatchery	CH1	SP	2014	7,000	04-15-14	04-15-14	Metolius River	Deschutes River
Oregon Dept. of Fish and Wildlife Oregon Dept. of Fish and Wildlife Total	Wizard Falls Hatchery	CH1	SP	2014	7,500	04-15-14	04-15-14	Crooked River (OR)	Deschutes River
					917,800				
U.S. Fish and Wildlife Service	Carson NFH	CH1	SP	2014	1,129,229	04-16-14	04-16-14	Carson Hatchery	Wind River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2014	360,000	04-14-14	04-15-14	Clear Creek Redhouse (SFk ClearH20 R)	Clearwater River M F
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2014	418,000	04-14-14	04-18-14		S Fk Clearwater River
U.S. Fish and Wildlife Service	Dworshak NFH	ST	SU	2014	1,201,000	04-14-14	04-18-14	Dworshak Hatchery	Clearwater River M F
U.S. Fish and Wildlife Service	Entiat Hatchery	CH1	SU	2014	385,000	04-16-14	04-16-14	Entiat Hatchery	Entiat River
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)

Hatchery Releases Next Two Weeks

U.S. Fish and Wildlife Service	Leavenworth NFH	CH1	SP	2014	1,200,000	04-21-14	04-21-14	Icicle Creek Little White Salmon Hatchery	Wenatchee River Little White Salmon River
U.S. Fish and Wildlife Service	Little White Salmon NFH	CH1	SP	2014	876,050	04-17-14	04-17-14		L Col R (D/s McN Dam) Little White Salmon River
U.S. Fish and Wildlife Service	Spring Creek NFH	CH0	FA	2014	6,000,000	04-11-14	04-11-14	Spring Creek Hatchery	
U.S. Fish and Wildlife Service	Willard Hatchery	CH1	SP	2014	122,800	04-15-14	04-15-14	Willard Hatchery	
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					13,567,629				
Umatilla Tribe	Cascade Hatchery	CO	UN	2014	750,000	04-20-14	04-20-14	Pendelton Acclim Pond	Umatilla River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2014	120,000	04-06-14	04-15-14	Grande Ronde Acclim Pond	Grande Ronde River
Umatilla Tribe	Lookingglass Hatchery	CH1	SP	2014	138,000	03-21-14	04-15-14	Catherine Cr Acclim Pond	Grande Ronde River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2014	172,100	04-16-14	04-16-14	Imeques Acclim Pond	Umatilla River
Umatilla Tribe	Umatilla Hatchery	CH1	SP	2014	224,600	04-16-14	04-16-14	Imeques 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					1,514,300				
Washington Dept. of Fish and Wildlife	Chiwawa Hatchery	CH1	SP	2014	222,300	04-15-14	04-25-14	Chiwawa Hatchery Blackbird Island Acc Pond	Wenatchee River
Washington Dept. of Fish and Wildlife	Eastbank Hatchery	ST	SU	2014	25,000	04-20-14	05-20-14		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
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	50,000	04-15-14	04-15-14	Baileysburg Bridge	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	90,000	04-05-14	04-15-14	Dayton Acclim Pond	Touchet River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	107,500	04-15-14	04-15-14	Walla Walla River	Walla Walla River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	117,500	04-15-14	04-15-14	Lyons Ferry Hatchery Cottonwood Acclim Pond	Snake River
Washington Dept. of Fish and Wildlife	Lyons Ferry Hatchery	ST	SU	2014	210,000	04-08-14	04-30-14		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 Ringold Springs Hatchery	Methow River
Washington Dept. of Fish and Wildlife	Ringold Springs Hatchery	ST	SU	2014	150,000	04-10-14	04-20-14		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	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 Total					2,256,792				
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 Jack Creek Acclim Pond	Yakima River
Yakama Tribe	Cle Elem Hatchery	CH1	SP	2014	270,653	03-15-14	05-15-14		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

Hatchery Releases Next Two Weeks

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	Marion Drain Hatchery	CH0	FA	2014	50,000	04-21-14	04-21-14	Roza 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	63,979	04-18-14	04-20-14	Leavenworth Hatchery	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 Total					2,368,177				
Grand Total					27,775,596				

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
03/28/2014	135.3	0.0	144.2	22.7	141.2	0.0	133.8	0.0	138.3	16.1	140.1	40.0	149.5	13.3
03/29/2014	124.7	0.0	123.7	6.8	128.5	0.0	124.6	0.0	139.5	29.4	136.3	33.2	142.3	21.4
03/30/2014	123.4	0.0	122.8	19.3	124.3	0.0	122.7	0.0	133.7	24.1	130.7	38.0	135.8	13.7
03/31/2014	120.0	0.0	120.5	10.9	127.9	3.1	121.7	0.0	137.4	15.7	131.7	26.6	136.7	0.0
04/01/2014	125.1	0.0	120.6	0.0	121.4	6.9	121.7	0.0	136.8	14.9	130.6	26.1	132.6	4.0
04/02/2014	117.4	0.0	117.9	0.0	110.1	14.2	112.5	0.0	121.4	27.1	120.5	30.0	127.6	0.0
04/03/2014	121.0	0.0	125.9	0.0	130.2	8.0	117.5	0.0	120.0	38.0	121.5	21.7	124.6	0.0
04/04/2014	120.8	0.0	124.3	0.0	123.4	2.2	123.2	0.0	127.8	37.7	131.0	25.5	134.5	19.5
04/05/2014	122.6	0.0	123.4	0.0	128.5	0.0	131.2	0.0	137.3	40.6	138.0	29.9	145.1	20.5
04/06/2014	116.6	0.0	114.1	0.0	116.5	0.0	113.5	0.0	113.7	28.2	123.9	22.3	133.1	17.6
04/07/2014	126.5	0.0	126.8	0.0	125.8	0.0	121.2	0.0	119.8	29.6	126.2	21.2	131.8	0.0
04/08/2014	120.8	0.0	121.4	0.0	116.3	0.0	117.7	0.0	124.2	25.4	127.6	19.9	131.1	4.6
04/09/2014	112.1	0.0	111.6	0.0	123.4	9.6	119.0	0.0	125.9	25.3	133.2	28.8	140.9	5.7
04/10/2014	106.7	0.0	108.9	0.0	126.7	9.8	128.7	0.0	135.5	31.9	133.9	17.1	141.7	0.0

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
03/28/2014	20.0	9.0	12.9	19.7	67.4	0.0	70.6	0.0	75.5	0.0	76.6	0.0	76.6	0.0
03/29/2014	20.0	9.0	13.5	20.5	74.4	0.0	65.7	0.0	66.3	0.0	70.4	0.0	70.4	0.0
03/30/2014	20.0	8.9	14.2	17.9	90.2	0.0	87.4	0.0	92.4	0.0	94.4	0.0	94.4	0.0
03/31/2014	20.0	8.9	15.2	13.5	85.5	0.0	73.3	0.0	79.3	0.0	78.2	0.0	78.2	0.0
04/01/2014	20.1	8.9	16.1	14.0	67.7	5.0	72.0	4.4	76.9	0.0	79.8	0.0	79.8	0.0
04/02/2014	20.0	8.8	16.2	13.9	68.4	0.0	66.6	0.1	72.2	0.0	76.0	0.2	76.0	0.2
04/03/2014	19.9	8.7	16.4	18.6	63.4	20.3	64.6	19.3	65.3	27.9	67.5	50.8	67.5	50.8
04/04/2014	19.7	8.5	15.8	21.3	66.6	20.7	67.3	20.1	69.7	27.9	70.6	51.9	70.6	51.9
04/05/2014	20.1	8.8	15.8	20.3	70.3	20.4	70.1	21.1	71.3	27.9	74.3	52.5	74.3	52.5
04/06/2014	19.9	8.8	15.2	21.2	67.1	20.2	68.3	20.5	67.6	28.0	67.7	49.8	67.7	49.8
04/07/2014	19.9	9.2	14.9	22.0	71.7	20.2	73.4	22.0	74.9	27.9	76.9	54.5	76.9	54.5
04/08/2014	20.0	9.2	14.4	18.4	70.9	21.8	71.3	22.8	74.1	27.9	77.4	54.3	77.4	54.3
04/09/2014	20.1	9.2	14.5	16.3	71.0	20.5	69.7	20.9	69.9	27.9	71.5	53.0	71.5	53.0
04/10/2014	19.8	9.0	14.9	16.6	83.5	20.7	83.7	25.1	85.0	29.1	88.4	59.4	88.4	59.4

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

Date	McNary		John Day		The Dalles		Bonneville			
	Flow	Spill	Flow	Spill	Flow	Spill	Flow	Spill	PH1	PH2
03/28/2014	227.1	52.2	220.6	0.0	218.1	0.0	238.8	11.5	101.5	113.4
03/29/2014	226.7	52.0	212.3	0.0	204.5	0.0	231.1	2.5	103.2	113.0
03/30/2014	240.2	65.0	230.5	0.0	228.2	0.0	250.4	21.5	103.5	113.0
03/31/2014	243.8	68.7	242.1	0.0	238.3	0.0	262.7	33.5	103.2	113.7
04/01/2014	221.5	87.8	223.5	0.0	221.2	0.0	243.9	33.2	83.8	114.4
04/02/2014	217.8	82.8	217.0	0.0	217.2	0.0	234.9	26.8	83.8	112.0
04/03/2014	217.7	79.8	211.5	0.0	211.2	0.0	239.5	26.3	84.5	116.3
04/04/2014	205.1	71.4	213.0	0.0	209.9	0.0	226.2	18.4	84.2	111.2
04/05/2014	227.5	89.1	231.6	0.0	229.6	0.0	241.0	28.6	84.5	115.5
04/06/2014	219.9	81.4	210.5	0.0	208.7	0.0	232.4	20.8	83.8	115.4
04/07/2014	207.6	74.1	213.6	0.0	209.5	0.0	219.9	26.1	79.9	101.5
04/08/2014	210.3	75.4	206.4	0.0	205.6	0.0	219.4	34.6	80.0	92.4
04/09/2014	206.2	61.5	209.3	0.0	205.3	0.0	222.8	36.5	80.8	93.1
04/10/2014	241.6	98.4	250.5	75.1	238.5	95.4	261.3	99.9	55.2	93.8

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											
	04/10/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Little Goose Dam											
	04/06/14	Chinook + Steelhead	100	0	0	0.00%	0.00%	0	0	0	0
Lower Monumental Dam											
	04/07/14	Chinook + Steelhead	90	0	0	0.00%	0.00%	0	0	0	0
McNary Dam											
Bonneville Dam											
Rock Island Dam											

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>				
3/28	104.8	104.8	104.9	21	---	---	---	0	102.3	102.6	102.8	24	101.0	101.2	101.4	24	---	---	---	0
3/29	104.9	104.9	105.0	24	---	---	---	0	103.0	103.2	103.3	24	101.8	102.0	102.3	24	---	---	---	0
3/30	104.7	104.8	104.9	24	---	---	---	0	103.3	103.5	103.9	24	101.8	102.1	102.3	24	---	---	---	0
3/31	104.6	104.7	104.9	24	---	---	---	0	103.4	104.0	104.3	24	101.7	102.2	102.5	24	---	---	---	0
4/1	104.8	104.9	105.2	24	---	---	---	0	104.5	105.0	105.4	24	102.5	102.8	103.0	24	---	---	---	0
4/2	107.2	109.6	111.1	24	---	---	---	0	104.7	105.0	105.2	24	102.4	102.6	102.7	24	---	---	---	0
4/3	111.1	111.3	112.1	24	---	---	---	0	105.0	105.4	105.7	24	102.7	103.0	103.1	24	---	---	---	0
4/4	111.2	111.5	112.3	24	---	---	---	0	105.8	106.1	106.5	24	103.4	103.6	103.8	24	---	---	---	0
4/5	111.0	111.1	111.2	24	---	---	---	0	105.5	105.8	106.1	24	102.5	102.8	103.3	24	---	---	---	0
4/6	111.0	111.1	111.2	24	---	---	---	0	105.2	105.5	106.6	24	102.0	102.1	102.5	24	---	---	---	0
4/7	111.8	112.7	113.4	24	---	---	---	0	105.3	106.1	106.6	24	101.5	101.8	102.2	24	---	---	---	0
4/8	113.3	113.4	113.5	24	---	---	---	0	107.4	108.9	115.5	24	102.8	103.6	104.5	24	---	---	---	0
4/9	113.3	113.4	113.7	24	---	---	---	0	106.1	106.3	106.9	24	103.0	103.1	103.4	24	---	---	---	0
4/10	113.4	113.5	113.7	23	---	---	---	0	105.8	106.1	106.6	23	102.6	102.9	103.1	23	---	---	---	0

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>				
3/28	106.8	106.8	107.0	8	101.8	102.0	102.2	21	101.9	102.3	102.4	21	102.3	102.4	102.6	24	103.3	103.5	103.7	24
3/29	---	---	---	0	103.0	103.3	103.7	18	103.1	103.6	104.1	18	102.5	102.8	102.9	24	103.4	103.6	103.7	24
3/30	---	---	---	0	102.3	102.7	103.0	21	102.7	103.2	103.7	21	102.6	102.8	103.0	24	103.3	103.5	103.6	24
3/31	---	---	---	0	102.9	103.7	103.9	20	103.7	105.1	106.6	20	103.2	103.6	103.8	24	103.9	104.2	104.5	24
4/1	---	---	---	0	103.9	104.2	104.6	22	106.1	106.9	107.6	22	103.3	103.6	103.7	24	104.0	104.3	104.5	24
4/2	---	---	---	0	103.2	103.5	103.8	24	107.6	110.0	113.5	24	104.8	105.7	106.1	24	105.0	105.7	106.4	24
4/3	---	---	---	0	103.3	103.7	103.8	23	105.4	106.8	108.0	23	105.7	106.1	106.8	24	106.2	106.5	107.3	24
4/4	---	---	---	0	103.9	104.1	104.5	20	106.4	106.6	106.8	20	106.8	107.3	108.0	24	107.5	107.9	108.3	24
4/5	---	---	---	0	103.6	103.8	103.9	21	106.0	106.1	106.2	21	105.4	105.4	105.5	12	106.2	106.2	106.5	11
4/6	---	---	---	0	103.8	104.0	104.6	21	105.5	105.7	105.9	21	103.6	103.6	103.9	3	---	---	---	0
4/7	---	---	---	0	104.3	104.7	105.3	20	105.3	105.6	105.9	20	103.8	103.8	103.8	1	---	---	---	0
4/8	---	---	---	0	105.2	105.7	106.1	23	106.0	106.3	106.5	23	105.0	105.3	105.7	17	105.5	105.7	106.0	16
4/9	---	---	---	0	104.8	105.0	105.3	20	105.6	105.7	105.9	19	105.0	105.2	105.5	24	105.4	105.6	105.9	24
4/10	---	---	---	0	104.8	105.1	105.4	18	106.2	107.0	108.2	17	105.5	106.1	106.9	23	105.7	106.1	107.1	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>#</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>				
3/28	102.7	104.0	126.1	24	104.2	105.5	128.4	24	103.5	103.6	103.8	24	110.3	110.7	111.8	24	109.5	111.0	111.5	24
3/29	102.0	102.3	102.4	24	104.1	105.0	105.8	24	103.8	104.0	104.3	24	109.4	110.6	112.6	24	110.5	110.8	111.5	24
3/30	101.9	102.3	102.7	24	104.1	105.1	110.0	24	104.1	104.7	105.2	24	110.1	111.4	111.8	24	108.3	109.6	110.0	24
3/31	102.6	103.4	103.8	24	104.2	104.8	105.1	24	104.6	105.7	107.1	24	107.9	110.0	110.9	24	110.6	111.8	112.4	24
4/1	103.1	103.4	103.6	24	104.6	104.8	105.0	24	105.0	105.4	105.6	24	108.4	109.9	111.2	24	108.7	109.6	110.1	24
4/2	103.1	103.9	104.6	24	106.8	109.6	110.6	24	104.5	104.8	105.0	23	109.8	110.3	111.5	23	108.3	108.9	109.4	23
4/3	104.8	105.1	105.2	24	110.7	111.0	111.4	24	104.8	105.8	107.4	24	108.1	109.3	112.4	24	109.2	109.8	110.2	24
4/4	106.1	106.9	107.8	24	111.4	111.7	112.5	24	109.2	109.8	110.2	24	110.9	112.2	112.5	24	108.5	109.1	109.7	24
4/5	105.0	105.1	105.8	14	109.7	109.7	111.4	11	110.0	110.5	111.1	24	112.3	112.7	113.1	24	111.0	111.3	111.5	24
4/6	104.2	104.2	104.7	3	---	---	---	0	109.2	109.6	110.4	24	110.3	111.2	112.7	24	111.9	112.3	113.8	24
4/7	103.2	103.2	104.1	7	---	---	---	0	108.8	109.2	109.7	24	109.2	109.5	109.9	24	110.5	110.8	111.2	24
4/8	104.3	104.8	105.1	18	109.2	109.4	111.4	15	109.4	110.3	110.7	24	110.0	110.8	111.2	24	110.7	111.3	113.1	24
4/9	104.2	104.5	104.7	24	108.6	109.5	111.5	24	108.4	108.9	110.1	24	111.3	112.5	115.0	24	110.0	110.5	111.4	24
4/10	104.2	104.8	105.4	23	109.4	110.5	111.3	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				Clrwr-Peck				Anatone			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/28	109.8	110.5	111.6	24	---	---	---	0	116.5	116.7	117.1	24	---	---	---	0	102.1	102.1	102.4	11
3/29	111.5	112.4	113.2	24	---	---	---	0	116.7	116.9	117.2	24	---	---	---	0	101.6	102.0	102.3	24
3/30	109.1	110.1	111.0	24	---	---	---	0	116.6	116.8	117.2	24	---	---	---	0	101.3	101.7	102.1	24
3/31	109.5	110.4	111.1	24	---	---	---	0	116.6	116.8	117.1	24	---	---	---	0	101.5	102.2	102.8	24
4/1	107.9	109.1	110.9	24	---	---	---	0	117.1	117.3	117.9	24	108.4	108.4	108.7	5	101.4	101.8	102.5	24
4/2	107.2	107.9	108.4	23	---	---	---	0	116.8	117.0	117.5	24	108.2	108.7	109.0	24	101.2	101.8	102.3	24
4/3	108.2	108.7	109.4	24	---	---	---	0	116.4	116.6	116.8	24	108.6	109.3	109.7	24	101.6	102.5	103.2	24
4/4	108.9	110.3	111.0	24	---	---	---	0	115.9	116.3	116.6	24	108.3	108.6	109.0	24	101.6	102.0	102.4	24
4/5	111.3	112.2	112.6	24	---	---	---	0	115.4	115.5	115.8	24	108.1	108.4	108.7	24	101.6	102.2	102.9	24
4/6	112.1	112.8	113.5	24	---	---	---	0	115.1	115.3	115.7	24	108.0	108.3	108.9	24	101.9	102.4	103.2	24
4/7	109.2	109.4	110.3	24	---	---	---	0	115.8	116.0	116.1	24	108.4	109.1	109.4	24	102.0	103.0	103.7	23
4/8	109.8	110.4	111.5	24	---	---	---	0	116.6	116.9	117.0	24	108.9	109.5	109.9	24	102.3	103.1	103.8	24
4/9	109.7	110.4	111.2	24	---	---	---	0	116.5	116.6	116.8	24	107.8	108.3	108.7	24	101.8	102.3	103.1	24
4/10	---	---	---	0	---	---	---	0	116.1	116.3	116.6	23	106.8	107.4	107.8	23	101.8	102.8	103.5	23

Total Dissolved Gas Saturation Data at Snake River Sites

Date	Clrwr-Lewiston				Lower Granite				L. Granite Tlwr				Little Goose				L. Goose Tlwr			
	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/28	105.2	105.9	106.3	24	104.6	104.8	105.0	24	104.2	104.3	104.5	24	103.3	103.5	103.8	24	102.9	103.1	103.3	24
3/29	105.4	106.1	106.9	24	104.0	104.3	104.6	24	103.8	103.9	104.2	24	104.1	104.3	104.6	24	103.6	103.9	105.0	24
3/30	104.1	104.5	105.0	24	103.2	103.3	103.4	24	102.8	102.9	103.1	24	104.0	104.2	104.5	24	103.7	103.8	104.0	24
3/31	105.0	106.3	107.1	24	103.7	104.3	104.7	24	103.5	104.1	104.7	24	104.1	104.4	104.6	24	103.8	104.3	104.9	24
4/1	105.6	106.4	107.2	24	103.9	104.1	104.5	24	105.6	107.5	116.8	24	104.2	104.4	104.6	24	105.4	107.1	116.5	24
4/2	105.4	106.3	107.1	24	103.3	103.4	103.6	24	103.0	103.2	103.5	24	103.6	103.8	103.9	24	102.9	103.1	103.4	24
4/3	105.5	106.9	107.8	24	103.3	103.5	103.7	24	111.3	111.8	112.4	24	103.3	103.8	104.4	24	108.7	109.2	109.5	24
4/4	105.5	106.2	107.1	24	103.7	103.8	103.9	24	111.6	111.8	111.9	24	104.0	104.6	105.0	24	109.2	109.4	109.8	24
4/5	105.0	106.0	106.7	24	103.4	103.5	103.6	24	111.1	111.3	111.6	24	103.9	104.1	104.4	24	109.3	109.4	109.7	24
4/6	105.0	105.7	106.7	24	103.4	103.5	103.6	24	110.9	111.2	111.5	24	106.3	107.4	107.8	24	110.0	110.4	110.8	24
4/7	105.4	106.9	108.0	24	103.0	103.2	103.4	24	110.9	111.2	111.8	24	108.0	108.7	109.2	24	110.6	111.0	111.1	24
4/8	106.2	107.6	108.7	24	103.9	104.3	104.5	24	111.4	112.4	116.4	24	110.5	111.6	112.5	24	111.5	112.0	115.6	24
4/9	105.7	106.5	107.4	24	104.3	104.4	104.5	24	111.5	111.7	112.0	24	110.8	111.1	111.5	24	111.1	111.3	111.6	24
4/10	104.9	106.0	106.9	23	104.7	104.9	105.3	23	111.3	111.5	111.7	23	111.7	112.1	112.5	23	111.8	112.1	112.2	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		12 h		#	24 h		12 h		#	24 h		12 h		#	24 h		12 h		#
	Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr		Avg	Avg	High	hr	
3/28	101.7	101.9	102.1	24	102.5	102.8	103.0	24	103.7	103.7	103.9	24	103.4	103.6	104.0	24	---	---	---	0
3/29	101.9	102.0	102.1	24	102.8	103.0	103.2	24	103.2	103.4	103.6	24	102.8	103.0	103.3	24	---	---	---	0
3/30	101.5	101.6	101.8	24	102.4	102.5	102.6	24	102.7	102.8	102.9	24	102.3	102.4	102.6	24	---	---	---	0
3/31	102.0	102.4	102.6	24	102.9	103.4	103.5	24	102.8	103.2	103.5	24	102.7	103.3	103.6	24	---	---	---	0
4/1	102.9	103.0	103.1	24	103.9	104.1	104.3	24	103.6	103.7	103.9	24	103.2	103.3	103.4	24	---	---	---	0
4/2	102.6	102.7	103.0	24	103.4	103.6	104.1	24	103.3	103.5	103.6	24	103.1	103.3	104.2	24	---	---	---	0
4/3	102.9	103.7	104.2	24	117.0	117.5	117.7	24	103.6	103.8	104.1	24	114.6	115.5	116.0	24	---	---	---	0
4/4	103.1	103.5	104.1	24	117.2	117.4	117.8	24	104.1	104.3	104.8	24	115.2	115.6	115.9	24	---	---	---	0
4/5	103.8	104.7	105.3	24	117.5	117.8	118.0	24	108.1	109.8	110.4	24	115.4	115.6	116.0	24	---	---	---	0
4/6	105.3	105.4	105.6	24	117.5	117.7	117.9	24	110.1	110.3	110.4	24	115.2	115.5	115.7	24	---	---	---	0
4/7	106.1	106.5	107.0	24	117.9	118.2	118.4	24	111.0	111.7	112.6	24	115.5	115.7	116.0	24	---	---	---	0
4/8	108.6	109.6	110.4	24	118.3	118.5	118.7	24	113.8	114.6	115.0	24	115.7	115.9	116.0	24	---	---	---	0
4/9	110.3	111.1	111.7	24	118.5	118.8	119.0	24	114.5	114.6	114.7	24	115.5	115.8	116.2	24	---	---	---	0
4/10	111.5	111.7	112.0	23	119.4	119.9	120.8	23	114.4	114.7	115.7	23	116.4	116.8	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	<u>McNary-Wash</u>			<u>McNary Tlwr</u>			<u>John Day</u>			<u>John Day Tlwr</u>			<u>The Dalles</u>							
	<u>24 h</u>	<u>12 h</u>		<u>24 h</u>	<u>12 h</u>		<u>24h</u>	<u>12h</u>		<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</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>	<u>Avg</u>	<u>AVG</u>	<u>High</u>	<u>hr</u>
3/28	108.4	108.6	108.7	24	112.3	113.6	115.6	24	109.8	110.0	110.0	24	109.6	109.7	109.8	24	108.8	109.0	109.1	24
3/29	107.0	107.3	107.9	24	111.6	112.5	113.2	24	109.7	109.9	110.0	24	109.4	109.6	109.7	24	108.8	109.0	109.1	24
3/30	106.2	106.3	106.6	24	112.5	113.1	113.4	24	108.5	108.7	109.1	24	108.2	108.3	108.6	24	107.9	108.1	108.5	24
3/31	106.5	106.9	107.3	24	113.9	114.4	114.9	24	108.4	108.8	109.0	24	108.1	108.5	108.7	24	107.8	108.3	108.6	24
4/1	106.4	106.8	107.0	24	115.7	116.6	117.4	24	108.3	108.6	108.8	24	107.9	108.1	108.4	24	107.2	107.7	108.3	24
4/2	106.9	107.1	107.4	24	115.5	115.7	116.0	24	107.4	107.6	108.0	24	107.0	107.3	107.6	24	105.8	106.1	106.2	24
4/3	106.8	106.9	107.6	24	115.0	115.7	116.0	24	106.9	107.1	107.3	24	106.4	106.7	106.9	24	105.9	106.1	106.2	24
4/4	106.2	106.4	106.5	24	113.6	114.0	114.9	24	107.0	107.2	107.5	24	106.8	107.0	107.8	24	106.0	106.2	106.4	24
4/5	106.6	107.3	107.7	24	112.6	112.8	112.9	24	107.0	107.2	107.3	24	106.7	106.8	106.9	24	105.9	106.1	106.2	24
4/6	107.4	107.6	107.8	24	113.3	113.7	114.0	24	106.8	106.9	107.1	24	106.5	106.7	106.8	24	105.4	105.6	105.9	24
4/7	107.6	108.3	108.9	24	113.1	113.3	113.6	24	107.3	108.0	108.6	24	107.1	107.8	108.2	24	106.4	107.0	107.4	24
4/8	110.2	110.8	111.2	24	113.9	114.3	114.6	24	108.7	108.9	109.2	24	108.0	108.2	108.6	24	107.6	107.8	108.1	24
4/9	111.8	112.3	112.5	24	115.1	115.5	116.1	24	107.7	107.9	108.3	24	107.1	107.3	107.5	24	106.7	107.0	107.4	24
4/10	111.3	111.8	112.3	23	114.1	114.3	114.6	23	107.6	108.1	108.7	23	115.7	117.2	118.9	23	107.2	108.4	110.6	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>24 h</u>	<u>12 h</u>		<u>24h</u>	<u>12h</u>		<u>24h</u>	<u>12h</u>		<u>#</u>	<u>24h</u>	<u>12h</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>	<u>Avg</u>	<u>Avg</u>	<u>High</u>	<u>hr</u>
3/28	108.8	108.9	109.0	24	107.5	107.7	107.8	21	107.7	107.9	108.1	21	106.4	106.5	106.7	21	111.3	112.1	112.8	21
3/29	108.8	108.9	109.0	24	108.0	108.1	108.2	24	108.0	108.1	108.3	24	107.1	107.3	107.4	24	110.9	111.5	112.7	24
3/30	107.9	108.2	108.5	24	107.4	107.6	107.8	24	107.7	107.9	108.0	24	107.2	107.9	108.3	24	112.3	112.8	112.9	24
3/31	107.9	108.3	108.5	24	107.7	107.9	108.1	24	108.3	108.5	108.8	24	107.2	107.6	108.1	19	113.4	113.8	114.1	24
4/1	107.4	107.9	108.3	24	107.3	107.5	107.8	24	107.9	108.1	108.2	24	---	---	---	0	112.8	113.4	113.5	24
4/2	106.1	106.3	106.3	24	105.8	106.0	106.3	24	106.9	107.1	107.3	24	106.7	106.8	107.2	14	111.6	112.1	112.2	24
4/3	106.2	106.4	106.6	24	105.8	106.0	106.2	24	106.6	106.8	107.1	24	106.1	106.4	106.7	24	111.7	112.2	112.4	24
4/4	106.2	106.4	106.6	24	106.0	106.2	106.3	24	106.6	106.9	107.2	24	106.0	106.5	106.8	24	110.5	110.8	111.3	24
4/5	106.2	106.3	106.5	24	105.6	105.8	106.1	24	106.4	106.7	106.9	24	105.7	105.9	105.9	24	111.5	112.5	114.2	24
4/6	105.7	105.8	106.0	24	104.6	104.8	105.0	24	105.6	105.8	106.1	24	105.3	105.6	106.1	24	110.7	111.3	111.6	24
4/7	106.6	107.1	107.4	24	105.6	106.4	106.6	24	106.7	108.0	109.3	24	105.9	107.0	107.7	24	111.1	112.8	114.9	24
4/8	107.8	108.1	108.4	24	106.8	107.3	107.6	24	107.7	108.2	108.4	24	107.6	108.4	109.2	24	111.3	111.8	112.0	24
4/9	107.1	107.3	107.5	24	106.5	106.9	107.2	24	107.8	108.3	108.5	24	107.4	108.2	109.1	24	110.3	111.0	112.3	24
4/10	113.2	114.5	115.5	23	106.3	106.5	106.7	23	111.4	112.1	112.5	23	108.7	110.7	112.3	23	117.5	117.7	117.8	23

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/11/2014 7:23

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/currentsmpsubmitdata.asp>

COMBINED YEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
03/28/2014	*	716	53	627	0	4,680	---	---	---	---	389	
03/29/2014	*	438	58	444	4	5,620	---	---	---	---	361	
03/30/2014	*	1,758	142	118	85	6,920	---	---	---	---	589	
03/31/2014	*	1,300	115	102	52	7,650	---	---	---	---	515	
04/01/2014	*	718	71	334	0	6,650	---	35	7	---	801	
04/02/2014	*	723	51	1,568	---	9,056	372	---	10	---	422	
04/03/2014	*	488	1,350	552	---	9,384	---	---	14	---	574	
04/04/2014	*	193	3,159	263	11	10,261	---	12	4	---	488	
04/05/2014	*	438	24,147	367	9	11,659	---	---	8	---	581	
04/06/2014	*	554	3,028	455	31	20,165	---	---	0	---	811	
04/07/2014	*	1,431	4,253	2,089	3	15,362	3,510	36	10	136	1,341	
04/08/2014	*	2,088	5,868	570	26	16,998	---	---	11	---	859	
04/09/2014	*	1,536	1,684	1,120	22	12,173	---	---	13	291	1,268	
04/10/2014	*	---	2,210	761	---	14,693	---	0	14	---	1,739	
04/11/2014		---	---	---	---	---	---	---	---	---	---	
Total:		12,381	46,189	9,370	243	151,271	3,882	83	91	427	7,216	10,738
# Days:		13	14	14	11	14	2	4	10	2	10	14
Average:		952	3,299	669	22	10,805	1,941	21	9	214	722	767
YTD		25,397	47,548	10,414	363	155,971	3,882	83	91	427	7,216	23,259

COMBINED SUBYEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
03/28/2014	*	0	0	0	1	20	---	---	---	---	389	
03/29/2014	*	0	0	0	3	20	---	---	---	---	804	
03/30/2014	*	0	0	0	0	20	---	---	---	---	851	
03/31/2014	*	0	0	0	3	250	---	---	---	---	584	
04/01/2014	*	0	0	0	1	200	---	0	33	---	926	
04/02/2014	*	0	0	0	---	701	0	---	2	---	600	
04/03/2014	*	0	0	0	---	274	---	---	14	---	508	
04/04/2014	*	0	0	0	1	74	---	0	19	---	252	
04/05/2014	*	0	0	0	0	144	---	---	4	---	299	
04/06/2014	*	0	0	0	0	141	---	---	220	---	441	
04/07/2014	*	0	0	0	7	143	0	0	10	15	201	
04/08/2014	*	0	0	0	3	792	---	---	274	---	527	
04/09/2014	*	0	0	0	0	70	---	---	108	91	555	
04/10/2014	*	---	0	0	---	0	---	0	85	---	300	
04/11/2014		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	19	2,849	0	0	769	106	48	7,237
# Days:		13	14	14	11	14	2	4	10	2	10	14
Average:		0	0	0	2	204	0	0	77	53	5	517
YTD		0	0	1	35	2,889	0	0	769	106	48	29,823

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)
03/28/2014	*	0	0	0	0	20	---	---	---	---	109
03/29/2014	*	0	0	0	0	20	---	---	---	---	525
03/30/2014	*	0	0	0	0	20	---	---	---	---	933
03/31/2014	*	0	0	0	0	0	---	---	---	---	945
04/01/2014	*	0	0	0	0	0	---	0	0	4	1,299
04/02/2014	*	0	0	0	---	0	0	---	5	---	1,102
04/03/2014	*	0	0	0	---	0	---	---	0	---	1,098
04/04/2014	*	0	0	0	0	0	---	0	0	---	1,008
04/05/2014	*	0	0	0	0	0	---	---	8	---	613
04/06/2014	*	0	0	0	0	0	---	---	4	---	626
04/07/2014	*	0	0	0	0	0	0	0	0	15	1,054
04/08/2014	*	0	0	0	0	0	---	---	0	---	790
04/09/2014	*	0	0	0	0	0	---	---	0	0	441
04/10/2014	*	---	0	0	---	0	---	0	0	---	540
04/11/2014		---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	60	0	0	17	0	11,083
# Days:		13	14	14	11	14	2	4	10	2	14
Average:		0	0	0	0	4	0	0	2	0	792
YTD		0	0	0	0	70	0	0	17	0	11,936

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)
03/28/2014	*	0	1,267	1	17	530	---	---	---	---	78
03/29/2014	*	0	619	1	11	380	---	---	---	---	33
03/30/2014	*	2	1,337	18	11	2,760	---	---	---	---	82
03/31/2014	*	0	1,357	10	13	6,700	---	---	---	---	52
04/01/2014	*	2	1,017	14	15	4,300	---	29	2	252	53
04/02/2014	*	0	443	7	---	6,199	1,009	---	0	---	49
04/03/2014	*	1	280	2	---	7,024	---	---	3	---	82
04/04/2014	*	0	223	2	23	6,644	---	5	4	---	63
04/05/2014	*	2	151	1	30	4,678	---	---	0	---	94
04/06/2014	*	2	89	2	25	4,513	---	---	0	---	216
04/07/2014	*	1	50	3	6	5,859	5,177	227	7	302	364
04/08/2014	*	2	44	4	18	4,033	---	---	0	---	343
04/09/2014	*	1	65	28	13	4,222	---	---	0	807	566
04/10/2014	*	---	271	72	---	7,657	---	0	9	---	396
04/11/2014		---	---	---	---	---	---	---	---	---	---
Total:		13	7,213	165	182	65,499	6,186	261	25	1,109	4,206
# Days:		13	14	14	11	14	2	4	10	2	14
Average:		1	515	12	17	4,679	3,093	65	3	555	177
YTD		35	7,824	189	203	66,019	6,186	261	25	1,109	4,206

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)	
03/28/2014	*	0	0	0	0	690	---	---	---	---	513	
03/29/2014	*	0	0	0	0	1,180	---	---	---	---	476	
03/30/2014	*	0	0	0	0	1,440	---	---	---	---	393	
03/31/2014	*	0	0	0	0	1,400	---	---	---	---	670	
04/01/2014	*	0	0	0	0	1,200	---	2	0	32	623	
04/02/2014	*	0	0	0	---	1,294	124	---	15	35	389	
04/03/2014	*	0	0	0	---	933	---	---	62	5	213	
04/04/2014	*	0	0	0	0	1,255	---	3	210	20	142	
04/05/2014	*	0	0	0	0	1,583	---	---	786	25	283	
04/06/2014	*	0	0	0	0	1,551	---	---	57	35	537	
04/07/2014	*	0	0	0	0	786	498	7	219	0	25	326
04/08/2014	*	0	0	0	0	1,296	---	---	122	10	321	
04/09/2014	*	0	0	0	0	1,478	---	---	237	2	0	192
04/10/2014	*	---	0	0	---	1,380	---	0	552	17	204	
04/11/2014		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	0	17,466	622	12	2,260	2	204	5,282
# Days:		13	14	14	11	14	2	4	10	2	10	14
Average:		0	0	0	0	1,248	311	3	226	1	20	377
YTD		0	0	0	0	18,306	622	12	2,260	2	204	9,751

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)	
03/28/2014	*	0	0	0	0	0	---	---	---	---	288	
03/29/2014	*	0	0	0	0	0	---	---	---	---	296	
03/30/2014	*	0	0	0	0	0	---	---	---	---	320	
03/31/2014	*	0	0	0	0	0	---	---	---	---	192	
04/01/2014	*	0	0	0	0	0	---	0	---	1,124	200	
04/02/2014	*	0	0	0	---	0	0	---	0	640	216	
04/03/2014	*	0	0	0	---	0	---	1	---	935	104	
04/04/2014	*	0	0	0	0	0	---	1	---	875	200	
04/05/2014	*	0	0	0	0	0	---	---	0	550	88	
04/06/2014	*	0	0	0	0	0	---	---	0	680	100	
04/07/2014	*	0	0	0	0	0	12	1	10	585	65	
04/08/2014	*	0	0	0	0	0	---	---	0	630	60	
04/09/2014	*	0	0	0	0	0	---	1	90	310	55	
04/10/2014	*	---	0	0	---	0	---	4	0	235	85	
04/11/2014		---	---	---	---	---	---	---	---	---	---	
Total:		0	0	0	0	0	12	6	4	100	6,564	2,269
# Days:		13	14	14	11	14	2	4	10	2	10	14
Average:		0	0	0	0	0	6	2	0	50	656	162
YTD		1	0	0	0	0	12	6	4	100	6,564	9,801

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 = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse Flow} / (\text{Powerhouse Flow} + \text{Spill}) \}$

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = $\text{Collection Counts} / \{ \text{Powerhouse 2 Flow} / (\text{Powerhouse 1 \& 2 Flow} + \text{Spill}) \}$

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

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:

4/11/14 7:28 AM

03/28/14 TO 04/11/14

		Species					
Site	Data	CH0	CH1	CO	ST	SO	Grand Total
LGR	Sum of NumberCollected	2,360	119,670	60	53,220	14,510	189,820
	Sum of NumberBarged	0	0	0	0	0	0
	Sum of NumberBypassed	2,350	119,653	60	53,217	14,493	189,773
	Sum of Numbertrucked	0	0	0	0	0	0
	Sum of SampleMorts	10	14	0	3	16	43
	Sum of FacilityMorts	0	3	0	0	1	4
	Sum of ResearchMorts	0	0	0	0	0	0
	Sum of TotalProjectMorts	10	17	0	3	17	47
LGS	Sum of NumberCollected		2,799		4,559	464	7,822
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		2,795		4,558	460	7,813
	Sum of Numbertrucked		0		0	0	0
	Sum of SampleMorts		4		1	4	9
	Sum of FacilityMorts		0		0	0	0
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		4		1	4	9
LMN	Sum of NumberCollected		162		271	18	451
	Sum of NumberBarged		0		0	0	0
	Sum of NumberBypassed		158		269	18	445
	Sum of Numbertrucked		0		0	0	0
	Sum of SampleMorts		0		0	0	0
	Sum of FacilityMorts		0		0	0	0
	Sum of ResearchMorts		0		0	0	0
	Sum of TotalProjectMorts		0		0	0	0
MCN	Sum of NumberCollected	70	281		730		1,081
	Sum of NumberBarged	0	0		0		0
	Sum of NumberBypassed	70	280		730		1,080
	Sum of Numbertrucked	0	0		0		0
	Sum of SampleMorts	0	0		0		0
	Sum of FacilityMorts	0	1		0		1
	Sum of ResearchMorts	0	0		0		0
	Sum of TotalProjectMorts	0	1		0		1
Total Sum of NumberCollected		2,430	122,912	60	58,780	14,992	199,174
Total Sum of NumberBarged		0	0	0	0	0	0
Total Sum of NumberBypassed		2,420	122,886	60	58,774	14,971	199,111
Total Sum of Numbertrucked		0	0	0	0	0	0
Total Sum of SampleMorts		10	18	0	4	20	52
Total Sum of FacilityMorts		0	4	0	0	1	5
Total Sum of ResearchMorts		0	0	0	0	0	0
Total Sum of TotalProjectMorts		10	22	0	4	21	57

YTD Transportation Summary

Source: Fish Passage Center

Updated: 4/11/14 7:28 AM

TO: 04/11/14

		Species						
Site	Data	CH0	CH1	CO	SO	ST	Grand Total	
LGR	Sum of NumberCollected	2,400	124,370		70	15,350	53,740	195,930
	Sum of NumberBarged	0	0		0	0	0	0
	Sum of NumberBypassed	2,388	124,351		70	15,328	53,737	195,874
	Sum of NumberTrucked	0	0		0	0	0	0
	Sum of SampleMorts	12	16		0	21	3	52
	Sum of FacilityMorts	0	3		0	1	0	4
	Sum of ResearchMorts	0	0		0	0	0	0
	Sum of TotalProjectMorts	12	19		0	22	3	56
LGS	Sum of NumberCollected		2,799			464	4,559	7,822
	Sum of NumberBarged		0			0	0	0
	Sum of NumberBypassed		2,795			460	4,558	7,813
	Sum of NumberTrucked		0			0	0	0
	Sum of SampleMorts		4			4	1	9
	Sum of FacilityMorts		0			0	0	0
	Sum of ResearchMorts		0			0	0	0
	Sum of TotalProjectMorts		4			4	1	9
LMN	Sum of NumberCollected		162			18	271	451
	Sum of NumberBarged		0			0	0	0
	Sum of NumberBypassed		158			18	269	445
	Sum of NumberTrucked		0			0	0	0
	Sum of SampleMorts		0			0	0	0
	Sum of FacilityMorts		0			0	0	0
	Sum of ResearchMorts		0			0	0	0
	Sum of TotalProjectMorts		0			0	0	0
MCN	Sum of NumberCollected	70	281				730	1,081
	Sum of NumberBarged	0	0				0	0
	Sum of NumberBypassed	70	280				730	1,080
	Sum of NumberTrucked	0	0				0	0
	Sum of SampleMorts	0	0				0	0
	Sum of FacilityMorts	0	1				0	1
	Sum of ResearchMorts	0	0				0	0
	Sum of TotalProjectMorts	0	1				0	1
Total Sum of NumberCollected		2,470	127,612		70	15,832	59,300	205,284
Total Sum of NumberBarged		0	0		0	0	0	0
Total Sum of NumberBypassed		2,458	127,584		70	15,806	59,294	205,212
Total Sum of NumberTrucked		0	0		0	0	0	0
Total Sum of SampleMorts		12	20		0	25	4	61
Total Sum of FacilityMorts		0	4		0	1	0	5
Total Sum of ResearchMorts		0	0		0	0	0	0
Total Sum of TotalProjectMorts		12	24		0	26	4	66

Cumulative Adult Passage at Mainstem Dams Through: 04/10

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	04/10	2476	18	1194	9	1636	0	0	0	0	0	0	0	0	0	0	0	0	0
TDA	04/10	737	3	384	6	517	0	0	0	0	0	0	0	0	0	0	0	0	0
JDA	04/10	427	18	247	4	244	0	0	0	0	0	0	0	0	0	0	0	0	0
MCN	04/10	105	2	84	0	102	0	0	0	0	0	0	0	0	0	0	0	0	0
IHR	04/10	21	0	43	4	51	0	0	0	0	0	0	0	0	0	0	0	0	0
LMN	04/10	8	0	22	2	21	0	0	0	0	0	0	0	0	0	0	0	0	0
LGS	04/10	2	1	15	1	10	0	0	0	0	0	0	0	0	0	0	0	0	0
LGR	04/10	3	0	7	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
PRD		0	0	0	0	0	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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH		0	0	0	0	0	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	04/06	22	0	471	2	367	0	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	04/10	5	-2	0	0	0	0	3	0	0	3036	2244	2674	962	698	723	1	-1	0
TDA	04/10	0	0	0	0	0	0	0	0	0	115	327	1693	41	152	603	0	0	0
JDA	04/10	0	1	0	0	0	0	0	0	0	2507	400	3577	943	221	914	-1	0	0
MCN	04/10	0	0	1	0	1	0	0	0	0	215	920	4455	125	460	1340	2	0	0
IHR	04/10	0	0	0	0	0	0	0	0	0	869	2798	3327	368	1070	838	0	2	0
LMN	04/10	0	0	0	0	0	0	0	0	0	465	1340	4938	306	762	1890	0	0	0
LGS	04/10	0	0	0	0	0	0	0	0	0	522	1032	4859	349	520	1358	0	0	0
LGR	04/10	0	0	0	0	0	0	0	0	0	6337	5959	6560	2715	2405	1965	0	0	0
PRD		0	0	0	0	0	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		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RRH		0	0	0	0	0	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	04/06	9	0	2	0	0	0	0	0	0	3896	5060	5147	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.