



Fish Passage Center

Weekly Report #13 - 06

April 25, 2013

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 79% and 102% of average at individual sub-basins over the water year. No updates to monthly precipitation were available.

Table 1. Summary of April precipitation until April 8 and cumulative October through April 25, 2013 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

| Location | Water Year 2013 April 1-8, 2013 | | Water Year 2013 October 1, 2012 to April 25, 2013 | |
|-----------------------------------|------------------------------------|--------------|---|--------------|
| | Observed (inches) | % Average | Observed (inches) | % Average |
| | Columbia Above Coulee | 0.67 | 151 | 24.6 |
| SNAKE RIVER ABOVE ICE HARBOR | 0.60 | 155 | 12.3 | 79 |
| Columbia Above The Dalles | 0.72 | 165 | 16.5 | 86 |
| Kootenai | 0.75 | 161 | 26.1 | 105 |
| Clark Fork | 0.37 | 112 | 13.8 | 79 |
| Flathead | 0.47 | 112 | 24.0 | 101 |
| Pend Oreille/Spokane | 1.00 | 165 | 29.0 | 96 |
| Central Washington | 0.41 | 242 | 6.19* | 102* |
| SNAKE RIVER PLAIN | 0.34 | 122 | 5.12* | 80* |
| Salmon/Boise/Payette | 0.70 | 163 | 11.82* | 90* |
| Clearwater | 1.07 | 151 | 26.8 | 92 |
| SW Washington Cascades/Cowlitz | 3.06 | 215 | 54.25* | 99* |
| Willamette Valley | 2.47 | 191 | 48.2 | 90 |

* October 1 through April 8

Snowpack within the Columbia Basin has generally been slightly below average. Average snowpack in the Columbia River for basins above the Snake River confluence is 105% of average, for Snake River Basins the average snowpack is 83% of average, and for lower Columbia Basins between McNary and Bonneville Dam average snowpack is 86% of average.

Table 2 displays the April 17th and April 26th ESP runoff volume forecasts for multiple reservoirs. The April

17th forecast at The Dalles between January and July is 93,387 Kaf (92% of average).

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

| Location | April 17, 2013 ESP | | April 26, 2013 ESP | |
|---|---------------------------------|---------------------------|---------------------------------|---------------------------|
| | % Average (1971- 2000) | Runoff Volume (Kaf) | % Average (1971- 2000) | Runoff Volume (Kaf) |
| The Dalles (Jan-July) | 92 | 93424 | 92 | 93388 |
| Grand Coulee (Jan-July) | 101 | 60427 | 102 | 60779 |
| Libby Res. Inflow, MT (Apr-Aug) | 100 | 5900 *6189 | 97 | 5731 *6189 |
| Hungry Horse Res. Inflow, MT (Jan-July) | 97 | 2043 | 99 | 2085 |
| Lower Granite Res. Inflow (Apr- July) | 76 | 15104 | 75 | 14820 |
| Brownlee Res. Inflow (Apr-July) | 59 | 3223 | 56 | 3076 |
| Dworshak Res. Inflow (Apr-July) | 94 | 2280 *2036 | 91 | 2211 *2036 |

* Denotes COE Forecast

Grand Coulee Reservoir is at 1263.0 feet (4-25-13) and drafted 5.8 feet over the last week. The current April 30th FC Elevation at Grand Coulee is 1258.5 feet. Outflows at Grand Coulee have ranged between 128.5 and 153.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2401.4 feet (4-26-13) and has refilled 1.0 feet last week. The current April 30th FC Elevation at Libby is 2411.8 feet. Outflows at Libby Dam have been 4.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3528.5 feet (4-25-13) and has drafted 3.4 feet last week. The current April 30th FC Elevation at Hungry Horse is 3532.6 feet. Outflows at Hungry Horse have ranged between 10.5 and 10.6 Kcfs last week.

Dworshak is currently at an elevation of 1564.6 feet (4-25-13) and has drafted 0.3 feet last week. The current April 30th Flood Control Elevation is 1568.5 feet. Outflows from Dworshak have been 9.9 Kcfs over past week.

The Brownlee Reservoir was at an elevation of 2054.9 feet on April 25th, 2013 drafting 1.3 feet over the last week. The current April 30th FC Elevation at Brownlee is 2071.2 feet. Over the last week, inflows at Brownlee have ranged between 9.9 and 10.2 Kcfs.

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast, the flow objective this spring is 85 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 57.5 Kcfs from April 3-25 and 48.7 Kcfs over the last week.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives will be 226 Kcfs at McNary Dam (began April 10th) and 135 Kcfs at Priest Rapids Dam (began April 10th). Flows at McNary Dam have averaged 244.9 Kcfs between April 10-25. Flows at Priest Rapids Dam have averaged 175.1 Kcfs between April 10-25.

Spill: Spill for fish passage began on April 3rd at the lower Snake River projects.

| Project | Spill Level Day/Night |
|------------------|--|
| Lower Granite | 20 Kcfs/20 Kcfs |
| Little Goose | 30%/30% |
| Lower Monumental | Gas Cap/Gas Cap |
| Ice Harbor | April 3-April 28: 45 kcfs/Gas Cap April 28-June 20: 30%/30% vs. 45 kcfs/Gas Cap |

At Lower Granite Dam, spill to the Court Order began on April 3rd and has been approximately 20 Kcfs. At Little Goose Dam spill has been provided to the 30% of instantaneous flow level as specified in the Court Order. At Lower Monumental Dam the Court Order calls for spill to the gas cap. The COE increased spill to 30 Kcfs, which has resulted in total dissolved gas (TDG) levels greater than the gas cap of 120% TDG in the tailrace, and greater than 115% at the Ice Harbor forebay, on two days. At Ice Harbor Dam the

Court Order calls for 45 Kcfs spill during the day and gas cap spill at night. At present, due to low flows the project is either providing 45 Kcfs spill during daylight hours and spill as flow in excess of one turbine unit during nighttime hours, or spill as all water in excess of the operation of one turbine unit. TDG levels have remained far below the gas cap in the Ice Harbor tailrace.

Spill for fish passage at the Lower Columbia projects began on April 10th.

| 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 |

At McNary, John Day, The Dalles, and Bonneville dams, spill has met the court order over the past week.

In the past week, TDG standards have been exceeded in the Ice Harbor and Bonneville forebays. One fish on 4/25 was detected with minor signs of gas bubble trauma (GBT) in the sample at Rock Island Dam.

Smolt Monitoring: Smolt monitoring is ongoing at all seven SMP dams (BON, JDA, MCN, RIS, LMN, LGS, and LGR) and all four SMP traps (SNK, GRN, IMN, WTB). However, SMP sampling at LMN and LGS is limited and sampling at MCN is every-other-day.

Passage of yearling Chinook at BON increased this week. In fact, yearling Chinook were the dominant species of salmonids in this week's bypass samples. This week's daily average passage index for yearling Chinook at BON was nearly 13,400 per day. Last week's daily average passage index was about 4,000 per day. Passage of steelhead also increased this week, when compared to last week. The daily average passage index for steelhead at BON was just over 2,100 per day this week. Last week's daily average passage index was only 800 per day. The majority of the subyearling fall Chinook tules that were released from Spring Creek NFH and Little White Salmon NFH last week have passed BON. This week's daily average

passage index for subyearling Chinook was only about 4,700 per day, compared to last week's daily average of about 171,500 per day. Passage of coho at BON also decreased this week. This week's daily average passage index for coho at BON was about 7,800 per day, compared to last week's daily average of nearly 12,700. Sockeye passage remained relatively steady this week, with a daily average passage index of nearly 150 per day. Finally, only pacific lamprey macrophthalmia were collected at BON this week. The daily average collection for pacific lamprey macrophthalmia was about 25 per day this week, which is a decrease over last week's daily average collection of about 140 per day.

Yearling Chinook continued to dominate the bypass sample at JDA this week. This week's daily average passage index for yearling Chinook was about 17,625 per day, which is an increase over last week's daily average passage index of about 4,775 per day. Steelhead, coho, and sockeye passage also increased this week. This week's daily average passage indices for steelhead, coho, and sockeye were about 4,400, 560, and 450 per day, respectively. Last week's daily average passage indices were about 1,550, 250, and 34 per day, respectively. No Chinook fry were sampled at JDA this week. Finally, only pacific lamprey macrophthalmia were sampled at JDA this week. Passage of pacific lamprey macrophthalmia decreased this week. The daily average collection for pacific lamprey macrophthalmia this week was about 725 per day, compared to last week's daily average collection of over 1,330 per day.

Sampling at MCN is every-other-day until transportation begins in the summer. This week's bypass samples were dominated by yearling Chinook and steelhead. Passage of both of these species increased this week, when compared to last week. This week's daily average passage indices for yearling Chinook and steelhead at MCN were about 17,800 and 14,150 per day, respectively. Last week's daily average passage indices were only about 7,100 and 1,800 per day, respectively. Passage of coho and sockeye also increased this week when compared to last week. This week's daily average passage indices for coho and sockeye were about 800 and 6,900 per day. As with last week, all subyearling Chinook juveniles that were collected at MCN this week were fry. This week's daily average passage index for Chinook fry was about 960 per day, which is an increase from last week's daily average of about 500 per day. Finally, pacific

lamprey macrophthalmia continue to be the only species and life-stage collected at MCN so far this year. This week's daily average collection for pacific lamprey macrophthalmia was about 675 per day.

For the second week in a row, steelhead dominated the bypass samples at LGR this week. This week's daily average passage index for steelhead at LGR was about 44,500 per day, which is an increase from last week's average of about 23,200 per day. Approximately 98% of the steelhead in the bypass sample this week were of known hatchery origin, which means that they either had clipped fins or had eroded fins, which is indicative of hatchery rearing practices. Passage of yearling Chinook also increased at LGR this week, when compared to last week. This week's daily average passage index for yearling Chinook at LGR was nearly 24,000 per day. Last week's daily average passage index was about 18,000 per day. Approximately 77% of the yearling Chinook juveniles sampled at LGR this week were of known hatchery origin, which means that they either had fin clips or were unclipped but had coded-wire-tags. Chinook fry, coho, and sockeye/kokanee passed LGR in relatively low numbers this week. Finally, no pacific lamprey juveniles were sampled at LGR this week.

Sampling at LMN and LGS remains limited until transportation begins. This limited sampling is every three days at LMN (for condition subsample only) and every five days at LGS (full 24-hour sample). At both sites, yearling Chinook and steelhead continued to dominate the samples this week. Finally, only LMN collected lamprey juveniles this week. On April 22nd, 11 pacific lamprey macrophthalmia were sampled at LMN.

Of the salmonids that were collected at RIS this week, yearling Chinook continued to dominate. This week's daily average passage index for yearling Chinook at RIS was just over 100 per day. This represented an increase over last week's daily average of about 60 per day. Sockeye passage also increased this week. This week's daily average passage index for sockeye at RIS was 63 per day, compared to last week's average of 32 per day. In addition to yearling Chinook and sockeye, at least a few subyearling Chinook, coho, and steelhead were also collected this week. Finally, only pacific lamprey macrophthalmia were collected this week. This week's daily average collection for pacific lamprey macrophthalmia was 63 per day.

The Grande Ronde Trap continued to collect

mostly yearling Chinook this week. The daily average collection for yearling Chinook at GRN was about 540 per day this week. This is a slight increase over last week's daily average collection of about 450 per day. Of the yearling Chinook that were collected at this trap this week, approximately 85% were of known hatchery origin, which means that they either had fin clips or were unclipped but had coded-wire-tags. Collections of steelhead also increased this week, when compared to last week. This week's daily average collection for steelhead at GRN was about 120 per day. Last week's daily average collection was about 40 per day. Finally, only a few subyearling Chinook juveniles were collected this week.

As in past weeks, the Salmon River Trap collected mostly yearling Chinook this week. However, yearling Chinook collections continued to decrease this week, when compared to previous weeks. The daily average collection for yearling Chinook this week was about 275 per day. Last week's daily average collection for yearling Chinook was just over 800 per day. Steelhead collections at the Salmon River Trap increased week. The daily average collection for steelhead this week was just over 100 per day, compared to last week's daily average of just over 50 per day.

Although still relatively low, collections at the Snake River Trap were dominated by steelhead this week. The daily average collection for steelhead this week was 191 per day, which is an increase from last week's daily average collection of 48 per day. This week's daily average collection for yearling Chinook at the Snake River Trap was 23 per day. A few Chinook fry and coho were also collected at the Snake River Trap this week.

At this time, data from the Imnaha Trap are only available through April 21st. Since April 15th, passage of steelhead and yearling Chinook has remained steady, when compared to the period of April 8-14. The daily average collections for steelhead and yearling Chinook since April 15th were 308 and 106 per day, respectively. These averages for the April 8-14 period were 293 and 110, respectively. No pacific lamprey juveniles were collected in the samples in the April 15-21 period.

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. Several volitional releases of yearling spring

Chinook that began in previous weeks were scheduled to end this week. No new releases of Chinook juveniles were scheduled to begin in this zone this week. The only new releases of juvenile salmonids that were scheduled to begin this week were of summer steelhead. In all, just over 809,000 summer steelhead juveniles were scheduled for release into the Salmon River this week.

Beginning on or around May 9th, approximately 271,000 sockeye smolts will be released into Redfish Lake Creek, a tributary of the Salmon River. The only other new releases of salmonids that are scheduled over the next two weeks are of summer steelhead. In all, about 866,000 summer steelhead juveniles are scheduled for release into this zone over the next two weeks. These summer steelhead releases are scheduled to take place throughout this zone, including: the Salmon River (40%), the Imnaha River (25%), the Pahsimeroi River (22%), and the Wallowa River (14%).

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. Several releases of subyearling and yearling Chinook were scheduled for this week. First, approximately 25,000 subyearling fall Chinook were scheduled for release into the Yakima River this week. In addition, nearly 1.8 million yearling spring Chinook juveniles were scheduled for release into this zone this week. Of these, approximately 72% were scheduled for release into the Wenatchee River while remaining 28% were scheduled for release into the Methow River. Just over 1.2 million yearling summer Chinook juveniles were scheduled to be released to the Wenatchee (64%) and Methow (36%) rivers this week.

Several releases of coho and summer steelhead were also scheduled for this week. In all, nearly 172,000 coho juveniles were scheduled to be released this week. Of these, about 76% were scheduled for release into the Wenatchee River while the remaining 24% were scheduled for release into the Methow River. Finally, approximately 521,000 summer steelhead were scheduled for release this week. These steelhead releases were schedule throughout this zone, including: the Wenatchee River (47%), the Methow River (28%), the Okanogan River (17%), and the Touchet River (7%).

Approximately 1.82 million subyearling fall Chinook are scheduled for release to this zone over the next two weeks. The vast majority (99.7%) are

scheduled to be released into the Yakima River. The remaining 0.3% are scheduled for release by WDFW Cooperatives to the Mid-Columbia (above McNary Dam) and Wenatchee rivers. In addition, about 387,000 coho juveniles are scheduled for release to this zone over the next two weeks. These coho releases are scheduled to take place on the Methow (45%), Wenatchee (28%), and Mid-Columbia (26%) rivers.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. The only releases that were schedule for this zone this week were of summer steelhead. In all, about 240,000 summer steelhead were scheduled for release this week. Of these, about 63% were scheduled for release into the Umatilla River while the remaining 37% were scheduled for release into the Klickitat River.

There are several new releases of juvenile salmonids scheduled for this zone over the next two week. First, Spring Creek NFH is scheduled to release about 4.5 million subyearling fall Chinook tules into Bonneville Dam pool on the morning of May 2nd. These fall Chinook tules are expected to arrive at Bonneville Dam sometime that evening or early the next morning. In addition, beginning on or around May 1st, the Yakama Tribe will release about 1.08 million coho juveniles from the Klickitat Hatchery into the Klickitat River. Finally, about 40,500 steelhead juveniles are scheduled for release into this zone over the next two weeks. The vast majority (93%) of these are winter steelhead that are scheduled to be released into Hood River. The remaining 7% are summer steelhead that are scheduled to be released into the Little White Salmon River.

Adult Fish Passage:

Adult counts at Bonneville Dam have been updated through April 25th. Daily adult spring Chinook counts at Bonneville Dam ranged from 355 to 2,541 adult salmon per day. As of April 25th, a total of 10,205 spring Chinook have been counted at Bonneville Dam. In 2012, 17,983 adult spring Chinook were counted at Bonneville Dam for the same time period. The 2013 adult spring Chinook count at Bonneville Dam is about 56.7% of the 2012 count and about 25.7% of the 10 year average count. At Willamette Falls Dam 2,612 adult spring Chinook has been counted so far this year. In 2012, 666 adult spring Chinook were counted at Willamette. This year's count is 3.9 times greater than the 2012 count. However, the 2013 Willamette Falls adult spring Chinook count is 57% of the 10 year

average count of 4,575. As of April 25th, a total of 3,711 adult spring Chinook have been counted at The Dalles Dam and 887 have been counted at McNary Dam.

The 2013 Bonneville Dam adult steelhead count of 2,520 is about 62.5% of the 2012 count of 4,030 and 67.9% of the 10 year average count of 3,709. The 2013 Bonneville Dam adult wild steelhead count of 782 is about 60.7% of the 2012 count of 1,287 and 80.1% of the 10 year average count of 976. At upriver sites, adult steelhead continue to move through the hydro system to reach their tributaries and spawning sites. The majority of these fish over-wintered in pools and will complete their trip to their spawning grounds in March through early May. Daily adult steelhead counts at Lower Granite Dam ranged from 24 to 61 adults per day last week. This year's Lower Granite steelhead count of 6,978 is about 86.8% of the 2012 count of 8,042 and 77.4% of the 10 year average count of 9,020. The 2013 Lower Granite Dam adult wild steelhead count of 2,947 is about 89% of the 2012 count of 3,308, while being about 1.1 times greater than the 10 year average count of 2,792. At Willamette Falls Dam, the 2013 count for steelhead was 6,387 as of April 24th. This year's steelhead count is about 70% of the 2012 count of 9,131 and about 82% of the 10 year average count of 7,781.

Hatchery Releases Last Two Weeks

| Hatchery Release Summary | | | | | | | | | |
|--|---------------------------|---------|------|-------|------------------|----------|----------|--|--|
| From: | 4/12/2013 | | to | | 04/25/13 | | | | |
| Agency | Hatchery | Species | Race | MigYr | NumRel | RelStart | RelEnd | RelSite | RelRiver |
| Colville Tribe | Wells Hatchery | ST | SU | 2013 | 9,189 | 04-13-13 | 04-27-13 | Omak Creek | Okanogan River |
| Colville Tribe Total | | | | | 9,189 | | | | |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 219,155 | 04-11-13 | 04-16-13 | Little Salmon River | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 219,739 | 04-19-13 | 04-23-13 | Little Salmon River | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 465,286 | 04-23-13 | 04-26-13 | Yankee Fk (Salmon R) | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Niagara Springs | ST | SU | 2013 | 451,040 | 04-08-13 | 04-15-13 | Little Salmon River | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Pahsimeroi Hatchery | CH1 | SU | 2013 | 167,209 | 04-05-13 | 04-17-13 | Pahsimeroi Hatchery | Pahsimeroi River |
| Idaho Dept. of Fish and Game | Pahsimeroi Hatchery | CH1 | SU | 2013 | 838,664 | 04-05-13 | 04-17-13 | Pahsimeroi Hatchery | Pahsimeroi River |
| Idaho Dept. of Fish and Game | Rapid River Hatchery | CH1 | SP | 2013 | 2,500,000 | 03-11-13 | 04-26-13 | Rapid River Hatchery | Little Salmon River |
| Idaho Dept. of Fish and Game Total | | | | | 4,861,093 | | | | |
| Nez Perce Tribe | Dworshak NFH | ST | SU | 2013 | 65,770 | 04-16-13 | 04-16-13 | Lolo Creek | Clearwater River M F |
| Nez Perce Tribe | Dworshak NFH | ST | SU | 2013 | 140,000 | 04-16-13 | 04-16-13 | Meadow Creek - CLES | S Fk Clearwater River |
| Nez Perce Tribe | Lookingglass Hatchery | CH1 | SP | 2013 | 130,500 | 04-12-13 | 04-22-13 | Lostine Accim Pond Big Canyon | Wallowa River |
| Nez Perce Tribe | Lyons Ferry Hatchery | CH1 | FA | 2013 | 150,000 | 04-14-13 | 04-14-13 | (Clearwater River) | Clearwater River M F |
| Nez Perce Tribe | Nez Perce Tribal Hatchery | CH1 | SP | 2013 | 205,000 | 04-01-13 | 04-13-13 | Nez Perce Tribal Hatchery | Clearwater River M F |
| Nez Perce Tribe Total | | | | | 691,270 | | | | |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2013 | 320,000 | 04-11-13 | 05-08-13 | Big Canyon Acclim.Pd (Grande Ronde) | Grande Ronde River |
| Oregon Dept. of Fish and Wildlife | Lookingglass Hatchery | CH1 | SP | 2013 | 250,000 | 03-14-13 | 04-14-13 | Lookingglass Creek | Grande Ronde River |
| Oregon Dept. of Fish and Wildlife | Opal Springs Hatchery | ST | SU | 2013 | 5,500 | 04-15-13 | 04-15-13 | Wychus Creek | Deschutes River |
| Oregon Dept. of Fish and Wildlife | Opal Springs Hatchery | ST | SU | 2013 | 8,000 | 04-15-13 | 04-15-13 | Crooked River (OR) | Deschutes River |
| Oregon Dept. of Fish and Wildlife | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Meacham Creek | Umatilla River |
| Oregon Dept. of Fish and Wildlife Total | | | | | 633,500 | | | | |
| U.S. Fish and Wildlife Service | Carson NFH | CH1 | SP | 2013 | 1,170,000 | 04-17-13 | 04-17-13 | Carson Hatchery | Wind River |
| U.S. Fish and Wildlife Service | Dworshak NFH | ST | SU | 2013 | 307,902 | 04-08-13 | 04-17-13 | Clear Creek Redhouse (SFk ClearH20 R) | Clearwater River M F |
| U.S. Fish and Wildlife Service | Dworshak NFH | ST | SU | 2013 | 400,400 | 04-08-13 | 04-17-13 | Dworshak Hatchery | S Fk Clearwater River |
| U.S. Fish and Wildlife Service | Dworshak NFH | ST | SU | 2013 | 1,248,146 | 04-15-13 | 04-19-13 | Dworshak Hatchery | Clearwater River M F |
| U.S. Fish and Wildlife Service | Entiat Hatchery | CH1 | SU | 2013 | 356,098 | 04-16-13 | 04-16-13 | Entiat Hatchery | Entiat River |
| U.S. Fish and Wildlife Service | Hagerman NFH | ST | SU | 2013 | 155,941 | 04-25-13 | 04-30-13 | East Fk Salmon River | Salmon River (ID) |
| U.S. Fish and Wildlife Service | Hagerman NFH | ST | SU | 2013 | 843,890 | 04-11-13 | 04-25-13 | S Fk Salmon River | Salmon River (ID) |
| U.S. Fish and Wildlife Service | Leavenworth NFH | CH1 | SP | 2013 | 1,280,000 | 04-20-13 | 04-20-13 | Leavenworth Hatchery Little White Salmon | Wenatchee River Little White Salmon |
| U.S. Fish and Wildlife Service | Little White Salmon NFH | CH1 | SP | 2013 | 724,810 | 04-18-13 | 04-18-13 | Hatchery | Little White Salmon River |
| U.S. Fish and Wildlife Service | Willard Hatchery | CH1 | SP | 2013 | 296,000 | 04-18-13 | 04-18-13 | Willard Hatchery | Little White Salmon River |
| U.S. Fish and Wildlife Service | Winthrop NFH | CH1 | SP | 2013 | 375,800 | 04-15-13 | 04-26-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service | Winthrop NFH | ST | SU | 2013 | 55,500 | 04-15-13 | 05-24-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service | Winthrop NFH | ST | SU | 2013 | 59,300 | 04-15-13 | 05-24-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service Total | | | | | 7,273,787 | | | | |
| Umatilla Tribe | Cascade Hatchery | CO | UN | 2013 | 1,000,000 | 03-25-13 | 04-22-13 | Pendelton Acclim Pond Catherine Cr Acclim | Umatilla River |
| Umatilla Tribe | Lookingglass Hatchery | CH1 | SP | 2013 | 134,519 | 03-21-13 | 04-14-13 | Pond Grande Ronde Acclim | Grande Ronde River |
| Umatilla Tribe | Lookingglass Hatchery | CH1 | SP | 2013 | 135,308 | 04-06-13 | 04-14-13 | Pond | Grande Ronde River |
| Umatilla Tribe | Umatilla Hatchery | CH1 | SP | 2013 | 178,400 | 04-08-13 | 04-15-13 | Imeques Acclim Pond Thornhollow Acclim | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | CH1 | SP | 2013 | 195,500 | 04-08-13 | 04-15-13 | Pond | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | CH1 | SP | 2013 | 225,000 | 04-08-13 | 04-15-13 | Imeques Acclim Pond Minthorn Acclimation | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Pond | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Pendelton Acclim Pond | Umatilla River |
| Umatilla Tribe Total | | | | | 1,968,727 | | | | |
| Warm Springs Tribe | Round Butte Hatchery | CH1 | SP | 2013 | 75,000 | 04-09-13 | 04-24-13 | W Fk Hood River | Hood River |
| Warm Springs Tribe Total | | | | | 75,000 | | | | |
| Washington Dept. of Fish and Wildlife | Chelan Hatchery | CH1 | SU | 2013 | 645,000 | 04-15-13 | 04-15-13 | Chelan Falls | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife | Chiwawa Hatchery | CH1 | SP | 2013 | 275,000 | 04-15-13 | 05-01-13 | Chiwawa Hatchery | Wenatchee River |
| Washington Dept. of Fish and Wildlife | Chiwawa Hatchery | ST | SU | 2013 | 223,000 | 04-25-13 | 05-05-13 | Chiwawa Hatchery | Wenatchee River |

Hatchery Releases Last Two Weeks, continued

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|--|--------------------------|-----|----|------|-------------------|----------|----------|---------------------------|--------------------|
| Washington Dept. of Fish and Wildlife | Eastbank Hatchery | CH1 | SU | 2013 | 600,000 | 04-15-13 | 05-10-13 | Similkameen Acclim Pd | Okanogan River |
| Washington Dept. of Fish and Wildlife | Eastbank Hatchery | CH1 | SU | 2013 | 771,000 | 04-20-13 | 04-25-13 | Dryden Acclim Pond | Wenatchee River |
| Washington Dept. of Fish and Wildlife | Eastbank Hatchery | ST | SU | 2013 | 24,000 | 04-25-13 | 06-20-13 | Blackbird Island Acc Pond | Wenatchee River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | CH1 | FA | 2013 | 489,000 | 04-10-13 | 04-15-13 | Lyons Ferry Hatchery | Snake River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 39,000 | 04-20-13 | 04-30-13 | Baileysburg Bridge | Touchet River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 84,000 | 04-10-13 | 04-20-13 | Dayton Acclim Pond | Touchet River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 100,000 | 04-15-13 | 04-20-13 | Walla Walla River | Walla Walla River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 145,000 | 04-15-13 | 05-20-13 | Lyons Ferry Hatchery | Snake River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 206,000 | 04-10-13 | 04-30-13 | Cottonwood Acclim Pond | Grande Ronde River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SP | 2013 | 18,200 | 04-20-13 | 04-30-13 | Twisp Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SP | 2013 | 93,400 | 04-20-13 | 04-25-13 | Chewuch Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SP | 2013 | 397,100 | 04-20-13 | 04-25-13 | Methow Hatchery | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SU | 2013 | 435,000 | 04-20-13 | 04-30-13 | Carlton Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | ST | SU | 2013 | 50,000 | 04-20-13 | 04-30-13 | Twisp Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | ST | SU | 2013 | 95,000 | 04-25-13 | 05-05-13 | Methow Hatchery | Methow River |
| Washington Dept. of Fish and Wildlife | Ringold Springs Hatchery | ST | SU | 2013 | 186,153 | 04-12-13 | 04-18-13 | Ringold Springs Hatchery | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife | Skamania Hatchery | ST | SU | 2013 | 90,000 | 04-25-13 | 05-05-13 | Klickitat River | Klickitat River |
| Washington Dept. of Fish and Wildlife | Tucannon Hatchery | CH1 | SP | 2013 | 260,000 | 04-01-13 | 04-27-13 | Curl Lake Acclim Pond | Tucannon River |
| Washington Dept. of Fish and Wildlife | Tucannon Hatchery | ST | SU | 2013 | 58,000 | 04-15-13 | 04-20-13 | Tucannon River | Tucannon River |
| Washington Dept. of Fish and Wildlife | Wells Hatchery | CH1 | SU | 2013 | 290,000 | 04-15-13 | 04-25-13 | Wells Hatchery | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife | Wells Hatchery | ST | SU | 2013 | 9,500 | 04-15-13 | 04-15-13 | Omak Creek | Okanogan River |
| Washington Dept. of Fish and Wildlife | Wells Hatchery | ST | SU | 2013 | 90,000 | 04-20-13 | 05-20-13 | Okanogan River | Okanogan River |
| Washington Dept. of Fish and Wildlife Total | | | | | 5,673,353 | | | | |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 130,722 | 04-22-13 | 06-15-13 | Nason Wetlands | Wenatchee River |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 130,867 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 306,946 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 249,305 | 03-15-13 | 05-15-13 | Easton Pond | Yakima River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 255,745 | 03-15-13 | 05-15-13 | Clark Flat Acclim Pond | Yakima River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 266,311 | 03-15-13 | 05-15-13 | Jack Creek Acclim Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 102,975 | 04-15-13 | 07-01-13 | Stiles Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 104,059 | 04-15-13 | 07-01-13 | Holmes Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 237,043 | 04-15-13 | 07-01-13 | Easton Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 124,425 | 04-15-13 | 07-01-13 | Lost Creek Acclim Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 131,858 | 04-15-13 | 07-01-13 | Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 322,100 | 04-01-13 | 07-01-13 | Stiles Pond | Yakima River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 30,343 | 04-15-13 | 06-15-13 | Prosser Acclim Pond | Yakima River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 40,957 | 04-22-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 73,036 | 04-15-13 | 06-15-13 | Winthrop Hatchery | Methow River |
| Yakama Tribe | Winthrop NFH | CO | UN | 2013 | 253,485 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Winthrop NFH | CO | UN | 2013 | 253,485 | 04-15-13 | 06-15-13 | Winthrop Hatchery | Methow River |
| Yakama Tribe Total | | | | | 2,760,177 | | | | |
| Grand Total | | | | | 23,946,096 | | | | |

Hatchery Releases Next Two Weeks

| Hatchery Release Summary | | | | | | | | | |
|--|--------------------------|---------|------|-------|------------------|----------|----------|---------------------------|---------------------|
| From: | 4/26/2013 | | to | | 5/9/2013 | | | | |
| Agency | Hatchery | Species | Race | MigYr | NumRel | RelStart | RelEnd | RelSite | RelRiver |
| Colville Tribe | Wells Hatchery | ST | SU | 2013 | 9,189 | 04-13-13 | 04-27-13 | Omak Creek | Okanogan River |
| Colville Tribe Total | | | | | 9,189 | | | | |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 63,298 | 05-01-13 | 05-02-13 | Pahsimeroi River | Pahsimeroi River |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 124,875 | 05-02-13 | 05-03-13 | Pahsimeroi River | Pahsimeroi River |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 188,145 | 04-26-13 | 05-01-13 | Squaw Creek | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Magic Valley Hatchery | ST | SU | 2013 | 465,286 | 04-23-13 | 04-26-13 | Yankee Fk (Salmon R) | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Oxbow-Oregon | SO | UN | 2013 | 100,000 | 05-09-13 | 05-09-13 | Redfish Lake Creek | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Rapid River Hatchery | CH1 | SP | 2013 | 2,500,000 | 03-11-13 | 04-26-13 | Rapid River Hatchery | Little Salmon River |
| Idaho Dept. of Fish and Game | Sawtooth Hatchery | SO | UN | 2013 | 1,300 | 05-09-13 | 05-09-13 | Redfish Lake Creek | Salmon River (ID) |
| Idaho Dept. of Fish and Game | Sawtooth Hatchery | SO | UN | 2013 | 170,000 | 05-09-13 | 05-09-13 | Redfish Lake Creek | Salmon River (ID) |
| Idaho Dept. of Fish and Game Total | | | | | 3,612,904 | | | | |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2013 | 50,000 | 04-29-13 | 04-29-13 | Big Sheep Creek | Imnaha River |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2013 | 120,000 | 05-04-13 | 05-04-13 | Wallowa Acclim Pond | Wallowa River |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2013 | 165,000 | 04-29-13 | 04-29-13 | L Sheep Acclim Pond | Imnaha River |
| | | | | | | | | Big Canyon Acclim.Pd | |
| Oregon Dept. of Fish and Wildlife | Irrigon Hatchery Complex | ST | SU | 2013 | 320,000 | 04-11-13 | 05-08-13 | (Grande Ronde) | Grande Ronde River |
| Oregon Dept. of Fish and Wildlife | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Meacham Creek | Umatilla River |
| Oregon Dept. of Fish and Wildlife Total | | | | | 705,000 | | | | |
| U.S. Fish and Wildlife Service | Hagerman NFH | ST | SU | 2013 | 127,363 | 05-01-13 | 05-10-13 | Salmon River (ID) | Salmon River (ID) |
| U.S. Fish and Wildlife Service | Hagerman NFH | ST | SU | 2013 | 155,941 | 04-25-13 | 04-30-13 | East Fk Salmon River | Salmon River (ID) |
| U.S. Fish and Wildlife Service | Hagerman NFH | ST | SU | 2013 | 215,523 | 05-01-13 | 05-10-13 | Yankee Fk (Salmon R) | Salmon River (ID) |
| | | | | | | | | L Col R (D/s McN | |
| U.S. Fish and Wildlife Service | Spring Creek NFH | CH0 | FA | 2013 | 4,500,000 | 05-02-13 | 05-02-13 | Spring Creek Hatchery | Dam) |
| U.S. Fish and Wildlife Service | Winthrop NFH | CH1 | SP | 2013 | 375,800 | 04-15-13 | 04-26-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service | Winthrop NFH | ST | SU | 2013 | 55,500 | 04-15-13 | 05-24-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service | Winthrop NFH | ST | SU | 2013 | 59,300 | 04-15-13 | 05-24-13 | Winthrop Hatchery | Methow River |
| U.S. Fish and Wildlife Service Total | | | | | 5,489,427 | | | | |
| | | | | | | | | Minthorn Acclimation | |
| Umatilla Tribe | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Pond | Umatilla River |
| Umatilla Tribe | Umatilla Hatchery | ST | SU | 2013 | 50,000 | 04-22-13 | 04-29-13 | Pendelton Acclim Pond | Umatilla River |
| Umatilla Tribe Total | | | | | 100,000 | | | | |
| | | | | | | | | E Fk Irrig Dist Sand | |
| Warm Springs Tribe | Oak Springs Hatchery | ST | WI | 2013 | 25,000 | 04-30-13 | 04-30-13 | Trap | Hood River |
| Warm Springs Tribe | Parkdale Acclim. Pond | ST | WI | 2013 | 12,500 | 04-30-13 | 04-30-13 | Parkdale Acclim Pond | Hood River |
| Warm Springs Tribe Total | | | | | 37,500 | | | | |
| Washington Dept. of Fish and Wildlife | Chiwawa Hatchery | CH1 | SP | 2013 | 275,000 | 04-15-13 | 05-01-13 | Chiwawa Hatchery | Wenatchee River |
| Washington Dept. of Fish and Wildlife | Chiwawa Hatchery | ST | SU | 2013 | 223,000 | 04-25-13 | 05-05-13 | Chiwawa Hatchery | Wenatchee River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | FA | 2013 | 175 | 05-01-13 | 05-31-13 | Wenatchee River | Wenatchee River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | FA | 2013 | 225 | 05-01-13 | 05-31-13 | Above McNary Dam | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | FA | 2013 | 4,500 | 05-01-13 | 05-31-13 | Above McNary Dam | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | FA | 2013 | 18,975 | 05-01-13 | 05-31-13 | Yakama River | Yakima River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | SU | 2013 | 225 | 05-01-13 | 05-31-13 | Methow River | Methow River |
| Washington Dept. of Fish and Wildlife | COOP | CH0 | SU | 2013 | 225 | 05-01-13 | 05-31-13 | Similkameen Acclim Pd | Okanogan River |
| Washington Dept. of Fish and Wildlife | Eastbank Hatchery | CH1 | SU | 2013 | 600,000 | 04-15-13 | 05-10-13 | Similkameen Acclim Pd | Okanogan River |
| Washington Dept. of Fish and Wildlife | Eastbank Hatchery | ST | SU | 2013 | 24,000 | 04-25-13 | 06-20-13 | Blackbird Island Acc Pond | Wenatchee River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 39,000 | 04-20-13 | 04-30-13 | Baileysburg Bridge | Touchet River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 145,000 | 04-15-13 | 05-20-13 | Lyons Ferry Hatchery | Snake River |
| Washington Dept. of Fish and Wildlife | Lyons Ferry Hatchery | ST | SU | 2013 | 206,000 | 04-10-13 | 04-30-13 | Cottonwood Acclim Pond | Grande Ronde River |

Hatchery Releases Next Two Weeks, continued

| | | | | | | | | | |
|--|----------------------|-----|----|------|-------------------|----------|----------|--|---|
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SP | 2013 | 18,200 | 04-20-13 | 04-30-13 | Twisp Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | CH1 | SU | 2013 | 435,000 | 04-20-13 | 04-30-13 | Carlton Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | ST | SU | 2013 | 50,000 | 04-20-13 | 04-30-13 | Twisp Acclim Pond | Methow River |
| Washington Dept. of Fish and Wildlife | Methow Hatchery | ST | SU | 2013 | 95,000 | 04-25-13 | 05-05-13 | Methow Hatchery | Methow River Little White Salmon River |
| Washington Dept. of Fish and Wildlife | Skamania Hatchery | ST | SU | 2013 | 3,000 | 05-01-13 | 05-10-13 | Drano Lake | |
| Washington Dept. of Fish and Wildlife | Skamania Hatchery | ST | SU | 2013 | 90,000 | 04-25-13 | 05-05-13 | Klickitat River | Klickitat River |
| Washington Dept. of Fish and Wildlife | Tucannon Hatchery | CH1 | SP | 2013 | 260,000 | 04-01-13 | 04-27-13 | Curl Lake Acclim Pond | Tucannon River |
| Washington Dept. of Fish and Wildlife | Wells Hatchery | ST | SU | 2013 | 90,000 | 04-20-13 | 05-20-13 | Okanogan River | Okanogan River |
| Washington Dept. of Fish and Wildlife Total | | | | | 2,577,525 | | | | |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 130,722 | 04-22-13 | 06-15-13 | Nason Wetlands | Wenatchee River |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 130,867 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2013 | 306,946 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 249,305 | 03-15-13 | 05-15-13 | Easton Pond | Yakima River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 255,745 | 03-15-13 | 05-15-13 | Clark Flat Acclim Pond Jack Creek Acclim Pond | Yakima River |
| Yakama Tribe | Cle Elem Hatchery | CH1 | SP | 2013 | 266,311 | 03-15-13 | 05-15-13 | Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 102,975 | 04-15-13 | 07-01-13 | Stiles Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 104,059 | 04-15-13 | 07-01-13 | Holmes Pond | Yakima River |
| Yakama Tribe | Eagle Creek NFH | CO | UN | 2013 | 237,043 | 04-15-13 | 07-01-13 | Easton Pond | Yakima River |
| Yakama Tribe | Klickitat Hatchery | CO | NO | 2013 | 1,080,000 | 05-01-13 | 05-01-13 | Klickitat Hatchery | Klickitat River |
| Yakama Tribe | Prosser Acclim. Pond | CH0 | FA | 2013 | 25,000 | 04-26-13 | 04-26-13 | Prosser Acclim Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CH0 | FA | 2013 | 300,000 | 04-27-13 | 04-27-13 | Prosser Acclim Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CH0 | FA | 2013 | 1,500,000 | 05-04-13 | 05-04-13 | Prosser Acclim Pond Lost Creek Acclim Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 124,425 | 04-15-13 | 07-01-13 | Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 131,858 | 04-15-13 | 07-01-13 | Stiles Pond | Yakima River |
| Yakama Tribe | Prosser Acclim. Pond | CO | UN | 2013 | 322,100 | 04-01-13 | 07-01-13 | Prosser Acclim Pond | Yakima River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 30,343 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 35,838 | 05-01-13 | 06-15-13 | Methow River | Methow River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 40,957 | 04-22-13 | 06-15-13 | Winthrop Hatchery | Methow River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 66,881 | 05-01-13 | 06-15-13 | Biddle Pond | Methow River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 72,764 | 05-01-13 | 06-15-13 | Twisp Acclim Pond | Methow River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 73,036 | 04-15-13 | 06-15-13 | Icicle Creek | Wenatchee River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 101,818 | 05-01-13 | 06-15-13 | Wells Hatchery | Mid-Columbia River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2013 | 109,826 | 05-01-13 | 06-15-13 | Wenatchee River | Wenatchee River |
| Yakama Tribe | Winthrop NFH | CO | UN | 2013 | 253,485 | 04-15-13 | 06-15-13 | Winthrop Hatchery | Methow River |
| Yakama Tribe Total | | | | | 6,052,304 | | | | |
| Grand Total | | | | | 18,583,849 | | | | |

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 |
| 04/12/2013 | 167.3 | 8.5 | 172.0 | 9.2 | 183.3 | 31.9 | 181.2 | 26.2 | 185.6 | 19.3 | 194.0 | 65.0 | 195.8 | 91.1 |
| 04/13/2013 | 163.8 | 1.6 | 171.3 | 5.0 | 178.9 | 32.4 | 175.6 | 29.2 | 179.1 | 20.2 | 195.0 | 54.4 | 192.7 | 94.1 |
| 04/14/2013 | 166.0 | 10.1 | 158.7 | 12.5 | 171.9 | 39.3 | 177.1 | 29.4 | 178.3 | 26.5 | 199.7 | 65.5 | 204.2 | 79.7 |
| 04/15/2013 | 177.7 | 16.4 | 175.7 | 21.6 | 187.3 | 36.5 | 180.2 | 24.7 | 180.4 | 29.9 | 199.4 | 72.8 | 200.4 | 84.4 |
| 04/16/2013 | 170.0 | 9.9 | 172.3 | 18.1 | 191.9 | 44.6 | 188.8 | 27.3 | 190.0 | 29.9 | 205.3 | 80.5 | 206.9 | 99.8 |
| 04/17/2013 | 164.3 | 0.0 | 166.0 | 15.4 | 176.6 | 34.8 | 179.1 | 26.9 | 181.4 | 30.1 | 189.6 | 63.3 | 190.9 | 92.7 |
| 04/18/2013 | 156.3 | 0.0 | 157.9 | 8.0 | 167.9 | 25.9 | 160.8 | 17.9 | 165.1 | 26.8 | 173.3 | 52.4 | 180.4 | 69.6 |
| 04/19/2013 | 138.3 | 0.0 | 141.9 | 0.0 | 156.8 | 17.8 | 155.2 | 14.6 | 158.9 | 20.1 | 166.8 | 28.5 | 161.2 | 43.2 |
| 04/20/2013 | 128.5 | 0.0 | 128.9 | 0.0 | 135.0 | 10.0 | 132.5 | 0.0 | 139.0 | 14.2 | 157.6 | 19.4 | 162.8 | 22.4 |
| 04/21/2013 | 139.2 | 0.0 | 136.4 | 0.0 | 139.2 | 10.0 | 130.9 | 0.0 | 136.6 | 15.7 | 154.3 | 18.4 | 152.7 | 21.6 |
| 04/22/2013 | 148.5 | 0.0 | 151.5 | 0.0 | 153.9 | 12.9 | 151.2 | 11.7 | 154.9 | 19.2 | 155.2 | 18.2 | 148.5 | 21.8 |
| 04/23/2013 | 153.9 | 0.0 | 151.2 | 0.0 | 164.6 | 15.1 | 162.1 | 14.6 | 167.1 | 16.0 | 160.9 | 32.4 | 152.8 | 24.3 |
| 04/24/2013 | 144.0 | 0.0 | 149.8 | 0.0 | 161.3 | 17.5 | 158.0 | 10.0 | 163.5 | 16.1 | 175.3 | 37.4 | 169.2 | 31.6 |
| 04/25/2013 | 144.8 | 0.0 | 147.1 | 0.0 | 157.8 | 14.5 | 154.9 | 7.9 | 160.0 | 17.3 | 160.1 | 33.4 | 153.5 | 36.3 |

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

| Date | Dworshak | | Hells Canyon | | Lower Granite | | Little Goose | | Lower Monumental | | Ice Harbor | |
|------------|----------|-------|--------------|---------|---------------|-------|--------------|-------|------------------|-------|------------|-------|
| | Flow | Spill | Inflow | Outflow | Flow | Spill | Flow | Spill | Flow | Spill | Flow | Spill |
| 04/12/2013 | 9.9 | 0.0 | --- | --- | 59.7 | 20.3 | 59.9 | 17.9 | 61.9 | 30.1 | 62.4 | 46.9 |
| 04/13/2013 | 9.9 | 0.0 | --- | --- | 59.1 | 20.3 | 56.9 | 17.0 | 58.2 | 30.0 | 57.4 | 46.5 |
| 04/14/2013 | 9.9 | 0.0 | --- | --- | 60.5 | 20.3 | 61.7 | 18.6 | 65.7 | 30.6 | 66.2 | 49.6 |
| 04/15/2013 | 9.9 | 0.0 | --- | --- | 55.4 | 20.0 | 55.9 | 16.7 | 59.2 | 31.0 | 61.1 | 47.2 |
| 04/16/2013 | 9.9 | 0.0 | --- | --- | 52.0 | 20.0 | 50.3 | 15.0 | 52.4 | 29.7 | 52.7 | 41.2 |
| 04/17/2013 | 9.9 | 0.0 | --- | --- | 50.2 | 20.2 | 53.3 | 16.0 | 54.5 | 30.5 | 53.6 | 43.5 |
| 04/18/2013 | 9.9 | 0.0 | --- | --- | 45.2 | 20.2 | 44.2 | 13.2 | 47.1 | 31.0 | 47.5 | 37.4 |
| 04/19/2013 | 9.9 | 0.0 | --- | --- | 45.8 | 20.4 | 47.0 | 14.1 | 49.5 | 31.1 | 50.1 | 39.9 |
| 04/20/2013 | 9.9 | 0.0 | --- | --- | 48.8 | 20.4 | 48.8 | 14.6 | 50.4 | 31.0 | 51.4 | 41.0 |
| 04/21/2013 | 9.9 | 0.0 | --- | --- | 51.8 | 20.4 | 53.7 | 16.1 | 58.1 | 31.0 | 59.8 | 45.5 |
| 04/22/2013 | 9.9 | 0.0 | --- | --- | 54.7 | 20.3 | 58.2 | 17.5 | 60.7 | 31.0 | 61.5 | 47.7 |
| 04/23/2013 | 9.9 | 0.0 | --- | --- | 49.8 | 20.2 | 48.5 | 14.5 | 49.3 | 31.0 | 48.6 | 38.7 |
| 04/24/2013 | 9.9 | 0.0 | --- | --- | 45.0 | 20.2 | 46.1 | 13.9 | 48.8 | 31.0 | 50.4 | 40.6 |
| 04/25/2013 | 9.9 | 0.0 | --- | --- | 45.2 | 20.4 | 44.9 | 13.5 | 47.4 | 29.6 | 47.0 | 37.0 |

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 | | |
| 04/12/2013 | 281.5 | 147.1 | 302.1 | 90.7 | 284.8 | 113.7 | 306.2 | 100.1 | 84.1 | 109.7 |
| 04/13/2013 | 242.7 | 98.4 | 241.8 | 72.7 | 223.3 | 89.3 | 256.9 | 99.9 | 43.5 | 101.1 |
| 04/14/2013 | 259.7 | 115.4 | 265.4 | 79.9 | 248.1 | 98.9 | 262.4 | 100.0 | 46.6 | 103.4 |
| 04/15/2013 | 269.3 | 141.0 | 283.9 | 85.3 | 265.9 | 106.5 | 283.2 | 100.8 | 66.5 | 103.5 |
| 04/16/2013 | 276.6 | 151.3 | 288.1 | 86.5 | 266.5 | 106.4 | 292.6 | 100.4 | 77.4 | 102.4 |
| 04/17/2013 | 265.2 | 138.1 | 247.7 | 74.2 | 233.1 | 93.0 | 261.7 | 100.0 | 48.4 | 100.9 |
| 04/18/2013 | 238.8 | 106.0 | 247.3 | 73.9 | 230.1 | 91.8 | 244.2 | 99.6 | 32.8 | 99.3 |
| 04/19/2013 | 217.6 | 88.0 | 212.3 | 63.6 | 195.2 | 78.0 | 226.1 | 100.1 | 16.4 | 97.2 |
| 04/20/2013 | 223.2 | 90.1 | 225.3 | 67.4 | 211.7 | 84.4 | 227.9 | 100.3 | 15.6 | 99.7 |
| 04/21/2013 | 233.2 | 93.5 | 234.3 | 70.5 | 217.5 | 86.9 | 235.0 | 100.4 | 21.9 | 100.3 |
| 04/22/2013 | 232.2 | 93.2 | 251.0 | 75.3 | 231.9 | 92.9 | 258.8 | 100.4 | 41.0 | 105.1 |
| 04/23/2013 | 207.8 | 83.8 | 214.0 | 64.2 | 201.4 | 80.3 | 233.8 | 99.9 | 24.8 | 96.7 |
| 04/24/2013 | 217.1 | 86.7 | 216.7 | 65.1 | 198.2 | 79.5 | 211.9 | 99.7 | 1.4 | 98.5 |
| 04/25/2013 | 211.3 | 85.1 | 214.4 | 64.6 | 195.5 | 78.1 | 215.6 | 97.6 | 0.0 | 105.6 |

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 | | | | | | | | | | | |
| | 04/16/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/24/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| Little Goose Dam | | | | | | | | | | | |
| | 04/12/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/17/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/22/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| Lower Monumental Dam | | | | | | | | | | | |
| | 04/13/13 | Chinook + Steelhead | 56 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/16/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| McNary Dam | | | | | | | | | | | |
| | 04/12/13 | Chinook + Steelhead | 52 | 2 | 1 | 1.92% | 0.00% | 1 | 0 | 0 | 0 |
| | 04/14/13 | Chinook + Steelhead | 52 | 1 | 1 | 1.92% | 0.00% | 1 | 0 | 0 | 0 |
| | 04/18/13 | Chinook + Steelhead | 99 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/22/13 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| Bonneville Dam | | | | | | | | | | | |
| | 04/20/13 | Chinook + Steelhead | 57 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/23/13 | Chinook + Steelhead | 84 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| Rock Island Dam | | | | | | | | | | | |
| | 04/15/13 | Chinook + Steelhead | 78 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/23/13 | Chinook + Steelhead | 42 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 04/25/13 | Chinook + Steelhead | 100 | 1 | 1 | 1.00% | 0.00% | 1 | 0 | 0 | 0 |

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

| Date | <u>Hungry H. Dnst</u> | | | # | <u>Boundary</u> | | | # | <u>Grand Coulee</u> | | | # | <u>Grand C. Tlwr</u> | | | # | <u>Chief Joseph</u> | | | | | |
|------|-----------------------|-------------|------|---|-----------------|-------------|------|---|---------------------|-------------|-------|----|----------------------|-------------|-------|----|---------------------|-------------|-------|------|------|----|
| | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | High | High | hr |
| | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | | |
| 4/12 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.4 | 105.5 | 105.9 | 24 | 103.3 | 104.3 | 104.5 | 24 | 103.6 | 104.8 | 105.8 | 24 | | |
| 4/13 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.9 | 105.2 | 105.7 | 24 | 103.5 | 103.8 | 104.1 | 24 | 105.6 | 105.9 | 106.2 | 24 | | |
| 4/14 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.3 | 104.5 | 104.8 | 24 | 103.4 | 103.8 | 104.1 | 24 | 103.3 | 103.7 | 104.1 | 24 | | |
| 4/15 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.1 | 104.4 | 105.1 | 24 | 104.3 | 105.2 | 105.6 | 24 | 102.3 | 102.3 | 102.4 | 24 | | |
| 4/16 | --- | --- | --- | 0 | --- | --- | --- | 0 | 103.3 | 103.7 | 104.1 | 24 | 103.5 | 104.4 | 104.9 | 24 | 102.3 | 102.4 | 102.5 | 24 | | |
| 4/17 | --- | --- | --- | 0 | --- | --- | --- | 0 | 103.4 | 104.1 | 104.9 | 24 | 101.6 | 101.8 | 102.0 | 24 | 103.8 | 104.5 | 104.6 | 24 | | |
| 4/18 | --- | --- | --- | 0 | --- | --- | --- | 0 | 103.4 | 103.7 | 104.7 | 24 | 101.8 | 102.2 | 102.4 | 24 | 103.5 | 104.1 | 104.5 | 24 | | |
| 4/19 | --- | --- | --- | 0 | --- | --- | --- | 0 | 105.3 | 105.8 | 106.6 | 24 | 102.7 | 102.9 | 103.1 | 24 | 103.3 | 103.5 | 103.8 | 24 | | |
| 4/20 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.3 | 104.5 | 104.7 | 24 | 102.5 | 102.8 | 103.1 | 24 | 103.2 | 103.5 | 103.7 | 24 | | |
| 4/21 | --- | --- | --- | 0 | --- | --- | --- | 0 | 103.9 | 104.0 | 104.1 | 24 | 101.9 | 102.1 | 102.4 | 24 | 102.8 | 103.1 | 103.2 | 24 | | |
| 4/22 | --- | --- | --- | 0 | --- | --- | --- | 0 | 103.5 | 103.8 | 103.9 | 24 | 101.1 | 101.7 | 102.0 | 24 | 102.4 | 102.6 | 103.0 | 24 | | |
| 4/23 | --- | --- | --- | 0 | --- | --- | --- | 0 | 104.5 | 105.0 | 105.4 | 24 | 102.4 | 103.0 | 105.0 | 24 | 102.9 | 103.4 | 110.1 | 24 | | |
| 4/24 | --- | --- | --- | 0 | --- | --- | --- | 0 | 105.4 | 105.8 | 106.2 | 24 | 102.7 | 103.4 | 104.0 | 24 | 103.3 | 103.8 | 104.0 | 24 | | |
| 4/25 | --- | --- | --- | 0 | --- | --- | --- | 0 | 106.2 | 106.3 | 106.6 | 23 | 103.7 | 103.9 | 104.1 | 23 | 104.2 | 104.5 | 104.9 | 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> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | High | High | hr |
| | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | | |
| 4/12 | 106.4 | 107.3 | 109.6 | 24 | 103.8 | 104.1 | 104.4 | 20 | 109.9 | 110.6 | 112.0 | 20 | 113.2 | 113.8 | 114.1 | 24 | 119.1 | 120.1 | 121.5 | 24 | | |
| 4/13 | 106.3 | 106.8 | 107.6 | 24 | 104.2 | 104.4 | 104.5 | 23 | 110.0 | 110.5 | 110.9 | 23 | 111.0 | 112.3 | 113.1 | 24 | 118.6 | 119.3 | 120.1 | 24 | | |
| 4/14 | 106.2 | 107.1 | 107.4 | 24 | 104.0 | 104.3 | 105.2 | 19 | 112.6 | 115.7 | 119.2 | 19 | 108.6 | 109.1 | 109.3 | 24 | 117.3 | 118.7 | 119.2 | 24 | | |
| 4/15 | 108.6 | 109.9 | 110.2 | 24 | 102.4 | 102.8 | 103.4 | 23 | 109.4 | 110.5 | 111.4 | 23 | 111.5 | 113.1 | 114.4 | 24 | 117.7 | 119.1 | 122.1 | 24 | | |
| 4/16 | 107.4 | 109.2 | 109.9 | 24 | 102.3 | 102.8 | 102.9 | 24 | 111.1 | 111.6 | 111.9 | 24 | 108.2 | 108.8 | 108.9 | 24 | 116.5 | 117.2 | 117.6 | 24 | | |
| 4/17 | 106.7 | 107.0 | 107.2 | 24 | 102.6 | 102.9 | 103.9 | 20 | 109.1 | 109.5 | 110.0 | 20 | 109.8 | 110.5 | 110.7 | 24 | 117.2 | 117.5 | 117.9 | 24 | | |
| 4/18 | 104.9 | 106.6 | 107.1 | 24 | 104.6 | 104.9 | 105.0 | 24 | 108.9 | 109.5 | 110.1 | 24 | 109.5 | 110.2 | 110.7 | 24 | 114.9 | 116.1 | 116.4 | 24 | | |
| 4/19 | 103.5 | 104.1 | 104.9 | 24 | 104.1 | 104.6 | 105.0 | 23 | 107.5 | 108.9 | 109.8 | 23 | 110.3 | 110.6 | 110.8 | 24 | 114.7 | 117.3 | 118.4 | 24 | | |
| 4/20 | 103.6 | 104.2 | 104.8 | 24 | 103.3 | 103.6 | 103.8 | 23 | 105.4 | 105.9 | 106.4 | 23 | 108.7 | 109.0 | 109.4 | 24 | 108.8 | 109.1 | 109.8 | 24 | | |
| 4/21 | 102.7 | 103.0 | 103.6 | 24 | 102.6 | 103.0 | 103.9 | 22 | 104.6 | 105.0 | 105.9 | 22 | 105.9 | 106.6 | 107.8 | 24 | 106.0 | 106.6 | 107.9 | 24 | | |
| 4/22 | 101.9 | 102.2 | 102.7 | 24 | 101.8 | 102.1 | 102.4 | 20 | 104.4 | 105.0 | 107.3 | 20 | 104.0 | 104.5 | 104.8 | 24 | 109.4 | 110.1 | 110.4 | 24 | | |
| 4/23 | 102.3 | 102.9 | 104.8 | 24 | 102.6 | 102.7 | 103.4 | 19 | 105.7 | 106.3 | 107.4 | 19 | 104.7 | 105.0 | 105.2 | 24 | 111.7 | 112.5 | 113.9 | 24 | | |
| 4/24 | 102.9 | 103.6 | 104.0 | 24 | 103.1 | 103.6 | 103.8 | 21 | 106.3 | 107.6 | 110.4 | 21 | 106.8 | 107.5 | 107.8 | 24 | 111.7 | 113.7 | 115.7 | 24 | | |
| 4/25 | 104.0 | 104.2 | 105.1 | 23 | 104.3 | 104.7 | 105.2 | 23 | 107.2 | 108.4 | 109.8 | 23 | 107.2 | 108.0 | 109.0 | 23 | 109.9 | 112.3 | 113.6 | 23 | | |

Total Dissolved Gas Saturation at Mid Columbia River Sites

| Date | <u>Rock Island</u> | | | # | <u>Rock I. Tlwr</u> | | | # | <u>Wanapum</u> | | | # | <u>Wanapum Tlwr</u> | | | # | <u>Priest Rapids</u> | | | | | |
|------|--------------------|-------------|-------|----|---------------------|-------------|-------|----|----------------|-------------|-------|----|---------------------|-------------|-------|----|----------------------|-------------|-------|------|------|----|
| | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | | <u>24 h</u> | <u>12 h</u> | High | High | High | hr |
| | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | Avg | Avg | | | | |
| 4/12 | 113.5 | 114.8 | 115.6 | 24 | 114.7 | 115.9 | 116.7 | 24 | 112.9 | 115.0 | 115.9 | 24 | 114.6 | 115.3 | 116.4 | 24 | 115.0 | 116.2 | 117.1 | 24 | | |
| 4/13 | 111.7 | 112.5 | 113.6 | 24 | 113.4 | 114.0 | 114.8 | 24 | 114.0 | 115.4 | 116.0 | 24 | 113.3 | 114.3 | 114.9 | 24 | 112.6 | 113.3 | 114.4 | 24 | | |
| 4/14 | 110.3 | 111.0 | 111.7 | 24 | 112.5 | 113.6 | 114.2 | 24 | 111.0 | 111.2 | 111.6 | 24 | 112.1 | 112.7 | 114.3 | 24 | 111.7 | 112.5 | 113.5 | 24 | | |
| 4/15 | 111.3 | 113.3 | 115.5 | 24 | 113.8 | 115.4 | 117.5 | 24 | 110.4 | 110.6 | 110.8 | 24 | 113.3 | 114.4 | 115.6 | 24 | 111.3 | 111.9 | 112.8 | 24 | | |
| 4/16 | 109.8 | 110.7 | 112.1 | 24 | 112.4 | 113.2 | 114.0 | 24 | 109.6 | 109.7 | 109.8 | 24 | 114.3 | 114.9 | 115.9 | 24 | 113.2 | 113.8 | 114.7 | 24 | | |
| 4/17 | 110.3 | 111.5 | 111.8 | 24 | 113.5 | 114.5 | 114.7 | 24 | 110.6 | 111.1 | 111.2 | 24 | 112.2 | 112.4 | 112.9 | 24 | 112.9 | 113.2 | 114.2 | 24 | | |
| 4/18 | 110.7 | 111.3 | 111.5 | 24 | 113.7 | 114.0 | 114.2 | 23 | 111.1 | 111.4 | 111.7 | 24 | 112.0 | 112.3 | 112.8 | 24 | 111.8 | 112.2 | 112.5 | 24 | | |
| 4/19 | 110.8 | 111.7 | 112.3 | 24 | 113.1 | 114.0 | 114.5 | 24 | 112.7 | 113.1 | 113.3 | 24 | 112.9 | 113.2 | 113.5 | 24 | 112.4 | 112.6 | 112.8 | 24 | | |
| 4/20 | 108.5 | 109.1 | 110.7 | 24 | 110.2 | 111.1 | 113.2 | 24 | 111.7 | 112.2 | 112.7 | 24 | 111.2 | 111.7 | 112.0 | 24 | 111.0 | 111.5 | 112.0 | 24 | | |
| 4/21 | 106.3 | 107.2 | 107.7 | 24 | 109.0 | 109.8 | 110.5 | 24 | 109.6 | 109.8 | 110.4 | 24 | 110.1 | 110.3 | 110.6 | 24 | 109.2 | 109.6 | 110.2 | 24 | | |
| 4/22 | 104.4 | 105.5 | 105.8 | 24 | 107.0 | 107.9 | 108.7 | 24 | 108.9 | 109.4 | 109.7 | 24 | 109.5 | 109.6 | 109.9 | 24 | 109.1 | 110.1 | 110.6 | 24 | | |
| 4/23 | 106.0 | 106.9 | 107.6 | 24 | 108.1 | 109.1 | 110.0 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 | | |
| 4/24 | 107.7 | 109.7 | 110.9 | 24 | 109.8 | 111.8 | 113.9 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 | | |
| 4/25 | 106.6 | 107.5 | 109.0 | 23 | 109.4 | 110.6 | 112.9 | 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 | <u>Priest R. Dnst</u> | | | <u>Pasco</u> | | | <u>Dworshak</u> | | | <u>Clrwr-Peck</u> | | | <u>Anatone</u> | | | | | | | |
|------|-----------------------|-------------|-------|--------------|-------------|-----|-----------------|-------------|------|-------------------|-------------|----|----------------|-------------|-------|-------------|-------------|-------|-------|-----|
| | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | | |
| | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg |
| 4/12 | 117.4 | 118.0 | 118.5 | 24 | --- | --- | --- | 0 | 95.3 | 95.9 | 96.1 | 23 | 91.3 | 91.3 | 92.4 | 10 | 102.5 | 103.6 | 104.3 | 24 |
| 4/13 | 116.3 | 116.8 | 117.2 | 24 | --- | --- | --- | 0 | 95.6 | 95.8 | 96.0 | 24 | --- | --- | --- | 0 | 102.1 | 102.6 | 103.3 | 24 |
| 4/14 | 115.5 | 115.6 | 116.0 | 24 | --- | --- | --- | 0 | 95.2 | 95.5 | 95.6 | 24 | 91.1 | 91.2 | 91.7 | 13 | 101.8 | 102.6 | 103.5 | 24 |
| 4/15 | 115.3 | 115.7 | 116.1 | 24 | --- | --- | --- | 0 | 95.3 | 95.6 | 96.0 | 24 | 90.3 | 90.3 | 90.6 | 5 | 101.8 | 102.6 | 103.4 | 24 |
| 4/16 | 116.3 | 116.5 | 117.2 | 24 | --- | --- | --- | 0 | 95.1 | 95.5 | 95.7 | 24 | --- | --- | --- | 0 | 101.6 | 102.5 | 103.4 | 24 |
| 4/17 | 116.4 | 116.6 | 117.1 | 24 | --- | --- | --- | 0 | 95.1 | 95.3 | 95.6 | 24 | 90.3 | 90.3 | 90.4 | 5 | 102.0 | 103.3 | 105.6 | 24 |
| 4/18 | 115.4 | 115.7 | 116.0 | 24 | --- | --- | --- | 0 | 95.3 | 95.5 | 95.8 | 24 | 97.8 | 98.5 | 98.8 | 13 | 102.0 | 102.7 | 103.4 | 24 |
| 4/19 | 115.2 | 115.5 | 116.1 | 24 | --- | --- | --- | 0 | 95.6 | 95.8 | 96.2 | 24 | 98.5 | 98.8 | 99.0 | 24 | 102.2 | 102.7 | 103.2 | 24 |
| 4/20 | 113.0 | 113.4 | 114.1 | 24 | --- | --- | --- | 0 | 95.1 | 95.3 | 95.6 | 24 | 98.6 | 99.1 | 99.4 | 24 | 102.0 | 102.8 | 103.8 | 24 |
| 4/21 | 111.3 | 111.6 | 112.0 | 24 | --- | --- | --- | 0 | 95.1 | 95.5 | 95.9 | 24 | 98.7 | 99.2 | 100.0 | 24 | 102.0 | 102.9 | 104.0 | 23 |
| 4/22 | 110.9 | 111.6 | 111.8 | 24 | --- | --- | --- | 0 | 94.6 | 94.9 | 95.2 | 24 | 98.3 | 99.1 | 99.8 | 24 | 101.6 | 102.7 | 103.6 | 24 |
| 4/23 | --- | --- | --- | 0 | --- | --- | --- | 0 | 95.0 | 95.3 | 95.8 | 24 | 98.4 | 99.1 | 99.9 | 24 | 101.8 | 102.7 | 103.7 | 24 |
| 4/24 | --- | --- | --- | 0 | --- | --- | --- | 0 | 95.3 | 95.8 | 96.0 | 24 | 98.9 | 99.9 | 100.6 | 24 | 102.4 | 103.9 | 105.0 | 24 |
| 4/25 | --- | --- | --- | 0 | --- | --- | --- | 0 | 96.0 | 96.4 | 96.8 | 23 | 99.2 | 100.0 | 100.7 | 23 | 102.7 | 103.8 | 104.9 | 23 |

Total Dissolved Gas Saturation Data at Snake River Sites

| Date | <u>Clrwr-Lewiston</u> | | | <u>Lower Granite</u> | | | <u>L. Granite Tlwr</u> | | | <u>Little Goose</u> | | | <u>L. Goose Tlwr</u> | | | | | | | |
|------|-----------------------|-------------|-------|----------------------|-------------|-------|------------------------|-------------|-------|---------------------|-------------|----|----------------------|-------------|-------|-------------|-------------|-------|-------|-----|
| | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | | |
| | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg |
| 4/12 | 100.5 | 101.8 | 102.9 | 23 | 101.9 | 102.8 | 103.3 | 24 | 110.8 | 111.2 | 111.8 | 24 | 108.2 | 108.9 | 109.5 | 22 | 110.8 | 111.3 | 112.3 | 22 |
| 4/13 | 100.0 | 100.6 | 101.2 | 24 | 102.7 | 103.1 | 103.5 | 24 | 110.6 | 110.9 | 111.3 | 24 | 108.6 | 109.0 | 109.5 | 24 | 110.8 | 110.9 | 111.1 | 24 |
| 4/14 | 99.9 | 101.0 | 102.2 | 24 | 101.6 | 101.7 | 101.9 | 24 | 110.9 | 111.2 | 111.6 | 24 | 107.3 | 107.4 | 107.6 | 24 | 110.3 | 110.5 | 110.8 | 24 |
| 4/15 | 100.1 | 101.2 | 102.1 | 24 | 101.3 | 101.4 | 101.7 | 24 | 111.1 | 111.4 | 111.8 | 24 | 106.9 | 107.0 | 107.2 | 24 | 110.1 | 110.3 | 110.4 | 24 |
| 4/16 | 99.7 | 101.0 | 102.0 | 24 | 99.8 | 100.1 | 100.8 | 24 | 110.8 | 111.4 | 112.2 | 24 | 106.0 | 106.1 | 106.4 | 24 | 110.0 | 110.3 | 110.5 | 24 |
| 4/17 | 99.9 | 101.6 | 102.9 | 24 | 99.2 | 99.4 | 99.8 | 24 | 111.7 | 112.6 | 113.4 | 24 | 105.8 | 106.4 | 107.0 | 24 | 110.3 | 110.4 | 110.6 | 24 |
| 4/18 | 99.1 | 100.0 | 101.4 | 24 | 100.1 | 100.4 | 100.9 | 24 | 112.0 | 112.5 | 112.9 | 24 | 107.7 | 108.8 | 109.1 | 24 | 111.2 | 111.5 | 111.6 | 24 |
| 4/19 | 98.5 | 99.4 | 99.9 | 24 | 101.3 | 101.5 | 101.7 | 24 | 112.6 | 113.0 | 113.9 | 24 | 109.0 | 109.2 | 109.3 | 24 | 111.4 | 111.5 | 111.7 | 24 |
| 4/20 | 98.4 | 99.0 | 99.6 | 24 | 101.7 | 102.0 | 102.3 | 24 | 112.7 | 113.1 | 113.3 | 24 | 108.4 | 108.5 | 108.9 | 24 | 111.0 | 111.2 | 111.3 | 24 |
| 4/21 | 98.1 | 98.9 | 99.5 | 24 | 102.4 | 102.5 | 102.7 | 24 | 112.5 | 112.9 | 113.4 | 24 | 108.1 | 108.4 | 108.8 | 24 | 110.7 | 111.0 | 111.4 | 24 |
| 4/22 | 97.3 | 98.5 | 99.5 | 24 | 101.4 | 101.7 | 102.2 | 24 | 111.6 | 111.9 | 112.3 | 24 | 107.3 | 107.6 | 107.9 | 24 | 110.4 | 110.6 | 110.9 | 24 |
| 4/23 | 96.8 | 97.8 | 98.6 | 24 | 101.8 | 102.0 | 102.2 | 24 | 111.9 | 112.3 | 112.5 | 24 | 107.9 | 108.2 | 108.3 | 24 | 111.0 | 111.3 | 111.7 | 24 |
| 4/24 | 97.5 | 99.2 | 100.1 | 24 | 102.4 | 102.6 | 103.1 | 24 | 112.2 | 112.9 | 113.8 | 24 | 109.1 | 110.2 | 111.3 | 24 | 111.8 | 112.3 | 112.7 | 24 |
| 4/25 | 97.8 | 98.8 | 99.5 | 23 | 103.2 | 103.4 | 103.6 | 23 | 112.4 | 112.8 | 113.2 | 23 | 111.3 | 111.6 | 111.9 | 23 | 112.9 | 113.3 | 113.7 | 23 |

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

| Date | <u>Lower Mon.</u> | | | <u>L. Mon. Tlwr</u> | | | <u>Ice Harbor</u> | | | <u>Ice Harbor Tlwr</u> | | | <u>McNary-Oregon</u> | | | | | | | |
|------|-------------------|-------------|-------|---------------------|-------------|-------|-------------------|-------------|-------|------------------------|-------------|----|----------------------|-------------|-------|-------------|-------------|-----|-----|-----|
| | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | <u>24 h</u> | <u>12 h</u> | # | | |
| | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg | | High | hr | | Avg | Avg |
| 4/12 | 109.1 | 109.5 | 109.9 | 24 | 119.4 | 119.6 | 120.0 | 22 | 112.8 | 113.3 | 113.8 | 24 | 115.1 | 115.5 | 115.9 | 24 | --- | --- | --- | 0 |
| 4/13 | 108.7 | 108.9 | 109.3 | 24 | 118.9 | 119.2 | 119.6 | 24 | 112.8 | 113.1 | 113.8 | 24 | 114.4 | 114.8 | 115.7 | 24 | --- | --- | --- | 0 |
| 4/14 | 108.3 | 108.6 | 108.8 | 24 | 119.5 | 119.9 | 120.3 | 24 | 111.7 | 111.8 | 111.9 | 24 | 115.4 | 115.7 | 115.8 | 24 | --- | --- | --- | 0 |
| 4/15 | 108.0 | 108.3 | 108.7 | 24 | 119.3 | 119.9 | 120.2 | 24 | 111.1 | 111.2 | 111.5 | 24 | 114.7 | 115.2 | 115.4 | 24 | --- | --- | --- | 0 |
| 4/16 | 107.4 | 107.7 | 107.8 | 24 | 118.9 | 119.6 | 120.1 | 24 | 111.1 | 111.4 | 111.6 | 24 | 113.7 | 114.5 | 115.1 | 24 | --- | --- | --- | 0 |
| 4/17 | 107.7 | 108.0 | 108.3 | 24 | 119.0 | 119.5 | 120.0 | 24 | 111.8 | 112.2 | 112.6 | 24 | 113.9 | 114.6 | 114.9 | 24 | --- | --- | --- | 0 |
| 4/18 | 108.6 | 108.9 | 109.2 | 24 | 119.5 | 119.8 | 120.3 | 24 | 113.0 | 113.6 | 114.3 | 24 | 113.3 | 113.7 | 114.1 | 24 | --- | --- | --- | 0 |
| 4/19 | 110.0 | 110.2 | 110.3 | 24 | 119.1 | 119.5 | 119.8 | 24 | 115.2 | 115.6 | 116.0 | 24 | 113.0 | 113.2 | 113.4 | 24 | --- | --- | --- | 0 |
| 4/20 | 109.7 | 109.9 | 110.1 | 24 | 119.2 | 119.4 | 119.7 | 24 | 114.4 | 114.6 | 114.9 | 24 | 113.2 | 113.6 | 114.3 | 24 | --- | --- | --- | 0 |
| 4/21 | 109.4 | 109.6 | 109.7 | 24 | 119.5 | 119.9 | 120.3 | 24 | 113.8 | 114.0 | 114.2 | 24 | 114.8 | 115.4 | 115.9 | 24 | --- | --- | --- | 0 |
| 4/22 | 108.3 | 108.7 | 109.1 | 24 | 119.4 | 119.8 | 120.1 | 24 | 112.4 | 112.7 | 113.1 | 24 | 114.7 | 115.2 | 115.6 | 24 | --- | --- | --- | 0 |
| 4/23 | 109.1 | 109.4 | 109.5 | 24 | 119.4 | 119.8 | 120.3 | 23 | 113.9 | 114.4 | 114.7 | 24 | 113.3 | 113.8 | 115.4 | 24 | --- | --- | --- | 0 |
| 4/24 | 110.3 | 110.9 | 111.2 | 24 | 119.6 | 120.2 | 120.8 | 24 | 115.2 | 116.1 | 116.8 | 24 | 113.6 | 114.0 | 114.4 | 24 | --- | --- | --- | 0 |
| 4/25 | 112.0 | 112.2 | 112.5 | 23 | 119.1 | 119.5 | 119.9 | 23 | 117.2 | 117.4 | 117.7 | 23 | 113.5 | 114.0 | 114.3 | 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>24 h</u> | <u>12 h</u> | | | <u>24h</u> | <u>12h</u> | | | <u>24h</u> | <u>12h</u> | | | <u>24h</u> | <u>12h</u> | | |
| | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | |
| 4/12 | 109.5 | 110.5 | 111.3 | 24 | 118.3 | 118.5 | 118.6 | 24 | 107.3 | 109.1 | 110.2 | 24 | 116.5 | 117.2 | 117.9 | 24 | 108.8 | 110.1 | 110.7 | 24 |
| 4/13 | 109.9 | 110.4 | 111.1 | 24 | 116.5 | 117.6 | 118.8 | 24 | 108.6 | 109.3 | 110.2 | 24 | 113.5 | 114.2 | 115.2 | 24 | 108.3 | 109.1 | 110.4 | 24 |
| 4/14 | 108.2 | 108.7 | 109.0 | 24 | 116.4 | 117.0 | 117.6 | 24 | 106.7 | 106.9 | 106.9 | 24 | 115.1 | 116.0 | 117.1 | 24 | 108.0 | 108.6 | 109.1 | 24 |
| 4/15 | 108.5 | 108.9 | 109.2 | 24 | 117.4 | 117.7 | 118.3 | 24 | 106.7 | 106.9 | 107.1 | 24 | 115.3 | 116.1 | 116.4 | 24 | 108.7 | 109.0 | 109.4 | 24 |
| 4/16 | 109.5 | 109.9 | 110.2 | 24 | 117.8 | 118.0 | 118.2 | 24 | 106.6 | 106.9 | 107.0 | 24 | 115.4 | 116.1 | 117.6 | 24 | 108.7 | 109.0 | 109.4 | 24 |
| 4/17 | 109.6 | 110.3 | 111.1 | 24 | 117.2 | 117.8 | 118.1 | 24 | 105.6 | 105.8 | 106.0 | 24 | 113.5 | 113.8 | 115.3 | 24 | 108.2 | 108.6 | 109.1 | 24 |
| 4/18 | 111.3 | 111.9 | 112.8 | 24 | 116.8 | 117.1 | 117.9 | 24 | 106.6 | 107.3 | 107.8 | 24 | 114.1 | 114.6 | 115.3 | 24 | 108.4 | 108.8 | 109.0 | 24 |
| 4/19 | 113.3 | 113.7 | 113.9 | 24 | 115.3 | 116.0 | 116.4 | 24 | 108.8 | 109.3 | 109.5 | 24 | 114.0 | 114.3 | 114.6 | 24 | 109.6 | 110.0 | 110.4 | 24 |
| 4/20 | 110.9 | 111.3 | 112.2 | 24 | 114.0 | 114.2 | 114.4 | 24 | 108.9 | 109.2 | 109.4 | 24 | 114.3 | 114.5 | 114.8 | 24 | 108.4 | 108.8 | 109.1 | 24 |
| 4/21 | 109.0 | 109.2 | 109.8 | 24 | 113.9 | 114.3 | 114.6 | 24 | 108.7 | 108.8 | 109.0 | 24 | 113.5 | 113.9 | 114.4 | 24 | 109.1 | 109.3 | 109.6 | 24 |
| 4/22 | 108.2 | 109.0 | 109.6 | 24 | 113.6 | 113.8 | 114.3 | 24 | 107.6 | 108.0 | 108.6 | 24 | 113.6 | 114.2 | 115.5 | 24 | 109.4 | 110.3 | 110.7 | 24 |
| 4/23 | 109.1 | 109.3 | 109.6 | 24 | 113.5 | 113.8 | 114.1 | 24 | 107.9 | 108.2 | 108.6 | 24 | 113.4 | 113.6 | 114.0 | 24 | 110.5 | 110.7 | 110.9 | 24 |
| 4/24 | 110.0 | 110.8 | 111.3 | 24 | 113.7 | 114.1 | 114.7 | 24 | 108.3 | 109.0 | 109.5 | 24 | 112.8 | 113.2 | 113.7 | 24 | 110.5 | 111.1 | 111.5 | 24 |
| 4/25 | 111.9 | 112.1 | 112.6 | 23 | 114.2 | 114.5 | 114.8 | 23 | 109.7 | 109.9 | 110.1 | 23 | 113.2 | 113.7 | 114.2 | 23 | 111.3 | 111.5 | 111.8 | 23 |

Total Dissolved Gas Saturation Data at Lower Columbia River Sites

| Date | <u>The Dalles Dnst</u> | | | # | <u>Bonneville</u> | | | # | <u>Warrendale</u> | | | # | <u>Camas\Washougal</u> | | | # | <u>Cascade Island</u> | | | # |
|------|------------------------|-------------|-------|----|-------------------|-------------|-------|----|-------------------|------------|-------|----|------------------------|------------|-------|----|-----------------------|------------|-------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24h</u> | <u>12h</u> | | | <u>24h</u> | <u>12h</u> | | | <u>24h</u> | <u>12h</u> | | |
| | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | |
| 4/12 | 115.2 | 115.7 | 116.1 | 24 | 112.8 | 113.4 | 113.8 | 24 | 114.6 | 115.0 | 115.3 | 24 | 113.6 | 114.2 | 114.5 | 24 | 119.8 | 120.2 | 120.5 | 24 |
| 4/13 | 114.6 | 115.1 | 115.5 | 24 | 111.3 | 112.1 | 112.7 | 24 | 114.2 | 114.5 | 114.8 | 24 | 111.7 | 112.1 | 113.0 | 24 | 118.5 | 118.7 | 119.0 | 24 |
| 4/14 | 114.6 | 115.3 | 115.6 | 24 | 109.7 | 110.4 | 110.9 | 24 | 113.9 | 114.4 | 114.8 | 24 | 111.7 | 112.7 | 113.6 | 24 | 118.3 | 118.4 | 118.6 | 24 |
| 4/15 | 115.2 | 115.5 | 115.9 | 24 | 111.7 | 112.1 | 112.3 | 24 | 114.3 | 114.5 | 114.6 | 24 | 112.3 | 113.2 | 113.8 | 24 | 118.7 | 118.8 | 118.9 | 24 |
| 4/16 | 115.0 | 115.2 | 115.4 | 24 | 112.5 | 113.0 | 113.2 | 24 | 114.5 | 114.8 | 115.0 | 24 | 112.7 | 113.4 | 114.2 | 24 | 118.7 | 118.8 | 118.8 | 24 |
| 4/17 | 114.8 | 115.1 | 115.3 | 24 | 113.2 | 113.5 | 113.9 | 24 | 115.6 | 116.0 | 116.3 | 24 | 113.5 | 114.9 | 115.8 | 24 | 118.3 | 118.4 | 118.5 | 24 |
| 4/18 | 114.6 | 114.9 | 115.4 | 24 | 112.5 | 112.7 | 113.1 | 24 | 115.5 | 115.8 | 116.1 | 24 | 114.1 | 114.8 | 115.5 | 24 | 118.3 | 118.5 | 118.8 | 24 |
| 4/19 | 115.0 | 115.4 | 115.8 | 24 | 111.9 | 112.2 | 112.4 | 24 | 115.3 | 115.5 | 115.6 | 24 | 113.1 | 113.6 | 114.2 | 24 | 118.4 | 118.5 | 118.6 | 24 |
| 4/20 | 114.4 | 114.6 | 114.7 | 24 | 110.3 | 110.6 | 110.8 | 24 | 114.9 | 115.1 | 115.2 | 24 | 112.6 | 113.4 | 113.9 | 24 | 118.3 | 118.4 | 118.5 | 24 |
| 4/21 | 114.8 | 115.1 | 115.3 | 24 | 110.2 | 110.4 | 110.5 | 24 | 114.5 | 114.7 | 115.0 | 24 | 112.0 | 112.5 | 112.9 | 24 | 118.3 | 118.4 | 118.5 | 24 |
| 4/22 | 115.2 | 115.9 | 116.1 | 24 | 111.1 | 112.1 | 112.7 | 24 | 114.4 | 115.0 | 115.3 | 24 | 112.2 | 113.3 | 113.6 | 24 | 118.1 | 118.2 | 118.3 | 24 |
| 4/23 | 116.0 | 116.4 | 116.7 | 24 | 114.4 | 115.4 | 115.9 | 24 | 116.4 | 117.1 | 117.6 | 24 | 113.6 | 115.5 | 116.5 | 24 | 118.6 | 118.8 | 119.0 | 24 |
| 4/24 | 116.2 | 117.0 | 117.9 | 24 | 115.4 | 116.1 | 116.7 | 24 | 117.0 | 117.7 | 118.2 | 24 | 114.7 | 116.0 | 116.7 | 24 | 118.7 | 118.9 | 119.1 | 24 |
| 4/25 | 116.2 | 116.6 | 117.3 | 23 | 115.6 | 115.9 | 116.4 | 23 | 117.2 | 117.5 | 117.8 | 23 | 116.5 | 117.6 | 118.5 | 23 | 118.7 | 118.9 | 119.1 | 23 |

Two-Week Summary of Passage Indices

Source: Fish Passage Center

Updated: 4/26/2013 8:29

Two-Week Summary of Passage Indices

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

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

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

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

| COMBINED YEARLING CHINOOK | | | | | | | | | | | |
|----------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Date | WTB (Coll) | IMN (Coll) | GRN (Coll) | LEW (Coll) | LGR (INDEX) | LGS (INDEX) | LMN (INDEX) | RIS (INDEX) | MCN (INDEX) | JDA (INDEX) | BO2 (INDEX) |
| 04/12/2013 * | 1,356 | 88 | 515 | 17 | 13,421 | --- | --- | 23 | --- | 4,855 | 5,092 |
| 04/13/2013 * | 878 | 101 | 743 | 11 | 20,595 | 6,792 | 239 | 25 | 4,057 | 3,428 | 3,494 |
| 04/14/2013 * | 966 | 89 | 411 | 20 | 17,498 | --- | --- | 111 | --- | 6,686 | 2,925 |
| 04/15/2013 * | 664 | 161 | 589 | 4 | 16,586 | --- | --- | 136 | 3,851 | 5,518 | 3,064 |
| 04/16/2013 * | 731 | 158 | 407 | 5 | 22,383 | --- | 265 | 52 | --- | 3,236 | 5,454 |
| 04/17/2013 * | 653 | 127 | 381 | 17 | 14,737 | --- | --- | 58 | 13,390 | 4,037 | 4,910 |
| 04/18/2013 * | 453 | 90 | 82 | 16 | 19,788 | 16,108 | --- | 20 | --- | 5,669 | 3,134 |
| 04/19/2013 * | 154 | 70 | 166 | 14 | 19,829 | --- | 184 | 46 | 19,908 | 12,934 | 6,234 |
| 04/20/2013 * | 147 | 65 | 373 | 6 | 25,347 | --- | --- | 26 | --- | 12,471 | 9,541 |
| 04/21/2013 * | 555 | 72 | 1,421 | 6 | 23,577 | --- | --- | 39 | 16,695 | 17,351 | 15,299 |
| 04/22/2013 * | 214 | --- | 894 | 19 | 31,799 | --- | 174 | 184 | --- | 21,877 | 14,401 |
| 04/23/2013 * | 339 | --- | 418 | 69 | 18,095 | 14,734 | --- | 67 | 14,591 | 21,763 | 16,870 |
| 04/24/2013 * | 272 | --- | 386 | 25 | 23,154 | --- | --- | 189 | --- | 20,100 | 13,740 |
| 04/25/2013 * | 253 | --- | 150 | 22 | 25,149 | --- | 225 | 191 | 20,112 | 16,877 | 17,468 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 7,635 | 1,021 | 6,936 | 251 | 291,958 | 37,634 | 1,087 | 1,167 | 92,604 | 156,802 | 121,626 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 545 | 102 | 495 | 18 | 20,854 | 12,545 | 217 | 83 | 13,229 | 11,200 | 8,688 |
| YTD | 42,497 | 52,819 | 21,835 | 597 | 426,623 | 39,521 | 1,225 | 1,259 | 97,167 | 165,074 | 139,199 |

| COMBINED SUBYEARLING CHINOOK | | | | | | | | | | | |
|-------------------------------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Date | WTB (Coll) | IMN (Coll) | GRN (Coll) | LEW (Coll) | LGR (INDEX) | LGS (INDEX) | LMN (INDEX) | RIS (INDEX) | MCN (INDEX) | JDA (INDEX) | BO2 (INDEX) |
| 04/12/2013 * | 0 | 0 | 2 | 0 | 147 | --- | --- | 72 | --- | 0 | 771,897 |
| 04/13/2013 * | 0 | 0 | 0 | 0 | 128 | 0 | 8 | 31 | 402 | 11 | 269,748 |
| 04/14/2013 * | 0 | 0 | 0 | 0 | 310 | --- | --- | 31 | --- | 0 | 63,431 |
| 04/15/2013 * | 0 | 0 | 2 | 0 | 0 | --- | --- | 2 | 247 | 29 | 27,663 |
| 04/16/2013 * | 0 | 0 | 2 | 0 | 0 | --- | --- | 5 | 11 | 0 | 38,001 |
| 04/17/2013 * | 0 | 0 | 2 | 3 | 0 | --- | --- | 17 | 870 | 29 | 17,096 |
| 04/18/2013 * | 0 | 0 | 0 | 0 | 0 | 0 | --- | 8 | --- | 0 | 12,695 |
| 04/19/2013 * | 0 | 0 | 1 | 2 | 0 | --- | 3 | 4 | 444 | 0 | 8,417 |
| 04/20/2013 * | 0 | 0 | 0 | 3 | 90 | --- | --- | 4 | --- | 0 | 4,399 |
| 04/21/2013 * | 0 | 0 | 0 | 0 | 68 | --- | --- | 5 | 0 | 0 | 6,305 |
| 04/22/2013 * | 0 | --- | 1 | 1 | 0 | --- | 0 | 11 | --- | 0 | 4,652 |
| 04/23/2013 * | 0 | --- | 0 | 1 | 163 | 0 | --- | 39 | 2,210 | 0 | 3,597 |
| 04/24/2013 * | 0 | --- | 0 | 0 | 0 | --- | --- | 20 | --- | 0 | 2,643 |
| 04/25/2013 * | 0 | --- | 0 | 0 | 92 | --- | 0 | 10 | 1,183 | 0 | 2,651 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 0 | 0 | 10 | 10 | 998 | 0 | 16 | 265 | 5,356 | 69 | 1,233,195 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 0 | 0 | 1 | 1 | 71 | 0 | 3 | 19 | 765 | 5 | 88,085 |
| YTD | 2 | 16 | 29 | 105 | 1,996 | 0 | 18 | 432 | 5,534 | 146 | 1,245,153 |

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) |
| 04/12/2013 | 0 | 0 | 0 | 1 | 147 | --- | --- | 2 | --- | 59 | 12,853 |
| 04/13/2013 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 321 | 63 | 12,419 |
| 04/14/2013 | 0 | 0 | 0 | 0 | 0 | --- | --- | 10 | --- | 192 | 10,857 |
| 04/15/2013 | 0 | 0 | 0 | 0 | 0 | --- | --- | 2 | 875 | 315 | 12,852 |
| 04/16/2013 | 0 | 0 | 0 | 0 | 0 | --- | 0 | 4 | --- | 229 | 16,999 |
| 04/17/2013 | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 544 | 429 | 10,459 |
| 04/18/2013 | 0 | 0 | 0 | 0 | 0 | 0 | --- | 4 | --- | 453 | 12,448 |
| 04/19/2013 | 0 | 0 | 0 | 0 | 46 | --- | 0 | 0 | 1,156 | 669 | 13,947 |
| 04/20/2013 | 0 | 0 | 0 | 0 | 45 | --- | --- | 6 | --- | 465 | 7,081 |
| 04/21/2013 | 0 | 0 | 0 | 0 | 0 | --- | --- | 7 | 851 | 502 | 9,634 |
| 04/22/2013 | 0 | --- | 0 | 0 | 0 | --- | 0 | 5 | --- | 802 | 6,828 |
| 04/23/2013 | 0 | --- | 0 | 0 | 0 | 0 | --- | 2 | 510 | 644 | 7,833 |
| 04/24/2013 | 0 | --- | 0 | 1 | 0 | --- | --- | 5 | --- | 429 | 4,875 |
| 04/25/2013 | 0 | --- | 0 | 1 | 0 | --- | 0 | 10 | 676 | 431 | 4,623 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 0 | 0 | 0 | 5 | 238 | 0 | 0 | 61 | 4,933 | 5,682 | 143,708 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 4 | 705 | 406 | 10,265 |
| YTD | 0 | 0 | 0 | 9 | 309 | 0 | 0 | 105 | 5,511 | 5,784 | 165,084 |

| 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) |
| 04/12/2013 | 41 | 189 | 31 | 36 | 10,323 | --- | --- | 16 | --- | 1,610 | 839 |
| 04/13/2013 | 56 | 215 | 30 | 46 | 17,520 | 5,907 | 107 | 22 | 729 | 1,682 | 0 |
| 04/14/2013 | 41 | 183 | 35 | 64 | 18,427 | --- | --- | 23 | --- | 1,036 | 1,278 |
| 04/15/2013 | 59 | 360 | 18 | 31 | 19,903 | --- | --- | 27 | 1,820 | 1,417 | 511 |
| 04/16/2013 | 76 | 558 | 57 | 78 | 25,693 | --- | 152 | 6 | --- | 1,289 | 453 |
| 04/17/2013 | 47 | 386 | 112 | 55 | 23,160 | --- | --- | 21 | 2,830 | 1,231 | 1,181 |
| 04/18/2013 | 43 | 341 | 14 | 29 | 47,414 | 42,888 | --- | 12 | --- | 2,573 | 1,402 |
| 04/19/2013 | 40 | 187 | 12 | 275 | 19,100 | --- | 288 | 6 | 10,252 | 1,861 | 1,402 |
| 04/20/2013 | 99 | 141 | 34 | 130 | 19,323 | --- | --- | 6 | --- | 1,751 | 2,310 |
| 04/21/2013 | 147 | 184 | 139 | 142 | 33,042 | --- | --- | 16 | 11,752 | 1,757 | 2,072 |
| 04/22/2013 | 129 | --- | 565 | 140 | 116,785 | --- | 338 | 13 | --- | 5,097 | 1,575 |
| 04/23/2013 | 103 | --- | 43 | 286 | 52,492 | 31,423 | --- | 7 | 13,314 | 6,586 | 1,679 |
| 04/24/2013 | 140 | --- | 41 | 120 | 25,041 | --- | --- | 20 | --- | 6,509 | 2,066 |
| 04/25/2013 | 90 | --- | 19 | 246 | 45,838 | --- | 379 | 16 | 21,292 | 7,038 | 3,671 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 1,111 | 2,744 | 1,150 | 1,678 | 474,061 | 80,218 | 1,264 | 211 | 61,989 | 41,437 | 20,439 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 79 | 274 | 82 | 120 | 33,862 | 26,739 | 253 | 15 | 8,856 | 2,960 | 1,460 |
| YTD | 1,574 | 9,319 | 1,445 | 2,204 | 508,946 | 81,463 | 1,390 | 364 | 63,407 | 46,811 | 23,139 |

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) |
| 04/12/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 67 | --- | 0 | 446 |
| 04/13/2013 * | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 181 | 16 | 0 |
| 04/14/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 49 | --- | 32 | 471 |
| 04/15/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 37 | 1,198 | 29 | 0 |
| 04/16/2013 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 21 | --- | 57 | 183 |
| 04/17/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 6 | 3,589 | 57 | 0 |
| 04/18/2013 * | 0 | 0 | 0 | 0 | 0 | 0 | --- | 8 | --- | 47 | 82 |
| 04/19/2013 * | 0 | 0 | 0 | 0 | 0 | --- | 0 | 12 | 2,845 | 215 | 77 |
| 04/20/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 34 | --- | 429 | 74 |
| 04/21/2013 * | 0 | 0 | 0 | 0 | 34 | --- | --- | 107 | 1,873 | 932 | 225 |
| 04/22/2013 * | 0 | --- | 0 | 0 | 0 | --- | 0 | 77 | --- | 630 | 225 |
| 04/23/2013 * | 0 | --- | 0 | 0 | 0 | 0 | --- | 10 | 12,079 | 143 | 79 |
| 04/24/2013 * | 0 | --- | 0 | 0 | 0 | --- | --- | 168 | --- | 286 | 111 |
| 04/25/2013 * | 0 | --- | 0 | 0 | 0 | --- | 0 | 36 | 10,817 | 503 | 204 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 665 | 32,582 | 3,376 | 2,177 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 48 | 4,655 | 241 | 156 |
| YTD | 0 | 0 | 0 | 0 | 64 | 0 | 3 | 750 | 32,582 | 3,430 | 2,839 |

| COMBINED LAMPREY JUVENILES | | | | | | | | | | | |
|----------------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Date | WTB (Coll) | IMN (Coll) | GRN (Coll) | LEW (Coll) | LGR† (Coll) | LGS (Coll) | LMN (Coll) | RIS (Coll) | MCN (Coll) | JDA (Coll) | BO2 (Coll) |
| 04/12/2013 * | 0 | 0 | 0 | 0 | 300 | --- | --- | 2 | --- | 600 | 155 |
| 04/13/2013 * | 0 | 0 | 0 | 0 | 42 | 420 | 7 | 2 | 210 | 1,095 | 429 |
| 04/14/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 1 | --- | 1,789 | 243 |
| 04/15/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 350 | 1,816 | 67 |
| 04/16/2013 * | 0 | 0 | 0 | 0 | 0 | --- | 5 | 0 | --- | 1,480 | 67 |
| 04/17/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 1,200 | 1,160 | 33 |
| 04/18/2013 * | 0 | 0 | 0 | 0 | 0 | 100 | --- | 1 | --- | 1,417 | 0 |
| 04/19/2013 * | 0 | 0 | 0 | 0 | 0 | --- | 21 | 0 | 1,100 | 1,050 | 0 |
| 04/20/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | --- | 1,350 | 33 |
| 04/21/2013 * | 0 | 0 | 0 | 0 | 0 | --- | --- | 0 | 900 | 1,375 | 37 |
| 04/22/2013 * | 0 | --- | 0 | 0 | 0 | --- | 11 | 0 | --- | 560 | 33 |
| 04/23/2013 * | 0 | --- | 0 | 0 | 0 | 0 | --- | 0 | 200 | 300 | 0 |
| 04/24/2013 * | 0 | --- | 0 | 0 | 0 | --- | --- | 0 | --- | 250 | 71 |
| 04/25/2013 * | 0 | --- | 0 | 0 | 0 | --- | 4 | 0 | 500 | 200 | 0 |
| 04/26/2013 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total: | 0 | 0 | 0 | 0 | 342 | 520 | 48 | 6 | 4,460 | 14,442 | 1,168 |
| # Days: | 14 | 10 | 14 | 14 | 14 | 3 | 5 | 14 | 7 | 14 | 14 |
| Average: | 0 | 0 | 0 | 0 | 24 | 173 | 10 | 0 | 637 | 1,032 | 83 |
| YTD | 0 | 7 | 0 | 0 | 692 | 613 | 56 | 31 | 4,610 | 21,512 | 2,608 |

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:

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.

Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.

The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macrophthalmia, and unidentified lamprey species.

† Caution should be used with interpreting lamprey juvenile collection counts at LGR because of the possibility that lamprey may escape the sample tank before being sampled

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

4/26/13 8:25 AM

| | | 04/12/13 | TO | 04/26/13 | | | |
|--------------------------------|--------------------------|----------|---------|----------|---------|--------|-------------|
| Site | Data | Species | | | | | Grand Total |
| | | CH0 | CH1 | CO | ST | SO | |
| LGR | Sum of NumberCollected | 625 | 176,150 | 150 | 285,545 | 20 | 462,490 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 624 | 176,113 | 150 | 285,536 | 20 | 462,443 |
| | Sum of Numbertrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 1 | 32 | 0 | 6 | 0 | 39 |
| | Sum of FacilityMorts | 0 | 6 | 0 | 1 | 0 | 7 |
| | Sum of ResearchMorts | 0 | 1 | 0 | 1 | 0 | 2 |
| | Sum of TotalProjectMorts | 1 | 39 | 0 | 8 | 0 | 48 |
| LGS | Sum of NumberCollected | | 26,241 | | 55,923 | | 82,164 |
| | Sum of NumberBarged | | 0 | | 0 | | 0 |
| | Sum of NumberBypassed | | 26,239 | | 55,921 | | 82,160 |
| | Sum of Numbertrucked | | 0 | | 0 | | 0 |
| | Sum of SampleMorts | | 2 | | 2 | | 4 |
| | Sum of FacilityMorts | | 0 | | 0 | | 0 |
| | Sum of ResearchMorts | | 0 | | 0 | | 0 |
| | Sum of TotalProjectMorts | | 2 | | 2 | | 4 |
| LMN | Sum of NumberCollected | 7 | 441 | | 488 | | 936 |
| | Sum of NumberBarged | 0 | 0 | | 0 | | 0 |
| | Sum of NumberBypassed | 7 | 441 | | 487 | | 935 |
| | Sum of Numbertrucked | 0 | 0 | | 0 | | 0 |
| | Sum of SampleMorts | 0 | 0 | | 1 | | 1 |
| | Sum of FacilityMorts | 0 | 0 | | 0 | | 0 |
| | Sum of ResearchMorts | 0 | 0 | | 0 | | 0 |
| | Sum of TotalProjectMorts | 0 | 0 | | 1 | | 1 |
| MCN | Sum of NumberCollected | 2,980 | 51,689 | 2,720 | 35,721 | 18,577 | 111,687 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 2,979 | 51,631 | 2,720 | 35,712 | 18,568 | 111,610 |
| | Sum of Numbertrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 1 | 6 | 0 | 2 | 1 | 10 |
| | Sum of FacilityMorts | 0 | 52 | 0 | 7 | 8 | 67 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 1 | 58 | 0 | 9 | 9 | 77 |
| Total Sum of NumberCollected | | 3,612 | 254,521 | 2,870 | 377,677 | 18,597 | 657,277 |
| Total Sum of NumberBarged | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of NumberBypassed | | 3,610 | 254,424 | 2,870 | 377,656 | 18,588 | 657,148 |
| Total Sum of Numbertrucked | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 2 | 40 | 0 | 11 | 1 | 54 |
| Total Sum of FacilityMorts | | 0 | 58 | 0 | 8 | 8 | 74 |
| Total Sum of ResearchMorts | | 0 | 1 | 0 | 1 | 0 | 2 |
| Total Sum of TotalProjectMorts | | 2 | 99 | 0 | 20 | 9 | 130 |

YTD Transportation Summary

Source: Fish Passage Center

Updated:

4/26/13 8:25 AM

TO: 04/26/13

| Site | Data | Species | | | | | Grand Total |
|--------------------------------|--------------------------|---------|---------|-------|--------|---------|-------------|
| | | CH0 | CH1 | CO | SO | ST | |
| LGR | Sum of NumberCollected | 1,335 | 276,053 | 210 | 50 | 309,872 | 587,520 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 1,331 | 275,969 | 210 | 50 | 309,861 | 587,421 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 4 | 69 | 0 | 0 | 8 | 81 |
| | Sum of FacilityMorts | 0 | 16 | 0 | 0 | 1 | 17 |
| | Sum of ResearchMorts | 0 | 1 | 0 | 0 | 1 | 2 |
| | Sum of TotalProjectMorts | 4 | 86 | 0 | 0 | 10 | 100 |
| LGS | Sum of NumberCollected | | 27,603 | | | 56,798 | 84,401 |
| | Sum of NumberBarged | | 0 | | | 0 | 0 |
| | Sum of NumberBypassed | | 27,599 | | | 56,796 | 84,395 |
| | Sum of NumberTrucked | | 0 | | | 0 | 0 |
| | Sum of SampleMorts | | 3 | | | 2 | 5 |
| | Sum of FacilityMorts | | 1 | | | 0 | 1 |
| | Sum of ResearchMorts | | 0 | | | 0 | 0 |
| | Sum of TotalProjectMorts | | 4 | | | 2 | 6 |
| LMN | Sum of NumberCollected | 8 | 542 | | 2 | 563 | 1,115 |
| | Sum of NumberBarged | 0 | 0 | | 0 | 0 | 0 |
| | Sum of NumberBypassed | 8 | 542 | | 2 | 562 | 1,114 |
| | Sum of NumberTrucked | 0 | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | 0 | 0 | | 0 | 1 | 1 |
| | Sum of FacilityMorts | 0 | 0 | | 0 | 0 | 0 |
| | Sum of ResearchMorts | 0 | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 0 | 0 | | 0 | 1 | 1 |
| MCN | Sum of NumberCollected | 3,070 | 53,974 | 3,030 | 18,577 | 36,409 | 115,060 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 3,068 | 53,910 | 3,030 | 18,568 | 36,398 | 114,974 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 2 | 8 | 0 | 1 | 3 | 14 |
| | Sum of FacilityMorts | 0 | 56 | 0 | 8 | 8 | 72 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 2 | 64 | 0 | 9 | 11 | 86 |
| Total Sum of NumberCollected | | 4,413 | 358,172 | 3,240 | 18,629 | 403,642 | 788,096 |
| Total Sum of NumberBarged | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of NumberBypassed | | 4,407 | 358,020 | 3,240 | 18,620 | 403,617 | 787,904 |
| Total Sum of NumberTrucked | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 6 | 80 | 0 | 1 | 14 | 101 |
| Total Sum of FacilityMorts | | 0 | 73 | 0 | 8 | 9 | 90 |
| Total Sum of ResearchMorts | | 0 | 1 | 0 | 0 | 1 | 2 |
| Total Sum of TotalProjectMorts | | 6 | 154 | 0 | 9 | 24 | 193 |

Cumulative Adult Passage at Mainstem Dams Through: 04/26

| DAM | ENDD ATE | Spring Chinook | | | | | | Summer Chinook | | | | | | Fall Chinook | | | | | |
|-----|-------------|----------------|------|-------|------|------------|------|----------------|------|-------|------|------------|------|--------------|------|-------|------|------------|------|
| | | 2013 | | 2012 | | 10-Yr Avg. | | 2013 | | 2012 | | 10-Yr Avg. | | 2013 | | 2012 | | 10-Yr Avg. | |
| | | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack |
| BON | 04/25 | 10205 | 255 | 17983 | 163 | 39661 | 259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TDA | 04/25 | 3711 | 118 | 3111 | 105 | 24031 | 124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JDA | 04/25 | 2182 | 130 | 748 | 44 | 17801 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MCN | 04/25 | 887 | 10 | 215 | 1 | 11469 | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IHR | 04/25 | 548 | 12 | 73 | 0 | 7301 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LMN | 04/25 | 263 | 11 | 33 | 0 | 5194 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGS | 04/25 | 192 | 11 | 20 | 1 | 4019 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGR | 04/25 | 104 | 12 | 10 | 0 | 2969 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRD | 04/24 | 37 | 0 | 7 | 0 | 993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WAN | 04/24 | 29 | 0 | 2 | 0 | 198 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RIS | 04/21 | 7 | 0 | 0 | 0 | 174 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| RRH | 04/21 | 1 | 0 | 0 | 0 | 15 | 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 | 04/24 | 2612 | 82 | 666 | 14 | 4575 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| DAM | ATE | Coho | | | | | | Sockeye | | | Steelhead | | | | | Lamprey | | | |
|-----|-------|-------|------|-------|------|------------|------|---------|------|------------|-----------|------|------------|-----------|-----------|------------|------|------|------------|
| | | 2013 | | 2012 | | 10-Yr Avg. | | 2013 | 2012 | 10-Yr Avg. | 2013 | 2012 | 10-Yr Avg. | Wild 2013 | Wild 2012 | 10-Yr Avg. | 2013 | 2012 | 10-Yr Avg. |
| | | Adult | Jack | Adult | Jack | Adult | Jack | | | | | | | | | | | | |
| BON | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2520 | 4030 | 3709 | 782 | 1287 | 976 | -1 | 1 | 0 |
| TDA | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 588 | 1525 | 2419 | 287 | 882 | 833 | 0 | 0 | 0 |
| JDA | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 704 | 1560 | 5903 | 393 | 1073 | 1806 | 0 | 0 | 0 |
| MCN | 04/25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1261 | 4380 | 5934 | 626 | 2039 | 1949 | 1 | 2 | 0 |
| IHR | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3588 | 1941 | 4972 | 1422 | 898 | 1391 | 3 | 0 | 0 |
| LMN | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2176 | 2889 | 9293 | 1225 | 1525 | 2741 | 0 | 1 | 0 |
| LGS | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1900 | 3087 | 9045 | 1019 | 1798 | 2751 | 1 | 1 | 0 |
| LGR | 04/25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6978 | 8042 | 9020 | 2947 | 3308 | 2792 | 0 | 0 | 0 |
| PRD | 04/24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 46 | 15 | 0 | 0 | 0 | 0 | 0 | 0 |
| WAN | 04/24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 79 | 63 | 0 | 0 | 0 | 0 | 0 | 0 |
| RIS | 04/21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 44 | 30 | 16 | 27 | 18 | 0 | 0 | 0 |
| RRH | 04/21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | 214 | 129 | 45 | 184 | 97 | 0 | 0 | 0 |
| WEL | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WFA | 04/24 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6387 | 9131 | 7781 | 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.