



Fish Passage Center

Weekly Report #14 - 5

April 18, 2014

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Summary of Events

Water Supply

Precipitation throughout the Columbia Basin has varied between 46% and 81% of average at individual sub-basins over the first 17 days of April. Precipitation above The Dalles has been 63% of average over the first half of April. Over the 2014 water year, precipitation has ranged between 77% and 101% of average.

Table 1. Summary of April precipitation and cumulative October through April 17, 2014, precipitation with respect to average (1971–2000), at select locations within the Columbia and Snake River Basins.

| Location | Water Year 2014 April 1–17, 2014 | | Water Year 2014 October 1, 2013 to April 17, 2014 | |
|---|-------------------------------------|--------------|---|--------------|
| | Observed (inches) | % Average | Observed (inches) | % Average |
| | Columbia above Coulee | 1.10 | 74 | 21.9 |
| Snake River above Ice Harbor | 0.63 | 57 | 12.2 | 81 |
| Columbia above The Dalles | 0.75 | 63 | 15.3 | 83 |
| Kootenai | 1.03 | 69 | 23.4 | 97 |
| Clark Fork | 0.62 | 46 | 14.5 | 85 |
| Flathead | 1.33 | 81 | 23.0 | 101 |
| Pend Oreille River Basin above Waneta Dam | 0.94 | 64 | 19.0 | 90 |
| Salmon River Basin | 0.81 | 56 | 14.4 | 77 |
| Upper Snake Tributaries | 0.86 | 63 | 15.8 | 90 |
| Clearwater | 1.15 | 57 | 27.0 | 96 |
| Willamette River above Portland | 1.43 | 48 | 41.4 | 79 |

Snowpack within the Columbia Basin has been variable. Average snowpack in the Columbia River for basins above the Snake River confluence is 123% of average. For Snake River Basins the average snowpack is 98% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 49% of average.

Table 2 displays the April 17th ESP runoff volume forecasts for multiple reservoirs along with the April COE forecasts at Libby and Dworshak. The April 17th ESP forecast at The Dalles between January and July is 105,083 Kaf (104% of average).

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

| Location | April 17, 2014 5-day QPF ESP | |
|---|---------------------------------|------------------------|
| | % Average (1981–2010) | Runoff Volume (Kaf) |
| The Dalles (Jan–July) | 104 | 105083 |
| Grand Coulee (Jan–July) | 105 | 62458 |
| Libby Res. Inflow, MT (Apr–Aug) | 112 | 6607 6868* |
| Hungry Horse Res. Inflow, MT (Jan–July) | 111 | 2322 |
| Lower Granite Res. Inflow (Apr–July) | 107 | 21246 |
| Brownlee Res. Inflow (Apr–July) | 64 | 3527 |
| Dworshak Res. Inflow (Apr–July) | 130 | 3143 3111* |

* Denotes COE April Forecast

Grand Coulee Reservoir is at 1243.5 feet (4-17-14) and has drafted 4.9 feet over the last week. The April 30th FC Elevation at Grand Coulee is 1235.2 feet. Outflows at Grand Coulee have ranged between 119.9 and 146.0 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2400.1 feet (4-17-14) and has drafted 6.1 feet over the previous week. The April 30th FC Elevation at Libby is 2387.0 feet. Daily average outflows at Libby Dam have been 24.2–25.2 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3503.9 feet (4-17-14) 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 12.5–13.0 Kcfs over the last week.

Dworshak is currently at an elevation of 1486.9 feet (4-17-14) and has drafted 8.7 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. 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 2057.3 feet on April 17th, 2014, holding steady over the last week. Inflows to Brownlee Dam have ranged between 14.8 and 16.3 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 79.0 Kcfs over the last week and 74.5 Kcfs between April 3 and April 17, 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 236.3 Kcfs and Priest Rapids Dam flows averaged 141.8 Kcfs.

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.

Dworshak Dam continues to spill about 9 Kcfs as the project drafts to its flood control elevation. All of the lower Snake River projects have spilled at, or

above, the 2014 Fish Operations Plan (FOP) levels. Spill above the 2014 FOP was due to the distribution of excess generation spill.

| 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 |

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 |

Total dissolved gas measurements from planned spill did not exceed the waiver limits, except for a few days at Lower Monumental Dam earlier in the week. Spill was decreased from 29 Kcfs to 26 Kcfs to address the exceedances, but was increased to 29 Kcfs by week’s end. 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.

Monitoring for signs of gas bubble trauma (GBT) occurred at Lower Granite, Little Goose, Lower Monumental and McNary dams over the past week. There were no fish observed with signs of GBT.

Smolt Monitoring

Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, LGR) and all four traps (LEW, GRN, IMN, WTB). However, SMP sampling at LGS and LMN remains limited.

This week's samples at Bonneville Dam (BON) were dominated by subyearling Chinook juveniles. On the morning of April 11th, Spring Creek NFH released over 3.15 million subyearling fall Chinook tules into Bonneville pool. According to SMP personnel at BON, these subyearling Chinook tules began arriving at BON at about 0245 on Saturday, April 12th. Peak passage of these subyearling Chinook occurred on April 13th, with a passage index of nearly 323,000. Subyearling Chinook passage has decreased substantially since then, with yesterday's passage index of only about 3,000. The daily average passage index for subyearling Chinook at BON this week was just over 100,000 per day. Passage of yearling Chinook, coho, sockeye, and steelhead at BON all increased this week, when compared to last week. The daily average passage indices for these four species were, 3,000, 2,000, 425, and 800, respectively. So far, no Pacific lamprey ammocoetes have been sampled at BON. Overall, samples of Pacific lamprey macrophthalmia increased this week, when compared to last week. The daily average collection for Pacific lamprey macrophthalmia for this week was nearly 225 per day.

Yearling Chinook continued to dominate the collections at John Day (JDA) this week. In fact yearling Chinook passage increased this week, when compared to last week. This week's daily average passage index for yearling Chinook at JDA was about 1,830 per day. Steelhead passage also increased this week. This week's daily average passage index for steelhead at JDA was nearly 1,000 per day. Last week's daily average passage index for steelhead was about 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 6 per day, while that for Pacific macrophthalmia was nearly 200 per day.

Sampling at McNary Dam (MCN) is every-other-day for the entire 2014 SMP season. Yearling Chinook dominated the collections at MCN this week. This week's daily average passage index for yearling Chinook at MCN was nearly 6,000 per day. Steelhead were the second most dominant species of salmonid this week, with a daily average passage index of almost 2,500 per day. The daily average passage indices for subyearling Chinook, coho, and sockeye were 260, 150, and 625 per day, respectively. All subyearling Chinook collected at MCN this week were fry. Finally, only Pacific lamprey macrophthalmia have been collected so far this year. The daily average collection of Pacific macrophthalmia this week was 345 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 nearly 31,000 per day, which is an increase over last week's daily average passage index of about 14,500 per day. About 7% of this week's total yearling Chinook passage index were likely yearling fall Chinook. These yearling fall Chinook include hatchery yearling fall Chinook that were released from acclimation ponds above LGR in recent weeks or individuals that overwintered in the LGR pool and are now out-migrating. Steelhead passage continued to increase this week. The daily average passage index for steelhead this week was nearly 12,000 per day. Sockeye passage increased slightly this week, with a daily average passage index of about 1,800 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 slightly 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 (LGS) and Lower Monumental (LMN) dams is limited until transportation begins. This limited sampling will be every 5 days at LGS and every 3 days at LMN. 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 continued to dominate this week's samples at LGS and LMN. LGS did two 24-hour samples this week. The daily average passage indices from this week's samples at LGS were about 16,650 for yearling Chinook and nearly 9,400 for steelhead. Both sites also collected sockeye in this week's samples and LGS sampled a few subyearling Chinook fry. Finally, Pacific lamprey macrophthalmia were collected at both sites this week. To date, no Pacific lamprey ammocoetes have been collected at these two sites.

Sockeye and yearling Chinook passage at Rock Island Dam (RIS) increased this week. The daily average passage index for sockeye at RIS this week was just over 900 per day. Last week's daily average passage index for sockeye at RIS was about 300 per day. The daily average passage index for yearling Chinook at RIS this week was about 90 per day, compared to less than 10 per day last week. Steelhead and coho passage at RIS was still relatively low this week while passage of subyearling Chinook fry decreased this week. Finally, only one Pacific lamprey macrophthalmia was sampled at Rock Island 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 730 per day. This represents a slight decrease over last week's daily average collection of about 800 per day. Over the past week, 79%–95% of the daily yearling Chinook collection has been of known hatchery origin. Steelhead collections at GRN increased this week. This week's daily average collection for steelhead was about 50 per day.

The Salmon River Trap (WTB) 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 4,400 per day, which is an increase over last week's daily average collection of about 1,400 per day. Of the yearling Chinook that were collected this week, approximately

74% were of known hatchery origin. Steelhead collections also increased this week, when compared to last week. This week's daily average collection for steelhead was about 170 per day. Last week's daily average collection was only about 10 per day. No juvenile lamprey were sampled this week.

The Snake River Trap (LEW) is located at river kilometer 225 and operated by Idaho Department of Fish and Game. Collections of yearling Chinook and steelhead increased this week, when compared to previous weeks. The daily average collections for yearling Chinook and steelhead this week were about 190 and 100 per day, respectively. As with LGR, a small portion of the yearling Chinook (8%) 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 16th. The average daily collection for yearling Chinook this week was about 1,150 per day, which is a decrease from last week's average collection of about 6,300 per day. Steelhead collections this week were very similar to last week's collections. The daily average collection for steelhead this week was about 135 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 326,000 yearling fall Chinook were scheduled for release above Lower Granite Dam this week. Of these, about 50% were scheduled for release from Pittsburg Landing Acclimation Pond in

the Snake River and 50% were scheduled for release from the Big Canyon Creek Acclimation Ponds on the Clearwater River. Over half of these yearling fall Chinook are unclipped but tagged with coded-wire tags. In addition, nearly 670,000 yearling spring Chinook juveniles were scheduled for release into this zone this week. Of these, about 63% were scheduled to be released into the Imnaha River. However, collections from the Imnaha Trap over the past week indicate that this release may have occurred earlier than originally scheduled. The remaining 37% of the yearling spring Chinook that were scheduled for release this week were scheduled to be released into the Grande Ronde River. Finally, nearly 3.6 million summer steelhead were scheduled for release to this zone this week. Of these, nearly 74% were scheduled to be released into the Clearwater River and its tributaries. The remaining 26% were scheduled for release throughout this zone, including: the Salmon River (19%), the Pahsimeroi River (4%), and directly from Lyons Ferry Hatchery below Little Goose Dam (3%).

Only one release of yearling spring Chinook juveniles is scheduled to take place over the next 2 weeks in this zone. On or around April 29th, about 193,000 yearling spring Chinook are scheduled to be released into Yankee Fork of the Salmon River. These yearling spring Chinook are 100% unclipped but are tagged with coded-wire tags. The only other releases that are scheduled for this zone over the next 2 weeks are steelhead. In all, about 367,500 summer steelhead are scheduled for release in this zone over the next 2 weeks. These releases are scheduled to take place throughout this zone, including the Imnaha River (59%), the Tucannon River (25%), and the Salmon River (17%).

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Just over 1.0 million yearling spring Chinook were scheduled to be released into this zone this week. Of these, about 79% were scheduled to be released into the Methow River while 21% were scheduled to be released into the Wenatchee River. In addition, just over 1.0 million yearling summer Chinook were scheduled to be released in this zone this week. These summer Chinook juveniles were scheduled to be released

throughout this zone, including: the Entiat River (38%), directly to the mid-Columbia at Wells Hatchery (31%), the Methow River (20%), and the Okanogan River (11%). Releases from the Yakama Tribal program to reintroduce coho to the Wenatchee, Methow, and Yakima rivers continued this week. In all, just over 1.51 million coho were scheduled to be released this week. Of the coho that were scheduled for release this week, about 43% were scheduled to be released into the Wenatchee River while 57% were scheduled to be released into the Yakima River. Many of these releases are volitional and are expected to continue through mid-June. Finally, four releases of summer steelhead were scheduled for this zone this week. In all, these four releases were expected to total about 306,500 summer steelhead juveniles. Of these, approximately 49% were scheduled to be released into the Methow River, 35% were scheduled to be released into the Walla Walla River, and 16% were scheduled to be released into the Touchet River.

Four releases of subyearling fall Chinook juveniles are scheduled for this zone over the next 2 weeks. Three of these releases are Yakama Tribal releases to the Yakima River that are expected to total nearly 1.8 million fall Chinook juveniles. The fourth release is of about 4,700 fall Chinook juveniles near Pasco, Washington, and is part of the WDFW Cooperative Program. In addition, a release of about 1.2 million yearling spring Chinook from Leavenworth NFH to the Wenatchee River is scheduled to occur on or around April 21st. Approximately 540,000 yearling summer Chinook are scheduled to be released into the Wenatchee River over the next 2 weeks.

The Yakama Tribal Program to reintroduce coho to the Wenatchee, Methow, and Yakima rivers is scheduled to release about 930,000 coho juveniles over the next 2 weeks. The releases that are scheduled to begin over the next 2 weeks are scheduled to occur in the Methow (57%) and Wenatchee (43%) rivers. As with many of the releases that have already started, many of these future releases are volitional and are expected to run for several weeks. Finally, approximately 310,000 summer steelhead are scheduled for release into this zone over the next 2 weeks. Of these, approximately 74% are scheduled to be released into the Wenatchee River and 26% are scheduled to be released into the Okanogan River.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. There were several releases of yearling spring Chinook scheduled for this zone this week. In all, these releases were expected to total nearly 2.15 million spring Chinook juveniles. The majority of these spring Chinook juveniles were scheduled to be released into the Wind (53%) and Little White Salmon (46%) rivers. A very small portion (1%) was scheduled to be released into the Deschutes River. The only other releases that were scheduled for this zone this week were of summer steelhead to the Deschutes River. In all, 13,500 steelhead juveniles were scheduled to be released into the Deschutes River this week.

Two releases of coho are scheduled for this zone over the next 2 weeks. In all, these two releases are expected to total nearly 1.7 million coho juveniles, of which 55% are scheduled for release into the Klickitat River and 45% are scheduled for release into the Umatilla River. Finally, nearly 292,000 steelhead juveniles are scheduled for release to this zone over the next 2 weeks. Of these, about 87% are summer steelhead and 13% are winter steelhead. The summer steelhead releases are scheduled to take place on the Umatilla and Klickitat rivers. All of the winter steelhead scheduled for release over the next 2 weeks are scheduled to be released into Hood River.

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 4/17/14. The 2014 adult spring Chinook count at Bonneville Dam is 10,620, which is about 5.3 times greater than the 2013 count of 1,994 and 1.3 times greater than the 10-year average count of 8,377. The 2014 Bonneville Dam adult steelhead count of 3,348

is about 1.4 times greater than the 2013 count of 2,393 and 1.1 times greater than the 10-year average count of 2,991.

At Willamette Falls 753 adult spring Chinook have been counted so far this season, and the 2014 count for steelhead was 4,707 as of April 15th.

A total of 37 spring chinook have been counted at Lower Granite Dam as of April 17th. This year's Lower Granite steelhead count of 6,716 is about the same as the 2013 count of 6,649, while being 89.5% of the 10-year average count of 7,504.

Counting at Priest Rapids Dam began on April 15th. In the first 2 full days of counting 7 spring Chinook and 17 steelhead were observed.

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) 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. Currently, Grant County PUD is attempting to define why and how this crack formed at the project.

The drawdown of Wanapum pool has 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 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. On April 15, 2014, the weir and chute retrofit was operational at the left bank fishway. Visual observations of the retrofit appeared promising as several adult fish did pass and

exit the structure safely into the forebay of Wanapum Dam. A weir and chute is also being constructed on the right bank fishway at Wanapum and is expected to be fully operational early next week. Although initial observations appear promising, some modifications to the structures may still be needed, and it is 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. Currently, the first two hundred hatchery Chinook through the trap will 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. All other fish at the left bank fishway at Rapids Dam will be trapped and hauled to a location above Wanapum 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 had to construct extensions or denils at several ladder entrances. As of April 16th, 2014, Chelan County PUD had one denil in place at the right bank fishway and another that would be completed in a short amount of time at another right bank entrance. A denil extension is also planned to be in place at the left bank fishway in June.

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 will now be discharging approximately one quarter of its ordinary level (approximately 5 Kcfs). The impact of this lower discharge on juvenile fish survival will need to be assessed.

Hatchery Releases Last Two Weeks

| Hatchery Release Summary | | | | | | | | | |
|--|---------------------------|---------|------|-------|------------------|----------|----------|--|-----------------------|
| From: | 4/4/2014 | | to | | 04/17/14 | | | | |
| Agency | Hatchery | Species | Race | MigYr | NumRel | RelStart | RelEnd | RelSite | RelRiver |
| Colville Tribe | Chief Joseph Hatchery | CH1 | SU | 2014 | 44,000 | 04-01-14 | 04-15-14 | Omak Creek | Okanogan River |
| Colville Tribe Total | | | | | 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 | S Fk Clearwater River |
| Idaho Dept. of Fish and Game | Clearwater Hatchery | ST | SU | 2014 | 220,000 | 04-11-14 | 04-11-14 | ClearH20 R) | 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 | 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 | 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 | 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 | 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 Total | | | | | 6,614,483 | | | | |
| 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 | Lookingglass Hatchery | CH1 | SP | 2014 | 233,061 | 03-21-14 | 04-22-14 | Lostine Accim Pond Big Canyon (Clearwater River) | Wallowa River |
| Nez Perce Tribe | Lyons Ferry Hatchery | CH1 | FA | 2014 | 162,000 | 04-17-14 | 04-17-14 | 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 Hatchery | Snake River |
| Nez Perce Tribe | Nez Perce Tribal Hatchery | CH1 | SP | 2014 | 269,000 | 04-01-14 | 04-11-14 | Hatchery | Clearwater River M F |
| Nez Perce Tribe Total | | | | | 1,331,614 | | | | |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2014 | 160,000 | 04-11-14 | 04-11-14 | Big Canyon Acclim.Pd (Grande Ronde) | Grande Ronde River |
| 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 | 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 | Round Butte Hatchery | ST | SU | 2014 | 162,000 | 04-08-14 | 04-08-14 | Deschutes River | Deschutes 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 | Wizard Falls Hatchery | CH1 | SP | 2014 | 7,500 | 04-15-14 | 04-15-14 | Crooked River (OR) | Deschutes River |
| Oregon Dept. of Fish and Wildlife Total | | | | | 1,385,000 | | | | |

Hatchery Releases Last Two Weeks

| | | | | | | | | | |
|--|--------------------------|-----|----|------|-------------------|----------|----------|--|---|
| 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 | 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 | 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 | Dworshak Hatchery | 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 Little White Salmon Hatchery | Salmon River (ID) 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 | Spring Creek Hatchery | L Col R (D/s McN Dam) Little White Salmon River |
| U.S. Fish and Wildlife Service | Spring Creek NFH | CH0 | FA | 2014 | 6,154,518 | 04-11-14 | 04-11-14 | Willard Hatchery | 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 | | | | | 15,051,799 | | | | |
| 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 | 169,078 | 04-09-14 | 04-09-14 | Imeques Acclim Pond | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | CH1 | SP | 2014 | 224,459 | 04-09-14 | 04-09-14 | Imeques Acclim Pond | Umatilla River |
| Umatilla Tribe Total | | | | | 651,537 | | | | |
| 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 | Chiwawa Hatchery | CH1 | SP | 2014 | 222,300 | 04-15-14 | 04-25-14 | Chiwawa Hatchery | Wenatchee 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 | 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 | 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 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 | Similkameen Acclim Pd | Mid-Columbia 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 | 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 | 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 | | | | | 3,213,792 | | | | |

Hatchery Releases Last Two Weeks

| | | | | | | | | | |
|---------------------------|----------------------|-----|----|------|-------------------|----------|----------|------------------------|--------------|
| 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 | Prosser Acclim. Pond | CO | UN | 2014 | 43,408 | 04-15-14 | 06-15-14 | Yakama River | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2014 | 108,570 | 04-15-14 | 06-15-14 | Stiles Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2014 | 221,567 | 04-15-14 | 06-15-14 | Prosser Acclim Pond | Yakima River |
| Yakama Tribe Total | | | | | 1,671,918 | | | | |
| Grand Total | | | | | 30,039,143 | | | | |

Hatchery Releases Next Two Weeks

| Hatchery Release Summary | | | | | | | | | |
|--|--------------------------|---------|------|-------|------------------|----------|----------|---------------------------|-----------------------|
| From: | 4/18/2014 | | to | | 5/1/2014 | | | | |
| Agency | Hatchery | Species | Race | MigYr | NumRel | RelStart | RelEnd | RelSite | RelRiver |
| 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 | 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 | | | | | 3,336,467 | | | | |
| 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 | Umatilla Hatchery | ST | SU | 2014 | 54,800 | 04-24-14 | 04-24-14 | Meacham Creek | Umatilla River |
| Oregon Dept. of Fish and Wildlife Total | | | | | 269,800 | | | | |
| U.S. Fish and Wildlife Service | Dworshak NFH | ST | SU | 2014 | 418,000 | 04-14-14 | 04-18-14 | Redhouse (SFk ClearH20 R) | 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 | 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 | 04-21-14 | 04-21-14 | 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 | | | | | 4,756,050 | | | | |
| 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 |
| 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 |

Hatchery Releases Next Two Weeks

| | | | | | | | | | |
|--|--------------------------|-----|----|------|-------------------|----------|----------|----------------------------|--------------------|
| 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 |
| 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 | | | | | 18,491,802 | | | | |

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 |
| 04/04/2014 | 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 |
| 04/11/2014 | 119.9 | 0.0 | 119.7 | 0.0 | 120.4 | 8.4 | 110.4 | 0.0 | 116.3 | 21.7 | 124.9 | 3.7 | 132.3 | 0.0 |
| 04/12/2014 | 123.2 | 0.0 | 118.9 | 0.0 | 120.1 | 8.5 | 114.2 | 0.0 | 117.3 | 24.3 | 117.1 | 0.0 | 121.2 | 0.0 |
| 04/13/2014 | 131.4 | 0.0 | 133.7 | 0.0 | 128.4 | 9.1 | 116.6 | 0.0 | 120.6 | 21.6 | 118.2 | 14.2 | 118.3 | 1.1 |
| 04/14/2014 | 128.7 | 0.0 | 131.0 | 0.0 | 134.1 | 10.0 | 129.7 | 0.0 | 131.8 | 16.9 | 138.2 | 28.6 | 145.3 | 4.0 |
| 04/15/2014 | 141.3 | 0.0 | 139.2 | 0.0 | 140.6 | 10.3 | 136.6 | 0.0 | 132.7 | 21.5 | 143.4 | 34.6 | 150.2 | 46.2 |
| 04/16/2014 | 146.0 | 0.0 | 147.0 | 9.3 | 149.9 | 10.0 | 145.3 | 0.0 | 150.1 | 23.1 | 148.3 | 39.8 | 158.6 | 37.5 |
| 04/17/2014 | 145.5 | 0.0 | 146.5 | 16.8 | 150.7 | 10.0 | 145.7 | 0.0 | 156.9 | 40.6 | 153.8 | 42.8 | 166.8 | 30.6 |

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 |
| 04/04/2014 | 19.7 | 8.5 | 15.8 | 21.3 | 66.6 | 20.7 | 67.3 | 20.1 | 69.7 | 27.9 | 70.6 | 51.9 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 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 | | |
| 04/11/2014 | 19.8 | 8.9 | 15.6 | 19.1 | 81.7 | 20.6 | 80.7 | 24.0 | 80.1 | 29.4 | 84.5 | 57.4 | | |
| 04/12/2014 | 19.8 | 8.9 | 15.8 | 18.5 | 84.3 | 22.2 | 84.7 | 26.6 | 85.9 | 27.0 | 86.9 | 58.1 | | |
| 04/13/2014 | 20.0 | 8.9 | 16.2 | 18.4 | 84.2 | 20.5 | 83.5 | 25.1 | 84.9 | 26.0 | 88.4 | 58.3 | | |
| 04/14/2014 | 20.0 | 8.9 | 16.3 | 19.5 | 83.0 | 21.6 | 83.5 | 25.7 | 83.4 | 26.8 | 85.8 | 58.2 | | |
| 04/15/2014 | 20.0 | 8.9 | 16.1 | 10.9 | 78.7 | 31.3 | 79.1 | 31.1 | 79.6 | 28.0 | 83.5 | 67.2 | | |
| 04/16/2014 | 19.9 | 9.0 | 15.5 | 12.8 | 69.6 | 20.6 | 70.3 | 21.2 | 70.0 | 28.0 | 71.7 | 53.7 | | |
| 04/17/2014 | 19.9 | 9.0 | 14.8 | 19.0 | 71.4 | 21.6 | 72.4 | 22.5 | 72.1 | 28.6 | 74.5 | 55.7 | | |

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 | | |
| 04/04/2014 | 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 |
| 04/11/2014 | 241.9 | 97.1 | 237.7 | 71.3 | 221.6 | 88.6 | 244.8 | 100.4 | 32.7 | 99.3 |
| 04/12/2014 | 222.2 | 88.9 | 226.4 | 68.0 | 213.8 | 85.5 | 236.7 | 100.4 | 22.6 | 101.3 |
| 04/13/2014 | 235.9 | 94.2 | 240.0 | 72.1 | 228.3 | 91.0 | 246.5 | 100.4 | 32.7 | 101.0 |
| 04/14/2014 | 228.9 | 95.9 | 225.7 | 67.9 | 214.7 | 85.9 | 234.7 | 100.4 | 33.1 | 88.8 |
| 04/15/2014 | 231.9 | 124.2 | 231.9 | 78.8 | 212.9 | 95.5 | 225.3 | 101.9 | 23.1 | 87.9 |
| 04/16/2014 | 239.7 | 115.8 | 251.0 | 75.2 | 237.7 | 95.1 | 268.3 | 100.6 | 66.3 | 89.0 |
| 04/17/2014 | 253.4 | 127.5 | 249.7 | 76.5 | 237.0 | 96.6 | 261.5 | 100.9 | 60.1 | 88.1 |

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 |
| | 04/17/14 | 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 |
| | 04/11/14 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/16/14 | 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 |
| | 04/10/14 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| McNary Dam | | | | | | | | | | | |
| | 04/14/14 | Chinook + Steelhead | 77 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| 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> |
| | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr |
| 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 | 24 | --- | --- | --- | 0 | 105.9 | 106.2 | 106.6 | 24 | 102.7 | 102.9 | 103.1 | 24 | --- | --- | --- | 0 |
| 4/11 | 113.5 | 113.6 | 113.7 | 24 | --- | --- | --- | 0 | 107.3 | 107.8 | 108.3 | 24 | 104.1 | 104.9 | 105.2 | 24 | --- | --- | --- | 0 |
| 4/12 | 113.4 | 113.5 | 113.5 | 24 | --- | --- | --- | 0 | 107.1 | 107.3 | 107.4 | 24 | 104.5 | 104.8 | 105.2 | 24 | --- | --- | --- | 0 |
| 4/13 | 113.2 | 113.3 | 113.5 | 24 | --- | --- | --- | 0 | 106.2 | 106.3 | 106.4 | 24 | 103.9 | 104.2 | 104.3 | 24 | --- | --- | --- | 0 |
| 4/14 | 114.1 | 114.6 | 114.7 | 24 | --- | --- | --- | 0 | 107.3 | 108.2 | 108.4 | 24 | 104.7 | 105.4 | 105.7 | 24 | --- | --- | --- | 0 |
| 4/15 | 114.6 | 114.7 | 114.9 | 24 | --- | --- | --- | 0 | 107.8 | 107.9 | 108.1 | 24 | 105.7 | 105.8 | 106.0 | 24 | --- | --- | --- | 0 |
| 4/16 | 114.7 | 114.8 | 115.2 | 24 | --- | --- | --- | 0 | 107.9 | 108.2 | 108.3 | 24 | 105.6 | 105.9 | 106.1 | 24 | 106.3 | 106.4 | 106.6 | 15 |
| 4/17 | 114.8 | 114.9 | 115.1 | 23 | --- | --- | --- | 0 | 108.7 | 109.0 | 109.2 | 23 | 106.3 | 106.6 | 106.7 | 23 | 106.6 | 106.8 | 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> |
| | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr |
| 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 | 105.6 | 106.3 | 106.9 | 24 | 105.7 | 106.3 | 107.1 | 24 |
| 4/11 | --- | --- | --- | 0 | 106.0 | 106.4 | 106.8 | 24 | 104.7 | 107.5 | 108.6 | 24 | 107.2 | 107.4 | 107.6 | 24 | 107.1 | 107.4 | 107.7 | 24 |
| 4/12 | --- | --- | --- | 0 | 105.7 | 106.0 | 106.4 | 20 | 106.2 | 107.4 | 108.3 | 20 | 107.0 | 107.2 | 107.4 | 24 | 107.1 | 107.3 | 107.4 | 24 |
| 4/13 | --- | --- | --- | 0 | 105.0 | 105.4 | 105.8 | 23 | 105.6 | 107.5 | 108.2 | 23 | 106.0 | 106.3 | 106.4 | 24 | 106.2 | 106.6 | 107.1 | 24 |
| 4/14 | --- | --- | --- | 0 | 106.1 | 106.6 | 106.8 | 23 | 105.7 | 108.9 | 109.7 | 23 | 107.2 | 107.9 | 108.4 | 24 | 107.4 | 107.9 | 108.4 | 24 |
| 4/15 | --- | --- | --- | 0 | 106.2 | 106.4 | 106.6 | 21 | 106.0 | 109.1 | 110.6 | 21 | 108.1 | 108.4 | 108.6 | 24 | 108.0 | 108.7 | 109.0 | 24 |
| 4/16 | --- | --- | --- | 0 | 106.2 | 106.3 | 106.5 | 22 | 106.9 | 109.0 | 109.3 | 22 | 108.2 | 108.5 | 108.8 | 24 | 108.5 | 108.7 | 108.9 | 24 |
| 4/17 | --- | --- | --- | 0 | 106.8 | 106.9 | 107.2 | 18 | 107.0 | 109.4 | 110.0 | 18 | 108.8 | 109.1 | 109.3 | 23 | 108.9 | 109.1 | 109.4 | 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> |
| | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr | Avg | Avg | High | hr |
| 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 | 104.3 | 104.9 | 105.4 | 24 | 109.4 | 110.5 | 111.3 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/11 | 105.9 | 106.4 | 106.6 | 24 | 110.7 | 112.1 | 113.2 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/12 | 106.0 | 106.3 | 106.6 | 24 | 110.8 | 111.8 | 112.1 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/13 | 105.0 | 105.7 | 106.0 | 24 | 108.4 | 109.4 | 111.1 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/14 | 106.2 | 106.9 | 107.4 | 24 | 109.0 | 111.5 | 113.3 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/15 | 106.8 | 107.1 | 107.4 | 24 | 112.2 | 113.3 | 113.7 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/16 | 107.1 | 107.2 | 107.4 | 24 | 111.3 | 112.2 | 113.4 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 4/17 | 107.5 | 108.0 | 108.1 | 23 | 112.4 | 113.9 | 114.9 | 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 | | | | Clwrtr-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 | |
| 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 | 24 | 106.8 | 107.5 | 107.8 | 24 | 101.8 | 102.8 | 103.5 | 24 |
| 4/11 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.6 | 117.1 | 117.5 | 24 | 107.6 | 108.4 | 108.9 | 24 | 102.4 | 103.3 | 104.3 | 24 |
| 4/12 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.6 | 116.8 | 117.1 | 24 | 107.3 | 107.8 | 108.1 | 24 | 102.0 | 102.5 | 103.3 | 24 |
| 4/13 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.0 | 116.2 | 116.4 | 24 | 107.0 | 107.7 | 108.2 | 24 | 101.9 | 102.8 | 103.5 | 24 |
| 4/14 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.2 | 116.6 | 116.9 | 24 | 107.8 | 108.8 | 109.2 | 24 | 102.8 | 103.9 | 104.4 | 24 |
| 4/15 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.5 | 116.7 | 116.8 | 24 | 107.7 | 108.0 | 108.3 | 24 | 102.5 | 102.9 | 103.5 | 24 |
| 4/16 | --- | --- | --- | 0 | --- | --- | --- | 0 | 116.6 | 116.7 | 117.2 | 17 | 108.0 | 108.8 | 109.0 | 24 | 102.2 | 102.9 | 103.7 | 24 |
| 4/17 | --- | --- | --- | 0 | --- | --- | --- | 0 | 117.5 | 117.6 | 117.7 | 14 | 108.8 | 109.2 | 109.4 | 23 | 102.5 | 102.9 | 103.3 | 23 |

Total Dissolved Gas Saturation Data at Snake River Sites

| Date | Clwrtr-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 | |
| 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 | 24 | 104.8 | 105.0 | 105.3 | 24 | 111.3 | 111.5 | 111.7 | 24 | 111.7 | 112.2 | 112.5 | 24 | 111.8 | 112.1 | 112.2 | 24 |
| 4/11 | 105.5 | 106.6 | 107.3 | 24 | 105.1 | 105.3 | 105.5 | 24 | 111.1 | 111.3 | 111.4 | 24 | 112.3 | 112.6 | 112.7 | 24 | 111.5 | 111.6 | 111.9 | 24 |
| 4/12 | 105.3 | 105.9 | 106.4 | 24 | 104.7 | 104.9 | 105.0 | 24 | 111.4 | 112.2 | 117.2 | 24 | 112.0 | 112.3 | 113.0 | 24 | 112.1 | 112.6 | 115.4 | 24 |
| 4/13 | 103.5 | 104.3 | 105.1 | 24 | 103.5 | 103.7 | 104.2 | 24 | 110.8 | 111.0 | 111.2 | 24 | 109.9 | 110.2 | 110.9 | 24 | 111.1 | 111.6 | 113.1 | 24 |
| 4/14 | 104.2 | 105.9 | 106.7 | 24 | 103.8 | 104.4 | 104.7 | 24 | 111.0 | 111.8 | 116.2 | 24 | 110.0 | 110.6 | 111.8 | 24 | 111.4 | 112.2 | 113.5 | 24 |
| 4/15 | 104.6 | 105.0 | 105.4 | 24 | 104.4 | 104.8 | 105.0 | 24 | 114.5 | 117.2 | 117.5 | 24 | 110.3 | 110.5 | 110.6 | 24 | 113.5 | 115.3 | 115.8 | 24 |
| 4/16 | 103.7 | 104.7 | 105.4 | 24 | 104.5 | 104.8 | 105.1 | 24 | 111.7 | 111.9 | 112.1 | 24 | 109.8 | 110.0 | 110.1 | 24 | 110.7 | 110.8 | 111.0 | 24 |
| 4/17 | 105.0 | 105.6 | 105.9 | 23 | 105.0 | 105.2 | 105.3 | 23 | 112.3 | 112.7 | 116.0 | 23 | 110.0 | 110.2 | 111.1 | 23 | 111.0 | 111.4 | 114.3 | 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 | |
| 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 | 24 | 119.4 | 120.1 | 120.8 | 24 | 114.5 | 114.8 | 115.7 | 24 | 116.4 | 116.9 | 117.6 | 24 | --- | --- | --- | 0 |
| 4/11 | 112.4 | 112.8 | 113.1 | 24 | 119.6 | 120.5 | 120.8 | 24 | 115.8 | 116.1 | 116.3 | 24 | 116.6 | 116.9 | 117.5 | 24 | --- | --- | --- | 0 |
| 4/12 | 113.1 | 113.3 | 113.6 | 24 | 118.7 | 118.9 | 119.2 | 24 | 115.6 | 115.8 | 116.0 | 24 | 116.2 | 116.4 | 116.6 | 24 | --- | --- | --- | 0 |
| 4/13 | 111.1 | 111.5 | 112.4 | 24 | 118.0 | 118.2 | 118.5 | 24 | 113.9 | 114.1 | 114.7 | 24 | 116.0 | 116.4 | 116.6 | 24 | --- | --- | --- | 0 |
| 4/14 | 112.4 | 113.0 | 113.3 | 24 | 118.6 | 118.9 | 119.1 | 24 | 114.0 | 114.4 | 114.8 | 24 | 115.8 | 116.1 | 116.4 | 24 | --- | --- | --- | 0 |
| 4/15 | 112.5 | 112.9 | 113.3 | 24 | 118.8 | 119.0 | 119.1 | 24 | 114.4 | 114.6 | 114.9 | 24 | 116.1 | 116.6 | 117.0 | 24 | --- | --- | --- | 0 |
| 4/16 | 111.9 | 112.1 | 112.4 | 24 | 118.6 | 118.9 | 119.1 | 24 | 113.7 | 113.9 | 114.1 | 24 | 115.5 | 115.9 | 116.1 | 24 | --- | --- | --- | 0 |
| 4/17 | 113.0 | 113.4 | 114.0 | 23 | 119.1 | 119.5 | 120.0 | 23 | 114.2 | 114.3 | 114.5 | 23 | 115.8 | 116.1 | 116.3 | 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> | |
| 4/4 | 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 | 24 | 114.1 | 114.3 | 114.6 | 24 | 107.7 | 108.2 | 108.7 | 24 | 115.6 | 117.2 | 118.9 | 24 | 107.3 | 108.8 | 110.6 | 24 |
| 4/11 | 111.5 | 111.5 | 111.7 | 24 | 114.2 | 114.5 | 114.7 | 24 | 109.8 | 110.5 | 110.9 | 24 | 113.4 | 113.7 | 114.7 | 24 | 110.4 | 110.7 | 111.1 | 24 |
| 4/12 | 111.0 | 111.1 | 111.2 | 24 | 114.0 | 114.3 | 114.5 | 24 | 110.6 | 110.8 | 111.0 | 24 | 113.6 | 114.1 | 114.8 | 24 | 110.7 | 111.4 | 112.0 | 24 |
| 4/13 | 109.7 | 110.1 | 110.4 | 24 | 113.7 | 114.2 | 114.5 | 24 | 110.3 | 110.8 | 111.2 | 24 | 113.5 | 114.1 | 114.7 | 24 | 111.0 | 111.3 | 111.6 | 24 |
| 4/14 | 109.9 | 110.2 | 110.6 | 24 | 113.6 | 113.9 | 114.1 | 24 | 112.3 | 113.2 | 113.8 | 24 | 113.9 | 114.4 | 115.3 | 24 | 112.1 | 112.5 | 113.0 | 24 |
| 4/15 | 109.8 | 110.1 | 110.4 | 24 | 115.3 | 116.4 | 117.1 | 24 | 112.1 | 112.6 | 113.1 | 24 | 114.4 | 115.2 | 115.7 | 24 | 110.7 | 111.3 | 112.4 | 24 |
| 4/16 | 108.9 | 109.0 | 109.0 | 24 | 114.9 | 115.5 | 116.4 | 24 | 110.8 | 110.9 | 111.0 | 24 | 113.8 | 114.3 | 115.0 | 24 | 111.1 | 111.6 | 112.0 | 24 |
| 4/17 | 110.2 | 110.8 | 111.3 | 23 | 115.9 | 116.4 | 117.2 | 23 | 110.8 | 111.0 | 111.1 | 23 | 114.0 | 114.5 | 116.9 | 23 | 111.9 | 112.0 | 112.2 | 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> | |
| 4/4 | 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 | 113.3 | 114.7 | 116.1 | 24 | 106.3 | 106.5 | 106.7 | 24 | 111.4 | 112.1 | 112.5 | 24 | 108.8 | 111.0 | 112.3 | 24 | 117.5 | 117.7 | 117.8 | 24 |
| 4/11 | 116.0 | 116.2 | 116.6 | 24 | 108.9 | 111.0 | 111.2 | 24 | 113.9 | 114.5 | 114.8 | 24 | 110.6 | 111.5 | 112.4 | 24 | 117.5 | 117.8 | 118.0 | 24 |
| 4/12 | 116.2 | 116.4 | 116.6 | 24 | 112.4 | 113.0 | 113.3 | 24 | 115.7 | 116.3 | 116.8 | 24 | 112.7 | 114.2 | 115.2 | 24 | 117.6 | 117.7 | 117.9 | 24 |
| 4/13 | 116.5 | 116.9 | 117.1 | 24 | 112.7 | 113.2 | 113.5 | 24 | 115.5 | 115.7 | 115.8 | 24 | 112.8 | 113.5 | 114.0 | 24 | 117.7 | 117.9 | 118.0 | 24 |
| 4/14 | 117.0 | 117.5 | 117.9 | 24 | 113.9 | 114.7 | 115.5 | 24 | 115.9 | 116.3 | 116.9 | 24 | 112.3 | 113.6 | 114.7 | 24 | 117.7 | 117.8 | 118.0 | 24 |
| 4/15 | 117.4 | 118.6 | 121.4 | 24 | 112.7 | 113.1 | 114.0 | 24 | 115.9 | 116.2 | 116.8 | 24 | 113.5 | 114.6 | 115.3 | 24 | 117.5 | 117.6 | 118.8 | 24 |
| 4/16 | 116.4 | 116.7 | 116.8 | 24 | 113.1 | 114.5 | 115.4 | 24 | 115.0 | 115.6 | 116.1 | 24 | 113.8 | 114.2 | 114.7 | 24 | 118.2 | 118.5 | 118.7 | 24 |
| 4/17 | 117.6 | 118.3 | 121.2 | 23 | 114.8 | 115.1 | 115.2 | 23 | 116.0 | 116.2 | 116.5 | 23 | 114.4 | 114.8 | 115.3 | 23 | 118.5 | 118.7 | 120.6 | 23 |

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/18/2014 7:18

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 | | | | | | | | | | | |
|---------------------------|---------------|---------------|---------------|--------------|----------------|---------------|------------|------------|---------------|---------------|---------------|
| | WTB | IMN | GRN | LEW | LGR | LGS | LMN | RIS | MCN | JDA | BO2 |
| Date | (Coll) | (Coll) | (Coll) | (Coll) | (INDEX) | (INDEX) | (INDEX) | (INDEX) | (INDEX) | (INDEX) | (INDEX) |
| 04/04/2014 * | 193 | 3,159 | 263 | 11 | 10,261 | --- | 12 | 4 | --- | 745 | 488 |
| 04/05/2014 * | 438 | 24,147 | 367 | 9 | 11,659 | --- | --- | 8 | --- | 685 | 581 |
| 04/06/2014 * | 554 | 3,028 | 455 | 31 | 20,165 | --- | --- | 0 | --- | 915 | 811 |
| 04/07/2014 * | 1,431 | 4,253 | 2,089 | 3 | 15,362 | 3,510 | 36 | 10 | 136 | 860 | 1,341 |
| 04/08/2014 * | 2,088 | 5,868 | 570 | 26 | 16,998 | --- | --- | 11 | --- | 865 | 859 |
| 04/09/2014 * | 1,536 | 1,684 | 1,120 | 22 | 12,173 | --- | --- | 13 | 291 | 610 | 1,268 |
| 04/10/2014 * | 3,601 | 2,210 | 761 | 3 | 14,693 | --- | 151 | 14 | --- | 849 | 1,739 |
| 04/11/2014 * | 3,925 | 1,493 | 669 | 34 | 17,048 | --- | --- | 41 | 616 | 974 | 1,583 |
| 04/12/2014 * | 5,806 | 866 | 572 | 45 | 13,115 | 9,989 | --- | 136 | --- | 830 | 2,972 |
| 04/13/2014 * | 5,879 | 1,676 | --- | 85 | 27,712 | --- | 217 | 108 | 2,144 | 1,375 | 4,854 |
| 04/14/2014 * | 7,195 | 824 | 870 | 346 | 22,312 | --- | --- | 143 | --- | 1,691 | 2,420 |
| 04/15/2014 * | 4,881 | 1,015 | 1,083 | 466 | 36,145 | --- | --- | 64 | 8,715 | 1,588 | 2,540 |
| 04/16/2014 * | 1,514 | 1,001 | 893 | 106 | 49,136 | --- | 133 | 86 | --- | 2,701 | 2,856 |
| 04/17/2014 * | --- | --- | 272 | --- | 51,094 | 23,292 | --- | 47 | 12,257 | 3,627 | 4,062 |
| 04/18/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 39,041 | 51,224 | 9,984 | 1,187 | 317,873 | 36,791 | 549 | 685 | 24,159 | 18,315 | 28,374 |
| # Days: | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 | 14 |
| Average: | 3,003 | 3,940 | 768 | 91 | 22,705 | 12,264 | 110 | 49 | 4,027 | 1,308 | 2,027 |
| YTD | 58,198 | 54,423 | 14,773 | 1,448 | 372,533 | 37,163 | 584 | 716 | 24,159 | 20,002 | 44,546 |

| 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) |
| 04/04/2014 * | 0 | 0 | 0 | 1 | 74 | --- | 0 | 19 | --- | 0 | 252 |
| 04/05/2014 * | 0 | 0 | 0 | 0 | 144 | --- | --- | 4 | --- | 5 | 299 |
| 04/06/2014 * | 0 | 0 | 0 | 0 | 141 | --- | --- | 220 | --- | 0 | 441 |
| 04/07/2014 * | 0 | 0 | 0 | 7 | 143 | 0 | 0 | 10 | 15 | 0 | 201 |
| 04/08/2014 * | 0 | 0 | 0 | 3 | 792 | --- | --- | 274 | --- | 10 | 527 |
| 04/09/2014 * | 0 | 0 | 0 | 0 | 70 | --- | --- | 108 | 91 | 0 | 555 |
| 04/10/2014 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 85 | --- | 0 | 300 |
| 04/11/2014 * | 0 | 3 | 0 | 9 | 66 | --- | --- | 118 | 34 | 0 | 571 |
| 04/12/2014 * | 0 | 1 | 0 | 1 | 67 | 36 | --- | 65 | --- | 7 | 305,128 |
| 04/13/2014 * | 0 | 3 | --- | 0 | 0 | --- | 0 | 39 | 135 | 0 | 322,634 |
| 04/14/2014 * | 0 | 3 | 0 | 7 | 0 | --- | --- | 14 | --- | 0 | 61,529 |
| 04/15/2014 * | 0 | 0 | 0 | 0 | 443 | --- | --- | 17 | 575 | 0 | 7,826 |
| 04/16/2014 * | 0 | 0 | 0 | 2 | 315 | --- | 0 | 36 | --- | 12 | 3,972 |
| 04/17/2014 * | --- | --- | 0 | --- | 0 | 1 | --- | 32 | 296 | 0 | 2,973 |
| 04/18/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 0 | 10 | 0 | 30 | 2,255 | 37 | 0 | 1,041 | 1,146 | 34 | 707,208 |
| # Days: | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 | 14 |
| Average: | 0 | 1 | 0 | 2 | 161 | 12 | 0 | 74 | 191 | 2 | 50,515 |
| YTD | 0 | 10 | 1 | 54 | 3,780 | 37 | 0 | 1,090 | 1,146 | 67 | 734,456 |

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) | |
| 04/04/2014 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 0 | --- | 0 | 1,008 | |
| 04/05/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 8 | --- | 0 | 613 | |
| 04/06/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 4 | --- | 5 | 626 | |
| 04/07/2014 * | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1,054 | |
| 04/08/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 0 | 790 | |
| 04/09/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 0 | 5 | 441 | |
| 04/10/2014 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 0 | --- | 0 | 540 | |
| 04/11/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 0 | 0 | 597 | |
| 04/12/2014 * | 0 | 0 | 0 | 0 | 0 | 0 | --- | 5 | --- | 0 | 750 | |
| 04/13/2014 * | 0 | 0 | --- | 0 | 0 | --- | 0 | 3 | 17 | 0 | 1,941 | |
| 04/14/2014 * | 0 | 0 | 0 | 2 | 0 | --- | --- | 0 | --- | 0 | 1,382 | |
| 04/15/2014 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 5 | 96 | 0 | 568 | |
| 04/16/2014 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 5 | --- | 12 | 3,245 | |
| 04/17/2014 * | --- | --- | 0 | --- | 0 | 0 | --- | 6 | 493 | 0 | 5,799 | |
| 04/18/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| Total: | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 36 | 606 | 37 | 19,354 | |
| # Days: | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 | 14 | |
| Average: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 101 | 3 | 1,382 | |
| YTD | 0 | 0 | 0 | 2 | 70 | 0 | 0 | 41 | 606 | 41 | 26,218 | |

| 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) | |
| 04/04/2014 * | 0 | 223 | 2 | 23 | 6,644 | --- | 5 | 4 | --- | 450 | 63 | |
| 04/05/2014 * | 2 | 151 | 1 | 30 | 4,678 | --- | --- | 0 | --- | 520 | 94 | |
| 04/06/2014 * | 2 | 89 | 2 | 25 | 4,513 | --- | --- | 0 | --- | 425 | 216 | |
| 04/07/2014 * | 1 | 50 | 3 | 6 | 5,859 | 5,177 | 227 | 7 | 302 | 490 | 364 | |
| 04/08/2014 * | 2 | 44 | 4 | 18 | 4,033 | --- | --- | 0 | --- | 585 | 343 | |
| 04/09/2014 * | 1 | 65 | 28 | 13 | 4,222 | --- | --- | 0 | 807 | 470 | 566 | |
| 04/10/2014 * | 66 | 271 | 72 | 17 | 7,657 | --- | 157 | 9 | --- | 579 | 396 | |
| 04/11/2014 * | 78 | 248 | 114 | 26 | 5,018 | --- | --- | 0 | 1,164 | 681 | 415 | |
| 04/12/2014 * | 110 | 130 | 87 | 77 | 6,058 | 5,331 | --- | 3 | --- | 816 | 738 | |
| 04/13/2014 * | 257 | 118 | --- | 114 | 9,260 | --- | 59 | 25 | 2,313 | 1,317 | 0 | |
| 04/14/2014 * | 215 | 97 | 43 | 134 | 7,570 | --- | --- | 21 | --- | 1,017 | 692 | |
| 04/15/2014 * | 301 | 140 | 76 | 151 | 8,852 | --- | --- | 14 | 2,742 | 749 | 1,602 | |
| 04/16/2014 * | 60 | 75 | 14 | 99 | 28,190 | --- | 84 | 27 | --- | 1,071 | 1,584 | |
| 04/17/2014 * | --- | --- | 2 | --- | 18,631 | 13,392 | --- | 9 | 3,751 | 1,304 | 559 | |
| 04/18/2014 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| Total: | 1,095 | 1,701 | 448 | 733 | 121,185 | 23,900 | 532 | 119 | 11,079 | 10,474 | 7,632 | |
| # Days: | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 | 14 | |
| Average: | 84 | 131 | 34 | 56 | 8,656 | 7,967 | 106 | 9 | 1,847 | 748 | 545 | |
| YTD | 1,122 | 8,632 | 525 | 821 | 149,598 | 24,909 | 561 | 124 | 11,079 | 11,161 | 8,339 | |

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) | |
| 04/04/2014 | * | 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 | 0 | 0 | 1,380 | --- | 15 | 552 | --- | 17 | 204 |
| 04/11/2014 | * | 0 | 0 | 0 | 0 | 1,130 | --- | --- | 447 | 51 | 0 | 376 |
| 04/12/2014 | * | 0 | 0 | 0 | 0 | 1,065 | 1,071 | --- | 1,239 | --- | 14 | 482 |
| 04/13/2014 | * | 0 | 0 | --- | 0 | 2,655 | --- | 14 | 1,396 | 287 | 29 | 324 |
| 04/14/2014 | * | 0 | 0 | 0 | 0 | 1,859 | --- | --- | 373 | --- | 29 | 692 |
| 04/15/2014 | * | 0 | 0 | 0 | 0 | 1,623 | --- | --- | 350 | 479 | 60 | 310 |
| 04/16/2014 | * | 0 | 0 | 0 | 0 | 1,890 | --- | 17 | 1,272 | --- | 93 | 441 |
| 04/17/2014 | * | --- | --- | 0 | --- | 2,258 | 3,876 | --- | 1,320 | 1,681 | 92 | 353 |
| 04/18/2014 | * | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | | 0 | 0 | 0 | 0 | 21,809 | 5,445 | 56 | 8,580 | 2,500 | 449 | 4,983 |
| # Days: | | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 | 14 |
| Average: | | 0 | 0 | 0 | 0 | 1,558 | 1,815 | 11 | 613 | 417 | 32 | 356 |
| YTD | | 0 | 0 | 0 | 0 | 30,786 | 5,569 | 58 | 8,657 | 2,500 | 521 | 12,729 |

| 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) |
| 04/04/2014 | * | 0 | 0 | 0 | 0 | --- | 1 | 1 | --- | 875 | 200 |
| 04/05/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 550 | 88 |
| 04/06/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 680 | 100 |
| 04/07/2014 | * | 0 | 0 | 0 | 0 | 12 | 1 | 1 | 10 | 585 | 65 |
| 04/08/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 630 | 60 |
| 04/09/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 1 | 90 | 310 | 55 |
| 04/10/2014 | * | 0 | 0 | 0 | 0 | --- | 4 | 0 | --- | 235 | 85 |
| 04/11/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | 120 | 250 | 30 |
| 04/12/2014 | * | 0 | 0 | 0 | 0 | 100 | --- | 1 | --- | 190 | 193 |
| 04/13/2014 | * | 0 | 0 | --- | 0 | --- | 0 | 0 | 560 | 245 | 857 |
| 04/14/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 270 | 429 |
| 04/15/2014 | * | 0 | 0 | 0 | 0 | --- | --- | 0 | 600 | 100 | 20 |
| 04/16/2014 | * | 0 | 0 | 0 | 0 | --- | 1 | 0 | --- | 152 | 40 |
| 04/17/2014 | * | --- | --- | 0 | --- | 50 | --- | 0 | 100 | 168 | 0 |
| 04/18/2014 | * | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | | 0 | 0 | 0 | 0 | 162 | 7 | 4 | 1,480 | 5,240 | 2,222 |
| # Days: | | 13 | 13 | 13 | 13 | 14 | 3 | 5 | 14 | 6 | 14 |
| Average: | | 0 | 0 | 0 | 0 | 54 | 1 | 0 | 247 | 374 | 159 |
| YTD | | 1 | 0 | 0 | 0 | 162 | 7 | 5 | 1,480 | 7,939 | 11,370 |

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:

4/18/14 7:21 AM

04/04/14 TO 04/18/14

| | | Species | | | | | |
|--------------------------------|--------------------------|---------|---------|-----|---------|--------|-------------|
| Site | Data | CH0 | CH1 | CO | ST | SO | Grand Total |
| LGR | Sum of NumberCollected | 1,550 | 222,925 | | 84,325 | 15,450 | 324,250 |
| | Sum of NumberBarged | 0 | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | 1,545 | 222,890 | | 84,321 | 15,435 | 324,191 |
| | Sum of Numbertrucked | 0 | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | 5 | 24 | | 4 | 8 | 41 |
| | Sum of FacilityMorts | 0 | 11 | | 0 | 7 | 18 |
| | Sum of ResearchMorts | 0 | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 5 | 35 | | 4 | 15 | 59 |
| LGS | Sum of NumberCollected | 26 | 25,671 | | 16,677 | 3,798 | 46,172 |
| | Sum of NumberBarged | 0 | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | 25 | 25,668 | | 16,676 | 3,796 | 46,165 |
| | Sum of Numbertrucked | 0 | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | 0 | 3 | | 1 | 2 | 6 |
| | Sum of FacilityMorts | 1 | 0 | | 0 | 0 | 1 |
| | Sum of ResearchMorts | 0 | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 1 | 3 | | 1 | 2 | 7 |
| LMN | Sum of NumberCollected | | 356 | | 332 | 36 | 724 |
| | Sum of NumberBarged | | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | | 351 | | 330 | 36 | 717 |
| | Sum of Numbertrucked | | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | | 1 | | 0 | 0 | 1 |
| | Sum of FacilityMorts | | 0 | | 0 | 0 | 0 |
| | Sum of ResearchMorts | | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | | 1 | | 0 | 0 | 1 |
| MCN | Sum of NumberCollected | 620 | 12,672 | 310 | 6,112 | 1,303 | 21,017 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 619 | 12,651 | 310 | 6,108 | 1,297 | 20,985 |
| | Sum of Numbertrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 1 | 4 | 0 | 2 | 1 | 8 |
| | Sum of FacilityMorts | 0 | 17 | 0 | 2 | 5 | 24 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 1 | 21 | 0 | 4 | 6 | 32 |
| Total Sum of NumberCollected | | 2,196 | 261,624 | 310 | 107,446 | 20,587 | 392,163 |
| Total Sum of NumberBarged | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of NumberBypassed | | 2,189 | 261,560 | 310 | 107,435 | 20,564 | 392,058 |
| Total Sum of Numbertrucked | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 6 | 32 | 0 | 7 | 11 | 56 |
| Total Sum of FacilityMorts | | 1 | 28 | 0 | 2 | 12 | 43 |
| Total Sum of ResearchMorts | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of TotalProjectMorts | | 7 | 60 | 0 | 9 | 23 | 99 |

YTD Transportation Summary

Source: Fish Passage Center

Updated: 4/18/14 7:21 AM

TO: 04/18/14

| | | Species | | | | | |
|--------------------------------|--------------------------|---------|---------|-----|--------|---------|-------------|
| Site | Data | CH0 | CH1 | CO | SO | ST | Grand Total |
| LGR | Sum of NumberCollected | 3,000 | 276,095 | 70 | 24,250 | 111,665 | 415,080 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 2,987 | 276,047 | 70 | 24,215 | 111,659 | 414,978 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 13 | 35 | 0 | 27 | 6 | 81 |
| | Sum of FacilityMorts | 0 | 13 | 0 | 8 | 0 | 21 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 13 | 48 | 0 | 35 | 6 | 102 |
| LGS | Sum of NumberCollected | 26 | 26,019 | | 3,914 | 17,621 | 47,580 |
| | Sum of NumberBarged | 0 | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | 25 | 26,015 | | 3,910 | 17,619 | 47,569 |
| | Sum of NumberTrucked | 0 | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | 0 | 4 | | 4 | 2 | 10 |
| | Sum of FacilityMorts | 1 | 0 | | 0 | 0 | 1 |
| | Sum of ResearchMorts | 0 | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 1 | 4 | | 4 | 2 | 11 |
| LMN | Sum of NumberCollected | | 391 | | 38 | 361 | 790 |
| | Sum of NumberBarged | | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | | 386 | | 38 | 359 | 783 |
| | Sum of NumberTrucked | | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | | 1 | | 0 | 0 | 1 |
| | Sum of FacilityMorts | | 0 | | 0 | 0 | 0 |
| | Sum of ResearchMorts | | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | | 1 | | 0 | 0 | 1 |
| MCN | Sum of NumberCollected | 620 | 12,672 | 310 | 1,303 | 6,112 | 21,017 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 619 | 12,651 | 310 | 1,297 | 6,108 | 20,985 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 1 | 4 | 0 | 1 | 2 | 8 |
| | Sum of FacilityMorts | 0 | 17 | 0 | 5 | 2 | 24 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 1 | 21 | 0 | 6 | 4 | 32 |
| Total Sum of NumberCollected | | 3,646 | 315,177 | 380 | 29,505 | 135,759 | 484,467 |
| Total Sum of NumberBarged | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of NumberBypassed | | 3,631 | 315,099 | 380 | 29,460 | 135,745 | 484,315 |
| Total Sum of NumberTrucked | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 14 | 44 | 0 | 32 | 10 | 100 |
| Total Sum of FacilityMorts | | 1 | 30 | 0 | 13 | 2 | 46 |
| Total Sum of ResearchMorts | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of TotalProjectMorts | | 15 | 74 | 0 | 45 | 12 | 146 |

Cumulative Adult Passage at Mainstem Dams Through: 04/17

| 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 | 04/17 | 10620 | 49 | 1994 | 25 | 8377 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TDA | 04/17 | 3366 | 36 | 845 | 18 | 3942 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JDA | 04/17 | 1668 | 44 | 613 | 15 | 2188 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MCN | 04/17 | 474 | 9 | 249 | 3 | 818 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IHR | 04/17 | 184 | 1 | 161 | 4 | 410 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LMN | 04/17 | 147 | 1 | 94 | 4 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGS | 04/17 | 54 | 1 | 61 | 2 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGR | 04/17 | 37 | 0 | 29 | 2 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRD | 04/16 | 7 | 0 | 1 | 0 | 7 | 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 | 04/15 | 753 | 2 | 551 | 2 | 1485 | 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. | 10-Yr Avg. | Wild 2014 | Wild 2013 | 10-Yr Avg. | 2014 | 2013 | 10-Yr Avg. | | |
| | | Adult | Jack | Adult | Jack | Adult | Jack | | | | | | | | | | | | |
| BON | 04/17 | 5 | -2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3348 | 2393 | 2991 | 1064 | 754 | 838 | 1 | -1 | 0 |
| TDA | 04/17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 237 | 515 | 1949 | 101 | 256 | 726 | 0 | 0 | 0 |
| JDA | 04/17 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2639 | 617 | 4087 | 1033 | 345 | 1206 | -1 | 0 | 0 |
| MCN | 04/17 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 362 | 1137 | 4886 | 230 | 559 | 1554 | 1 | 0 | 0 |
| IHR | 04/17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1120 | 3370 | 3938 | 517 | 1340 | 1075 | 0 | 3 | 0 |
| LMN | 04/17 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 782 | 1965 | 5754 | 500 | 1109 | 2280 | 0 | 0 | 0 |
| LGS | 04/17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 802 | 1644 | 5666 | 538 | 855 | 1722 | 0 | 0 | 0 |
| LGR | 04/17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6716 | 6649 | 7504 | 2960 | 2765 | 2392 | 0 | 0 | 0 |
| PRD | 04/16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 3 | 3 | 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 | 04/15 | 9 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4707 | 5583 | 6243 | 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.