



Fish Passage Center

Weekly Report #12 - 19

July 20, 2012

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Summary of Events:

Water Supply: Precipitation throughout the Columbia Basin has varied between 40% and 168% of average at individual sub-basins over the first one-half of July. Precipitation above The Dalles has been 134% of average over July. Over the 2012 water year, precipitation has ranged between 92% and 126% of average.

Table 1. Summary of July precipitation and cumulative October through July 16, 2012 precipitation with respect to average (1971-2000), at select locations within the Columbia and Snake River Basins.

| Location | Water Year 2012 July 1-16, 2012 | | Water Year 2012 October 1, 2011 to July 16, 2012 | |
|-----------------------------------|------------------------------------|--------------|--|--------------|
| | Observed (inches) | % Average | Observed (inches) | % Average |
| Columbia Above Coulee | 1.16 | 127 | 26.25 | 122 |
| SNAKE RIVER ABOVE ICE HARBOR | 0.56 | 117 | 15.58 | 100 |
| Columbia Above The Dalles | 0.86 | 134 | 23.01 | 113 |
| Kootenai | 1.40 | 143 | 27.65 | 126 |
| Clark Fork | 0.77 | 125 | 16.50 | 111 |
| Flathead | 1.09 | 132 | 23.86 | 121 |
| Pend Oreille/ Spokane | 1.19 | 168 | 33.97 | 122 |
| Central Washington | 0.25 | 133 | 7.56 | 93 |
| SNAKE RIVER PLAIN | 0.42 | 137 | 9.14 | 92 |
| Salmon/Boise/ Payette | 0.39 | 95 | 17.90 | 99 |
| Clearwater | 0.59 | 79 | 31.06 | 113 |
| SW Washington Cascades/Cowlitz | 0.63 | 87 | 68.83 | 104 |
| Willamette Valley | 0.17 | 40 | 61.85 | 110 |

Table 2 displays the May 29th and July 18th Ensemble Streamflow Prediction (ESP) runoff volume forecasts for multiple reservoirs. The July 18th forecast at The Dalles between January and July is 130,282 Kaf (121% of average).

Table 2. May 29th and July 18th ESP Runoff Volume Forecasts for various reservoirs within the Columbia and Snake River Basins.

| Location | May 29, 2012 ESP | | July 18, 2012 ESP | |
|---|---------------------------------|---------------------------|---------------------------------|---------------------------|
| | % Average (1971- 2000) | Runoff Volume (Kaf) | % Average (1971 -2000) | Runoff Volume (Kaf) |
| The Dalles (Jan-July) | 109 | 117424 | 121 | 130282 |
| Grand Coulee (Jan-July) | 113 | 71280 | 130 | 81486 |
| Libby Res. Inflow, MT (Apr-Aug) | 117 | 7281 7155* | 148 | 9231 |
| Hungry Horse Res. Inflow, MT (Jan-July) | 103 | 2290 | 124 | 2749 |
| Lower Granite Res. Inflow (Apr- July) | 99 | 21410 | 106 | 22848 |
| Brownlee Res. Inflow (Apr-July) | 84 | 5275 | 88 | 5536 |
| Dworshak Res. Inflow (Apr-July) | 114 | 3024 3226* | 127 | 3351 |

* Denotes COE Forecast

Grand Coulee Reservoir is at 1289.3 feet (7-19-12) and refilled 0.4 feet over the last week. Grand Coulee is currently 0.7 feet from full (1290 feet). Outflows at Grand Coulee have ranged between 232.4 and 252.9 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2459.5 feet (7-19-12) and has drafted 0.4 feet over the last week. Libby is currently slightly above full (2459 feet). Outflows at Libby Dam have ranged between 36.4-43.0 Kcfs last week.

Hungry Horse is currently at an elevation of 3558.7 feet (7-19-12) and has drafted 0.3 feet over the last week. Hungry Horse is currently 1.3 feet from full (3560 feet). Outflows at Hungry Horse have been 3.8-5.9 Kcfs last week.

Dworshak is currently at an elevation of 1589.4 feet (7-19-12) and has drafted 5.7 feet over the last week for temperature and flow augmentation. Dworshak is currently 10.6 feet from full (1600 feet). Outflows from Dworshak have been approximately 13.0 Kcfs over most of the past week, however were decreased to 9.5 Kcfs on July 19, 2012.

The Brownlee Reservoir was at an elevation of 2068.2 feet on July 18th, 2012 drafting 0.8 feet last week. Brownlee is 8.8 feet from full (2077 feet). Over the last week, outflows at Brownlee have ranged between 11.3 and 14.3 Kcfs.

The Biological Opinion summer flow objective at Lower Granite (June 21st to August 31st) is 52 Kcfs; over the summer period flows at Lower Granite have averaged 60.4 Kcfs and 44.8 Kcfs over the last week.

The Summer Biological Opinion Flow Objective is 200 Kcfs at McNary Dam (began July 1st and will end August 31st). Over the summer period, flows at McNary have averaged 341.3 Kcfs and 327.3 Kcfs over the last week.

Spill:

The summer spill program began on June 21 in the Snake River and July 1 at the lower River projects, at projects where dates were not modified for research purposes.

Snake River flows have steadily declined over the past week and some excess generation spill has occurred. At Lower Granite Dam spill met, or exceeded, the Court Ordered summer spill level of 18 Kcfs. At Little Goose Dam spill met, or exceeded, the 30% of instantaneous flow level as specified in the Court Order, and ranged between 30% and 67% of daily average flow at this project. At Lower Monumental Dam daily average spill to the gas cap

using bulk spill ranged from 16.6 to 19.2 Kcfs. The summer spill level of 17 Kcfs began on June 21st. At Ice Harbor Dam the Court Order “test-like” conditions are in place and have been met or exceeded.

| Project | Day/Night Spill |
|------------------|--|
| Lower Granite | 18 Kcfs/18 Kcfs |
| Little Goose | 30%/30% |
| Lower Monumental | 17 Kcfs/17 Kcfs |
| Ice Harbor | “Test-Like”: 45 Kcfs/gas cap vs. 30%/30% |

Summer spill for fish passage at the Lower Columbia projects began on July 1. Flows remained high in the lower Columbia River for the past week. Spill at McNary Dam changed to the summer level early to accommodate research studies and met, or exceeded, the Court Order as a result of flows in excess of hydraulic capacity due to unit outages and due to spill in excess of generation needs. Spill at John Day Dam continued to the test levels of 30%/30% versus 40%/40%. For the most part, the 30% spill test levels were met at John Day during the past week. However, the 40% level was not achieved for the entire block due to the restriction of spill to address the TDG at The Dalles Dam forebay gage. At The Dalles Dam, spill was slightly less than the 40% over several days of the past week due to the management of spill at The Dalles Dam to control TDG at the Bonneville dam forebay monitor. Spill at Bonneville Dam switched to the summer test levels on June 17th comparing 95 Kcfs for 24 hours versus 85 Kcfs during daytime hours and gas cap spill at night. Spill generally met or exceeded these levels.

| Project | Day/Night Spill |
|------------|--------------------------------------|
| McNary | 50%/50% |
| John Day | Testing: 30%/30% vs. 40%/40% |
| The Dalles | 40%/40% |
| Bonneville | 95 Kcfs/95 Kcfs vs. 85 Kcfs/121 Kcfs |

Gas bubble trauma samples were taken this past week at Little Goose, Lower Monumental, McNary, Rock Island and Bonneville dams. There were no signs of GBT detected in the samples this past week at little Goose and Lower Monumental dams. At McNary Dam there were no signs of GBT on July 15, but 2% of the fish in the sample with minor signs of GBT on July 19. At Rock Island on July 17th there were 3% of the fish in the sample with minor signs of GBT, and 3% on July 19th. At Bonneville Dam there were no signs of GBT on July 14, but 1% of the fish in the sample with minor signs of GBT on July 19. All incidents were below the action criteria.

Smolt Monitoring:

Smolt monitoring activities are ongoing at all seven SMP dams (BON, JDA, MCN, LGR, LGS, LMN, and RIS). The Imnaha River Trap is the only SMP trap that is still collecting juvenile salmonids for the 2012 season.

Subyearling Chinook were the dominant species of salmonid at all SMP dams over the past week. Very few spring migrants were collected at the SMP sites this week. Subyearling Chinook passage at the SMP sites on the Lower Columbia River (i.e., from MCN to BON) has decreased over the past week. Among the Snake River SMP sites, subyearling Chinook passage increased at LGR and LGS and decreased at LMN this week, when compared to last week. Finally, subyearling Chinook passage at RIS, in the Upper Columbia River, increased this week, when compared to last week.

Subyearling Chinook numbers at BON decreased this week, with a daily average passage index of nearly 73,000 per day, compared to last week's daily average passage index of about 92,500. Only pacific lamprey macrophthalmia were collected at BON this week. The daily collections for pacific lamprey macrophthalmia were variable this week, ranging from 0 to 200 per day.

Passage of subyearling Chinook at JDA decreased this week. The daily average passage index for subyearling Chinook at JDA this week was about 106,000 per day, compared to just over 111,500 per day last week. Collections of pacific lamprey macrophthalmia decreased this week. The daily average collection for pacific macrophthalmia at JDA this week was about 1,400 per day, compared to about 3,500 per day last week. Pacific lamprey ammocoetes were collected on one day (July 17th) this week.

Passage of subyearling Chinook at MCN decreased this week, when compared to last week. The daily average passage index for subyearling Chinook at MCN this week was just over 101,000 per day, compared to over 133,000 per day last week. Passage of pacific lamprey macrophthalmia decreased this week. This week's daily average collection for pacific lamprey macrophthalmia at MCN was about 700 per day, compared to about 1,325 per day last week. No pacific lamprey ammocoetes were collected at MCN this week.

Subyearling Chinook passage at LGR increased this week, when compared to last week. The daily average passage index for subyearling Chinook at LGR this week was over 5,800 per day. Last week's daily average passage index for subyearling Chinook was about 4,700 per day. Finally, both pacific lamprey ammocoetes and pacific lamprey macrophthalmia were collected at LGR this week. However, these collections were variable and there were several days where no lamprey juveniles were collected.

When compared to last week, passage of subyearling Chinook at LGS increased this week. The daily average passage index for subyearling Chinook at LGS this week was about 6,300 per day, compared to nearly 5,100 per day last week. Subyearling Chinook passage at LMN decreased this week. This week's daily average passage index for subyearling Chinook at LMN was about 1,350 per day, compared to nearly 2,500 per day last week. Although lamprey collections at LMN and LGS were low this week, both pacific lamprey ammocoetes and macrophthalmia were collected at LGS and LMN this week.

Passage of subyearling Chinook at RIS increased this week. This week's daily average passage index for subyearling Chinook at RIS was 718 per day, compared to 668 per day last week. There was a hydraulic leak on the afternoon of July 15th, which caused the trap at RIS to shut down for about 20 hours while repairs were made. This resulted in incomplete samples for July 16th and July 17th, which means that the passage estimates on these days may be biased. Finally, only a few pacific lamprey macrophthalmia were collected at RIS this week. In addition, one "unknown" lamprey ammocoete was collected at RIS this week. This ammocoete was likely "unknown" because it was too small to distinguish between Pacific or Brook lamprey.

The most recent data that we have from the Imnaha River Trap this week are from July 13th through July 17th. Both yearling Chinook and steelhead

juveniles were collected on these dates, although in small numbers. The daily collections on these days ranged from 0 to 6 for yearling Chinook and 0 to 1 for steelhead.

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. There were no new releases of juvenile salmonids scheduled for this zone this week. In addition, there are no releases scheduled for this zone over the next two weeks.

Mid-Columbia Zone: The Mid-Columbia Zone encompasses the area of the Columbia River and its tributaries from McNary Dam to Chief Joseph Dam. No new releases of juvenile salmonids were scheduled to begin in this zone this week. There are also no releases of juvenile salmonids in this zone over the next two weeks. However, several of the volitional releases of coho juveniles to the Wenatchee River that began in May are scheduled to end in the coming weeks.

Lower Columbia Zone: The Lower Columbia Zone is defined as the Columbia River and its tributaries from Bonneville Dam to McNary Dam. No new releases of juvenile salmonids were scheduled for this zone this week. Furthermore, there are no new releases to this zone scheduled over the next two weeks.

Adult Fish Passage:

Daily passage numbers at Bonneville Dam ranged between 587 and 1,080 adult summer Chinook in the last week. The 2012 summer Chinook count of 75,921 is about 76.2% of the 2011 count and 88.2% of the 10 year average count. The 2012 Bonneville Dam summer Chinook jack count of 10,730 is about 22.9% of the 2011 count and 67.6% of the 10 year average count. At McNary Dam 54,021 adult summer Chinook have been counted. The 2012 McNary adult summer Chinook is about 86.9% of the 2011 and 90.1% of the 10 average counts. The McNary jack summer Chinook count of 3,854 is about 15.6% of the 2011 count of 24,632 and about 40.2% of the 10 year average count of 9,590. The 2012 adult summer Chinook count at Lower Granite Dam in the Snake River of 11,240 is about 33.5% of the 2011 count and 70.4% of the 10 year average count. The 2012 Lower Granite summer Chinook jack count of 1,378 is about 9.2% of the 2011 count and 26.6% of the 10 year average count.

The Bonneville Dam 2012 steelhead count of 43,715 is 1.08 times greater than the 2011 count of 40,554, while being about 72% of the 10 year average count of 60,706. The 2012 Bonneville wild adult steelhead count of 19,191 is about 97.3% of the 2011 count of 19,709 and about 71.5% of the 10 year average count of 26,845. In the Snake River, this year's Lower Granite steelhead count of 9,557 is about 72.1% of the 2011 count of 13,246 and 79.1% of the 10 year average of 12,083. The 2012 Lower Granite wild adult steelhead count of 4,181 is about 68.8% of the 2011 count of 6,075, while being about 1.09 times greater than the 10 year average count of 3,842. At Willamette Falls Dam, the 2012 count for steelhead was 28,175, as of July 8th. This year's steelhead count is about 1.08 times greater than the 2011 count of 26,036 and 1.07 times greater than the 10 year average count of 26,254.

Daily adult sockeye passage numbers at Bonneville Dam ranged between 204 and 2,479 last week. The 2012 accumulated total adult sockeye count at Bonneville Dam of 514,450, as of 7/19/2012, is about 2.81 times greater than the 2011 count of 182,852 and about 3.9 times greater than the 10 year average count of 129,932. The 2012 McNary Dam adult sockeye count of 361,028 is about 3.4 times greater than the 2011 count of 106,381 and 3.9 times greater than the 10 year average count of 91,255. Two of the major spawning sites for sockeye in the Upper Columbia River zone are Lake Wenatchee and Lake Osoyoos (Okanogan basin). In the Snake River at Ice Harbor Dam, the 2012 adult sockeye count of 375 is 41.2% of the 2011 count of 909, while being 1.03 times greater than the 10 year average count of 364. The Lower Granite Dam 2012 adult sockeye count of 296 is about 31.6% of the 2011 count of 935 and about 63.5% of the 10 year average count of 466.

As of July 19th at Bonneville Dam, the adult shad count was 2,424,054. This year's shad count is about 2.58 times greater than the 2011 count of 939,714, while being 82.8% of the 10 year average count of 2,926,114.

Hatchery Releases Last Two Weeks

| Hatchery Release Summary | | | | | | | | | |
|--|--------------------------|---------|------|-------|------------------|----------|----------|--------------------------|--------------------|
| From: | 7/6/2012 | | to | | 07/19/12 | | | | |
| Agency | Hatchery | Species | Race | MigYr | NumRel | RelStart | RelEnd | RelSite | RelRiver |
| Idaho Dept. of Fish and Game | Eagle Hatchery | SO | UN | 2013 | 11,354 | 07-13-12 | 07-13-12 | Redfish Lake | Salmon River (ID) |
| Idaho Dept. of Fish and Game Total | | | | | 11,354 | | | | |
| Washington Dept. of Fish and Wildlife | Ringold Springs Hatchery | CH0 | FA | 2012 | 3,328,919 | 06-27-12 | 07-10-12 | Ringold Springs Hatchery | Mid-Columbia River |
| Washington Dept. of Fish and Wildlife Total | | | | | 3,328,919 | | | | |
| Yakama Tribe | Cascade Hatchery | CO | UN | 2012 | 65,564 | 05-13-12 | 07-14-12 | Beaver Creek Acclim Pond | Wenatchee River |
| Yakama Tribe | Willard Hatchery | CO | UN | 2012 | 31,423 | 05-13-12 | 07-14-12 | Beaver Creek Acclim Pond | Wenatchee River |
| Yakama Tribe Total | | | | | 96,987 | | | | |
| Grand Total | | | | | 3,437,260 | | | | |

Hatchery Releases Next Two Weeks

Hatchery Release Summary

From: 7/20/2012 to 8/2/2012

Agency Hatchery Species Race MigYr NumRel RelStart RelEnd RelSite RelRiver

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 |
| 07/06/2012 | 245.6 | 25.7 | 262.9 | 108.4 | 263.7 | 104.0 | 269.3 | 125.9 | 286.6 | 104.1 | 283.4 | 174.8 | 280.2 | 155.1 |
| 07/07/2012 | 236.3 | 20.1 | 234.6 | 80.5 | 255.2 | 70.3 | 254.2 | 124.2 | 264.1 | 85.2 | 286.8 | 173.8 | 291.1 | 161.3 |
| 07/08/2012 | 244.8 | 25.7 | 241.7 | 76.3 | 261.4 | 80.7 | 255.3 | 121.2 | 262.9 | 76.9 | 277.8 | 195.0 | 283.4 | 162.1 |
| 07/09/2012 | 248.2 | 29.9 | 246.7 | 81.4 | 272.5 | 98.6 | 264.1 | 118.2 | 268.2 | 80.6 | 273.1 | 178.0 | 279.0 | 171.6 |
| 07/10/2012 | 244.1 | 24.3 | 250.7 | 94.6 | 278.0 | 101.3 | 268.2 | 119.6 | 266.2 | 76.6 | 290.7 | 195.4 | 294.4 | 184.1 |
| 07/11/2012 | 234.9 | 29.6 | 233.1 | 77.0 | 262.0 | 100.2 | 256.7 | 119.9 | 260.0 | 73.2 | 281.7 | 161.2 | 289.7 | 163.6 |
| 07/12/2012 | 245.9 | 28.4 | 240.6 | 96.3 | 262.4 | 91.2 | 255.1 | 118.4 | 255.5 | 65.6 | 274.7 | 160.8 | 275.5 | 147.3 |
| 07/13/2012 | 252.9 | 34.4 | 249.8 | 118.1 | 268.5 | 99.6 | 265.8 | 118.6 | 263.2 | 70.3 | 288.7 | 169.4 | 284.9 | 166.5 |
| 07/14/2012 | 243.0 | 25.0 | 243.1 | 97.9 | 263.2 | 89.4 | 268.4 | 110.6 | 268.2 | 66.7 | 301.0 | 168.9 | 302.7 | 205.7 |
| 07/15/2012 | 242.9 | 25.0 | 242.5 | 95.3 | 261.9 | 87.4 | 265.0 | 112.0 | 264.7 | 72.2 | 308.3 | 177.6 | 320.2 | 235.2 |
| 07/16/2012 | 241.1 | 23.2 | 240.7 | 104.0 | 255.2 | 88.5 | 265.2 | 100.2 | 262.5 | 60.1 | 283.8 | 161.8 | 282.9 | 186.7 |
| 07/17/2012 | 232.4 | 15.1 | 230.7 | 93.2 | 245.7 | 85.9 | 252.3 | 100.2 | 254.7 | 57.1 | 268.3 | 134.4 | 269.4 | 161.5 |
| 07/18/2012 | 233.5 | 17.3 | 226.9 | 79.4 | 243.4 | 76.7 | 242.7 | 89.2 | 248.0 | 55.8 | 254.4 | 137.6 | 257.6 | 153.3 |
| 07/19/2012 | 242.3 | 24.7 | 247.4 | 91.5 | 260.2 | 84.4 | 260.3 | 95.4 | 264.6 | 58.6 | 274.6 | 150.2 | 273.0 | 166.0 |

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

| Date | Dworshak | | Brownlee Canyon | | Hells Granite | | Lower Granite | | Little Goose | | Lower Monumental | | Ice Harbor | |
|------------|----------|-------|-----------------|---------|---------------|-------|---------------|-------|--------------|-------|------------------|-------|------------|-------|
| | Flow | Spill | Inflow | Outflow | Flow | Spill | Flow | Spill | Flow | Spill | Flow | Spill | Flow | Spill |
| 07/06/2012 | 7.1 | 0.0 | 14.4 | 16.7 | 48.4 | 18.6 | 49.2 | 14.7 | 49.8 | 17.0 | 52.2 | 41.9 | | |
| 07/07/2012 | 7.1 | 0.0 | 13.5 | 16.2 | 52.0 | 18.4 | 52.1 | 15.6 | 51.2 | 16.6 | 52.0 | 20.5 | | |
| 07/08/2012 | 7.1 | 0.0 | 13.4 | 12.9 | 46.7 | 18.4 | 47.6 | 14.4 | 48.2 | 16.9 | 49.2 | 14.7 | | |
| 07/09/2012 | 8.9 | 0.0 | 13.4 | 14.5 | 46.2 | 18.4 | 44.3 | 13.3 | 43.3 | 16.7 | 45.6 | 31.0 | | |
| 07/10/2012 | 12.5 | 2.9 | 13.0 | 16.3 | 50.4 | 21.2 | 51.3 | 19.5 | 51.3 | 17.0 | 54.3 | 41.7 | | |
| 07/11/2012 | 12.8 | 3.3 | 12.4 | 17.6 | 55.9 | 23.4 | 55.7 | 21.0 | 54.7 | 18.2 | 55.2 | 23.4 | | |
| 07/12/2012 | 12.8 | 3.2 | 11.2 | 14.4 | 50.8 | 20.4 | 50.5 | 15.7 | 50.7 | 17.0 | 52.7 | 16.1 | | |
| 07/13/2012 | 12.9 | 3.4 | 10.7 | 12.9 | 49.2 | 22.4 | 49.1 | 18.2 | 47.9 | 17.4 | 48.8 | 32.5 | | |
| 07/14/2012 | 12.9 | 3.4 | 10.4 | 11.5 | 40.7 | 19.2 | 40.3 | 13.6 | 39.0 | 17.3 | 42.8 | 32.3 | | |
| 07/15/2012 | 13.0 | 3.4 | 11.6 | 12.2 | 42.5 | 26.5 | 42.5 | 28.6 | 42.0 | 18.7 | 43.1 | 32.3 | | |
| 07/16/2012 | 12.9 | 3.3 | 11.6 | 11.4 | 46.9 | 22.0 | 47.8 | 22.2 | 47.3 | 19.2 | 49.6 | 39.1 | | |
| 07/17/2012 | 12.9 | 3.3 | 11.2 | 13.4 | 45.3 | 18.9 | 45.9 | 15.1 | 45.7 | 16.6 | 48.8 | 38.4 | | |
| 07/18/2012 | 11.0 | 1.4 | 11.6 | 15.6 | 44.9 | 19.8 | 45.0 | 15.9 | 44.4 | 17.0 | 46.8 | 35.8 | | |
| 07/19/2012 | 9.6 | 0.0 | --- | --- | 43.9 | 18.2 | 44.3 | 13.3 | 44.5 | 16.7 | 45.9 | 34.9 | | |

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 | | |
| 07/06/2012 | 359.7 | 210.9 | 363.0 | 128.6 | 342.6 | 124.1 | 358.7 | 147.1 | 94.3 | 104.9 |
| 07/07/2012 | 327.0 | 176.9 | 322.7 | 96.5 | 302.2 | 113.0 | 333.8 | 124.0 | 94.9 | 102.5 |
| 07/08/2012 | 318.2 | 169.4 | 313.0 | 99.3 | 298.6 | 112.6 | 319.7 | 115.7 | 95.3 | 96.3 |
| 07/09/2012 | 347.7 | 216.1 | 342.9 | 133.2 | 321.8 | 114.2 | 331.9 | 140.1 | 89.6 | 89.8 |
| 07/10/2012 | 340.1 | 214.1 | 338.0 | 125.5 | 317.1 | 114.9 | 334.2 | 148.7 | 85.6 | 87.5 |
| 07/11/2012 | 343.1 | 216.7 | 337.6 | 110.0 | 322.5 | 125.1 | 342.0 | 155.1 | 85.4 | 89.1 |
| 07/12/2012 | 334.1 | 204.2 | 327.7 | 120.1 | 312.4 | 127.3 | 343.1 | 151.5 | 84.8 | 94.4 |
| 07/13/2012 | 338.9 | 188.9 | 338.5 | 131.2 | 320.5 | 124.6 | 331.7 | 132.8 | 85.0 | 101.5 |
| 07/14/2012 | 329.6 | 179.9 | 332.9 | 128.2 | 316.0 | 127.0 | 343.5 | 139.7 | 85.0 | 106.4 |
| 07/15/2012 | 336.7 | 186.3 | 319.6 | 138.5 | 296.9 | 124.4 | 319.3 | 124.2 | 83.0 | 99.7 |
| 07/16/2012 | 357.4 | 214.9 | 362.0 | 118.4 | 345.1 | 137.0 | 358.0 | 164.3 | 75.2 | 106.2 |
| 07/17/2012 | 332.5 | 197.9 | 335.4 | 103.1 | 319.2 | 128.1 | 339.2 | 142.9 | 75.5 | 108.4 |
| 07/18/2012 | 297.3 | 164.0 | 295.3 | 103.3 | 282.9 | 113.6 | 297.8 | 103.8 | 75.2 | 106.4 |
| 07/19/2012 | 298.8 | 168.4 | 299.0 | 89.7 | 279.6 | 111.2 | 298.5 | 99.0 | 79.8 | 107.2 |

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>Clwrtr-Peck</u> | | | # | <u>Anatone</u> | | | # |
|------|-----------------------|-------------|-------|----|--------------|-------------|-------|----|-----------------|-------------|-------|----|--------------------|-------------|-------|----|----------------|-------------|-------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | |
| 7/6 | 127.0 | 128.2 | 129.4 | 24 | 120.9 | 121.7 | 122.2 | 24 | 101.8 | 102.4 | 102.8 | 24 | 102.4 | 103.6 | 104.6 | 24 | 102.9 | 104.0 | 105.0 | 24 |
| 7/7 | 126.2 | 127.0 | 127.8 | 24 | 120.9 | 121.2 | 121.6 | 24 | 101.9 | 102.4 | 103.0 | 24 | 102.8 | 103.8 | 104.8 | 24 | 102.9 | 103.9 | 104.9 | 24 |
| 7/8 | 126.2 | 127.5 | 128.6 | 24 | 120.8 | 121.5 | 122.4 | 24 | 102.0 | 102.5 | 103.0 | 24 | 103.1 | 104.3 | 105.3 | 24 | 102.9 | 104.1 | 105.3 | 24 |
| 7/9 | 127.1 | 128.7 | 130.5 | 24 | 120.6 | 121.1 | 121.8 | 24 | 101.5 | 101.8 | 102.1 | 24 | 102.5 | 103.1 | 103.6 | 24 | 102.2 | 102.9 | 103.9 | 24 |
| 7/10 | 125.6 | 126.7 | 127.3 | 24 | 120.7 | 121.1 | 121.4 | 24 | 106.9 | 108.2 | 108.9 | 24 | 106.0 | 107.7 | 108.8 | 24 | 102.8 | 104.1 | 105.2 | 24 |
| 7/11 | 125.4 | 126.0 | 126.6 | 24 | 120.3 | 120.9 | 121.4 | 24 | 108.2 | 108.5 | 108.9 | 24 | 107.3 | 108.4 | 109.2 | 24 | 103.1 | 104.2 | 105.2 | 24 |
| 7/12 | 125.0 | 125.7 | 126.2 | 24 | 119.9 | 120.4 | 121.0 | 24 | 108.2 | 108.5 | 108.8 | 24 | 107.7 | 108.7 | 109.5 | 24 | 103.1 | 104.3 | 105.4 | 24 |
| 7/13 | 125.0 | 125.5 | 125.9 | 24 | 119.2 | 119.6 | 120.1 | 24 | 108.7 | 109.1 | 110.4 | 22 | 108.0 | 108.8 | 109.3 | 24 | 102.5 | 103.5 | 104.8 | 22 |
| 7/14 | 125.3 | 125.6 | 125.8 | 24 | 118.8 | 119.8 | 120.4 | 24 | 108.5 | 108.8 | 109.3 | 24 | 107.7 | 108.6 | 109.3 | 24 | 101.9 | 102.6 | 103.3 | 24 |
| 7/15 | 125.1 | 125.4 | 125.6 | 24 | 118.3 | 119.0 | 119.6 | 24 | 108.5 | 109.0 | 109.5 | 24 | 107.5 | 108.4 | 109.5 | 24 | 102.1 | 103.0 | 103.8 | 24 |
| 7/16 | 124.6 | 124.9 | 125.2 | 24 | 118.3 | 119.1 | 119.8 | 24 | 108.3 | 108.8 | 109.2 | 24 | 107.2 | 108.1 | 108.8 | 24 | 102.0 | 103.1 | 104.5 | 24 |
| 7/17 | 124.8 | 125.1 | 125.2 | 24 | 118.5 | 119.4 | 120.0 | 24 | 108.5 | 108.9 | 109.5 | 24 | 107.5 | 108.5 | 109.4 | 24 | 102.2 | 103.4 | 104.8 | 24 |
| 7/18 | --- | --- | --- | 0 | 118.3 | 119.0 | 119.6 | 24 | 105.0 | 107.8 | 108.5 | 24 | 105.6 | 106.7 | 107.9 | 24 | 102.2 | 103.1 | 104.7 | 24 |
| 7/19 | --- | --- | --- | 0 | 117.4 | 118.1 | 118.7 | 24 | 101.8 | 102.3 | 102.8 | 24 | 103.5 | 104.8 | 105.8 | 24 | 102.2 | 103.0 | 103.8 | 24 |

Total Dissolved Gas Saturation Data at Snake River Sites

| Date | <u>Clwrtr-Lewiston</u> | | | # | <u>Lower Granite</u> | | | # | <u>L. Granite Tlwr</u> | | | # | <u>Little Goose</u> | | | # | <u>L. Goose Tlwr</u> | | | # |
|------|------------------------|-------------|-------|----|----------------------|-------------|-------|----|------------------------|-------------|-------|----|---------------------|-------------|-------|----|----------------------|-------------|-------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | |
| 7/6 | 103.0 | 105.1 | 106.5 | 24 | 100.7 | 100.9 | 101.2 | 24 | 115.4 | 116.1 | 116.7 | 24 | 114.5 | 115.6 | 117.3 | 24 | 112.8 | 113.1 | 113.4 | 24 |
| 7/7 | 103.2 | 105.1 | 106.7 | 23 | 101.0 | 101.5 | 101.9 | 24 | 114.8 | 115.3 | 116.0 | 24 | 115.3 | 115.9 | 117.8 | 24 | 112.7 | 113.2 | 113.7 | 24 |
| 7/8 | 103.6 | 105.4 | 107.0 | 22 | 102.0 | 102.3 | 102.9 | 24 | 115.4 | 115.7 | 116.3 | 24 | 116.0 | 116.7 | 117.5 | 24 | 112.8 | 113.2 | 113.5 | 24 |
| 7/9 | 102.4 | 103.5 | 104.8 | 24 | 102.8 | 103.3 | 103.7 | 24 | 115.7 | 116.1 | 117.0 | 24 | 116.4 | 117.2 | 117.9 | 24 | 113.1 | 113.5 | 113.9 | 24 |
| 7/10 | 103.9 | 106.4 | 107.9 | 24 | 102.7 | 103.1 | 103.9 | 24 | 116.3 | 117.2 | 119.0 | 24 | 115.6 | 115.9 | 116.6 | 24 | 113.5 | 114.3 | 116.1 | 24 |
| 7/11 | 105.3 | 107.4 | 108.8 | 24 | 102.3 | 102.7 | 102.8 | 24 | 115.2 | 116.2 | 117.2 | 24 | 114.8 | 115.0 | 115.3 | 24 | 113.4 | 114.4 | 116.3 | 24 |
| 7/12 | 105.6 | 107.8 | 109.3 | 24 | 101.4 | 101.7 | 102.1 | 24 | 114.9 | 115.6 | 118.1 | 24 | 116.3 | 117.1 | 117.7 | 24 | 112.7 | 113.1 | 113.8 | 24 |
| 7/13 | 105.1 | 107.2 | 109.0 | 24 | 101.8 | 102.4 | 102.6 | 24 | 115.6 | 116.6 | 118.5 | 24 | 115.2 | 115.5 | 116.0 | 24 | 113.2 | 113.9 | 115.8 | 24 |
| 7/14 | 104.7 | 106.2 | 107.4 | 24 | 102.9 | 103.2 | 103.5 | 24 | 115.7 | 116.2 | 118.1 | 24 | 115.6 | 115.7 | 116.0 | 24 | 113.2 | 113.5 | 114.0 | 24 |
| 7/15 | 105.2 | 107.1 | 108.0 | 24 | 103.1 | 103.3 | 103.7 | 24 | 119.0 | 119.4 | 119.8 | 24 | 115.0 | 115.1 | 115.3 | 24 | 115.1 | 116.3 | 117.3 | 24 |
| 7/16 | 104.9 | 106.9 | 108.7 | 24 | 102.4 | 102.6 | 103.0 | 24 | 116.7 | 117.9 | 119.3 | 24 | 113.4 | 113.8 | 114.3 | 24 | 114.3 | 115.7 | 116.5 | 24 |
| 7/17 | 105.4 | 107.6 | 109.5 | 24 | 102.1 | 102.3 | 102.5 | 24 | 115.7 | 116.3 | 118.9 | 24 | 112.5 | 112.7 | 113.1 | 24 | 112.8 | 113.4 | 115.1 | 24 |
| 7/18 | 105.1 | 107.6 | 109.3 | 24 | 102.3 | 103.2 | 103.6 | 24 | 116.0 | 116.9 | 118.6 | 24 | 111.7 | 111.8 | 111.9 | 24 | 112.6 | 112.8 | 113.5 | 24 |
| 7/19 | 103.9 | 106.3 | 107.8 | 23 | 102.9 | 103.1 | 103.3 | 24 | 115.3 | 115.7 | 116.4 | 24 | 111.6 | 112.0 | 112.4 | 24 | 112.8 | 113.2 | 113.5 | 24 |

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

| Date | <u>Lower Mon.</u> | | | # | <u>L. Mon. Tlwr</u> | | | # | <u>Ice Harbor</u> | | | # | <u>Ice Harbor Tlwr</u> | | | # | <u>McNary-Oregon</u> | | | # |
|------|-------------------|-------------|-------|----|---------------------|-------------|-------|----|-------------------|-------------|-------|----|------------------------|-------------|-------|----|----------------------|-------------|------|---|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | | Avg | Avg | High | |
| 7/6 | 113.1 | 113.3 | 113.5 | 24 | 116.6 | 117.1 | 118.2 | 24 | 112.1 | 112.8 | 113.4 | 24 | 114.4 | 115.5 | 116.3 | 24 | --- | --- | --- | 0 |
| 7/7 | 113.2 | 113.8 | 114.6 | 24 | 116.3 | 117.1 | 117.7 | 24 | 113.4 | 113.7 | 113.9 | 24 | 113.5 | 114.5 | 116.1 | 24 | --- | --- | --- | 0 |
| 7/8 | 114.3 | 114.8 | 115.1 | 24 | 116.2 | 116.8 | 117.1 | 24 | 114.3 | 114.6 | 114.8 | 24 | 113.4 | 114.0 | 115.3 | 24 | --- | --- | --- | 0 |
| 7/9 | 113.9 | 114.1 | 114.2 | 24 | 115.9 | 116.4 | 117.8 | 24 | 114.9 | 115.2 | 115.5 | 24 | 113.6 | 114.2 | 115.5 | 24 | --- | --- | --- | 0 |
| 7/10 | 113.1 | 113.2 | 113.7 | 24 | 116.7 | 116.9 | 117.2 | 24 | 114.7 | 114.9 | 115.0 | 24 | 114.2 | 115.1 | 115.8 | 24 | --- | --- | --- | 0 |
| 7/11 | 112.9 | 113.1 | 113.3 | 24 | 117.0 | 117.6 | 118.4 | 24 | 114.4 | 114.5 | 114.7 | 24 | 113.5 | 114.4 | 115.8 | 24 | --- | --- | --- | 0 |
| 7/12 | 113.5 | 114.0 | 114.4 | 24 | 117.4 | 118.0 | 119.0 | 24 | 114.3 | 114.5 | 114.8 | 24 | 114.4 | 115.9 | 116.3 | 24 | --- | --- | --- | 0 |
| 7/13 | 113.9 | 114.3 | 114.6 | 24 | 116.9 | 117.5 | 118.5 | 24 | 114.3 | 114.7 | 115.2 | 24 | 113.8 | 115.1 | 115.9 | 24 | --- | --- | --- | 0 |
| 7/14 | 113.9 | 114.1 | 114.6 | 24 | 116.8 | 117.1 | 117.4 | 24 | 114.6 | 114.8 | 115.0 | 24 | 113.7 | 114.1 | 114.6 | 24 | --- | --- | --- | 0 |
| 7/15 | 113.2 | 113.4 | 113.7 | 24 | 116.7 | 117.1 | 117.6 | 24 | 114.2 | 114.3 | 114.4 | 24 | 114.1 | 114.7 | 116.2 | 24 | --- | --- | --- | 0 |
| 7/16 | 111.4 | 111.8 | 112.6 | 24 | 117.3 | 117.8 | 118.6 | 24 | 112.4 | 112.6 | 113.4 | 24 | 113.9 | 114.7 | 115.4 | 24 | --- | --- | --- | 0 |
| 7/17 | 111.4 | 111.7 | 111.9 | 24 | 116.5 | 117.0 | 117.4 | 24 | 111.8 | 112.0 | 112.4 | 24 | 113.7 | 114.3 | 114.8 | 24 | --- | --- | --- | 0 |
| 7/18 | 112.2 | 113.2 | 114.5 | 24 | 117.2 | 117.5 | 118.2 | 24 | 111.1 | 111.5 | 112.3 | 24 | 114.0 | 114.7 | 115.5 | 24 | --- | --- | --- | 0 |
| 7/19 | 113.2 | 113.5 | 113.7 | 24 | 116.8 | 117.5 | 118.1 | 24 | 112.4 | 113.0 | 114.2 | 24 | 114.0 | 114.7 | 115.2 | 24 | --- | --- | --- | 0 |

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

Total Dissolved Gas Saturation Data at Upper Columbia River Sites

| Date | <u>Hungry H. Dnst</u> | | | # | <u>Boundary</u> | | | # | <u>Grand Coulee</u> | | | # | <u>Grand C. Tlwr</u> | | | # | <u>Chief Joseph</u> | | | # |
|------|-----------------------|-------------|-------------|----|-----------------|-------------|-------------|----|---------------------|-------------|-------------|----|----------------------|-------------|-------------|----|---------------------|-------------|-------------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | |
| 7/6 | 104.4 | 104.7 | 105.0 | 24 | 126.4 | 127.6 | 128.4 | 24 | 118.7 | 119.1 | 119.4 | 24 | 117.1 | 117.6 | 118.0 | 24 | 117.4 | 117.9 | 118.5 | 24 |
| 7/7 | 104.3 | 104.7 | 104.8 | 24 | 126.3 | 127.5 | 127.9 | 23 | 119.0 | 119.3 | 119.5 | 24 | 116.4 | 116.7 | 116.9 | 23 | 117.5 | 117.7 | 118.1 | 24 |
| 7/8 | 104.8 | 105.0 | 105.4 | 24 | 126.4 | 126.8 | 127.4 | 21 | 119.7 | 120.2 | 120.7 | 24 | 117.2 | 117.9 | 118.3 | 21 | 116.8 | 117.3 | 117.7 | 24 |
| 7/9 | 105.2 | 105.4 | 106.0 | 19 | 126.7 | 127.1 | 127.6 | 18 | 120.3 | 120.6 | 121.0 | 24 | 118.0 | 118.1 | 118.4 | 18 | 117.4 | 118.0 | 118.4 | 24 |
| 7/10 | 104.6 | 105.3 | 105.8 | 23 | 126.3 | 126.8 | 127.1 | 22 | 120.5 | 120.6 | 120.8 | 24 | 117.8 | 117.9 | 118.1 | 22 | 117.9 | 118.3 | 118.7 | 24 |
| 7/11 | 104.3 | 104.8 | 105.3 | 24 | 126.5 | 127.2 | 127.9 | 23 | 121.0 | 121.3 | 121.5 | 24 | 118.2 | 119.0 | 119.4 | 23 | 118.0 | 118.5 | 119.1 | 24 |
| 7/12 | 106.1 | 106.9 | 107.6 | 24 | 126.4 | 127.1 | 128.1 | 22 | 121.4 | 121.7 | 121.9 | 24 | 118.7 | 119.1 | 119.7 | 22 | 118.1 | 118.9 | 119.2 | 24 |
| 7/13 | 106.8 | 107.1 | 107.3 | 24 | 126.2 | 126.8 | 127.6 | 23 | 121.9 | 122.0 | 122.4 | 18 | 119.6 | 119.8 | 120.1 | 23 | 118.5 | 118.7 | 118.9 | 24 |
| 7/14 | 107.1 | 107.2 | 107.5 | 24 | 125.4 | 126.1 | 126.5 | 23 | 122.0 | 122.4 | 123.2 | 24 | 118.9 | 119.2 | 119.4 | 23 | 119.1 | 119.5 | 119.8 | 24 |
| 7/15 | 106.7 | 106.9 | 107.2 | 24 | 126.2 | 126.5 | 126.9 | 23 | 122.8 | 123.0 | 123.3 | 24 | 119.3 | 119.4 | 119.6 | 23 | 118.6 | 118.8 | 119.2 | 24 |
| 7/16 | 107.1 | 107.4 | 107.6 | 24 | 121.9 | 122.6 | 124.0 | 21 | 122.2 | 122.5 | 122.8 | 24 | 119.0 | 119.3 | 119.5 | 21 | 118.4 | 118.9 | 119.4 | 24 |
| 7/17 | 107.0 | 107.2 | 107.4 | 24 | 122.0 | 122.8 | 123.4 | 24 | 122.4 | 122.7 | 122.9 | 24 | 118.6 | 118.9 | 119.3 | 24 | 118.6 | 118.8 | 119.0 | 24 |
| 7/18 | 106.7 | 107.0 | 107.4 | 24 | 120.0 | 121.5 | 125.4 | 22 | 122.2 | 122.4 | 122.8 | 24 | 118.7 | 119.3 | 119.6 | 22 | 118.4 | 118.7 | 119.1 | 24 |
| 7/19 | 106.7 | 106.9 | 107.2 | 24 | 120.2 | 122.4 | 122.7 | 22 | 122.1 | 122.3 | 122.6 | 23 | 119.0 | 119.4 | 119.8 | 22 | 118.5 | 118.9 | 119.3 | 24 |

Total Dissolved Gas Saturation Data at Mid Columbia River Sites

| Date | <u>Chief J. Dnst</u> | | | # | <u>Wells</u> | | | # | <u>Wells Dwnstrm</u> | | | # | <u>Rocky Reach</u> | | | # | <u>Rocky R. Tlwr</u> | | | # |
|------|----------------------|-------------|-------------|----|--------------|-------------|-------------|----|----------------------|-------------|-------------|----|--------------------|-------------|-------------|----|----------------------|-------------|-------------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | |
| 7/6 | 118.6 | 119.1 | 119.9 | 24 | 117.9 | 118.4 | 119.2 | 24 | 128.7 | 129.9 | 131.6 | 24 | 128.8 | 129.3 | 129.6 | 24 | 123.7 | 124.6 | 125.4 | 24 |
| 7/7 | 117.4 | 117.8 | 118.6 | 24 | 117.8 | 118.6 | 119.1 | 24 | 123.8 | 124.5 | 125.8 | 24 | 124.8 | 126.0 | 127.8 | 24 | 125.0 | 125.6 | 126.0 | 24 |
| 7/8 | 117.3 | 117.7 | 118.2 | 24 | 117.3 | 117.9 | 118.4 | 24 | 124.6 | 125.7 | 126.9 | 24 | 122.0 | 122.4 | 122.5 | 20 | 124.7 | 124.9 | 125.9 | 20 |
| 7/9 | 118.6 | 119.7 | 120.1 | 24 | 117.1 | 117.9 | 118.8 | 24 | 126.0 | 126.9 | 128.1 | 24 | 123.0 | 123.5 | 124.1 | 24 | 123.8 | 125.2 | 126.3 | 24 |
| 7/10 | 120.1 | 120.7 | 123.1 | 24 | 118.5 | 119.4 | 119.7 | 24 | 126.6 | 127.1 | 128.5 | 24 | 124.0 | 125.0 | 125.6 | 24 | 123.4 | 124.2 | 125.5 | 24 |
| 7/11 | 118.0 | 118.6 | 120.1 | 24 | 118.9 | 119.4 | 120.5 | 24 | 128.1 | 129.1 | 130.4 | 24 | 125.4 | 126.2 | 128.2 | 24 | 123.2 | 124.5 | 125.5 | 24 |
| 7/12 | 118.9 | 119.8 | 120.9 | 23 | 118.3 | 118.7 | 119.0 | 24 | 127.3 | 127.9 | 128.9 | 24 | 125.6 | 126.1 | 127.8 | 24 | 122.9 | 123.5 | 124.4 | 24 |
| 7/13 | 120.4 | 120.5 | 121.5 | 13 | 119.8 | 120.7 | 121.1 | 24 | 129.4 | 130.8 | 133.0 | 24 | 124.5 | 125.1 | 125.4 | 24 | 123.0 | 124.0 | 125.2 | 24 |
| 7/14 | 119.4 | 119.8 | 120.4 | 24 | 119.6 | 120.0 | 120.6 | 23 | 128.5 | 129.3 | 131.4 | 23 | 126.2 | 126.8 | 127.5 | 24 | 123.5 | 124.4 | 124.8 | 24 |
| 7/15 | 119.0 | 119.2 | 119.4 | 24 | 118.7 | 119.3 | 120.0 | 24 | 127.7 | 128.5 | 129.6 | 24 | 124.8 | 125.4 | 126.2 | 24 | 123.7 | 124.7 | 125.7 | 24 |
| 7/16 | 119.2 | 119.8 | 120.7 | 24 | 118.6 | 119.5 | 119.7 | 24 | 128.1 | 129.1 | 129.6 | 24 | 123.9 | 124.3 | 124.6 | 24 | 121.5 | 121.9 | 122.6 | 24 |
| 7/17 | 118.9 | 119.2 | 120.0 | 24 | 118.2 | 118.5 | 119.3 | 23 | 127.8 | 128.1 | 128.6 | 23 | 124.7 | 124.9 | 125.2 | 24 | 119.4 | 121.0 | 121.7 | 24 |
| 7/18 | 118.6 | 118.9 | 119.9 | 24 | 118.5 | 118.7 | 118.9 | 24 | 126.5 | 127.1 | 127.8 | 24 | 124.6 | 124.8 | 124.9 | 24 | 118.7 | 119.4 | 119.8 | 24 |
| 7/19 | 119.1 | 119.9 | 120.6 | 24 | 118.3 | 118.9 | 119.2 | 24 | 127.2 | 128.4 | 129.1 | 24 | 123.0 | 123.4 | 123.8 | 24 | 119.2 | 119.7 | 120.6 | 24 |

Total Dissolved Gas Saturation at Mid Columbia River Sites

| Date | <u>Rock Island</u> | | | # | <u>Rock I. Tlwr</u> | | | # | <u>Wanapum</u> | | | # | <u>Wanapum Tlwr</u> | | | # | <u>Priest Rapids</u> | | | # |
|------|--------------------|-------------|-------------|----|---------------------|-------------|-------------|----|----------------|-------------|-------------|----|---------------------|-------------|-------------|----|----------------------|-------------|-------------|----|
| | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | | <u>24 h</u> | <u>12 h</u> | | |
| | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | |
| 7/6 | 126.8 | 127.3 | 127.6 | 24 | 129.7 | 130.1 | 130.4 | 24 | 128.5 | 129.7 | 131.0 | 24 | 130.2 | 133.6 | 140.1 | 24 | 130.5 | 133.6 | 137.2 | 24 |
| 7/7 | 126.0 | 126.4 | 126.6 | 24 | 129.0 | 129.5 | 129.7 | 24 | 128.8 | 129.7 | 130.5 | 24 | 129.7 | 130.5 | 133.8 | 24 | 127.8 | 129.2 | 130.5 | 24 |
| 7/8 | 123.7 | 124.2 | 124.6 | 20 | 126.3 | 127.0 | 128.5 | 20 | 128.3 | 129.5 | 130.8 | 24 | 132.4 | 134.7 | 139.4 | 24 | 128.4 | 130.3 | 133.1 | 24 |
| 7/9 | 123.9 | 124.9 | 125.5 | 24 | 127.0 | 127.8 | 128.6 | 24 | 125.4 | 126.4 | 128.0 | 24 | 130.5 | 136.0 | 141.8 | 24 | 131.0 | 136.2 | 138.2 | 24 |
| 7/10 | 123.9 | 124.6 | 125.1 | 24 | 127.3 | 127.8 | 128.8 | 24 | 124.2 | 125.6 | 127.6 | 24 | 130.9 | 131.9 | 133.3 | 24 | 126.3 | 130.2 | 131.5 | 24 |
| 7/11 | 124.4 | 125.3 | 125.9 | 24 | 127.6 | 128.1 | 128.5 | 24 | 125.3 | 126.9 | 128.0 | 24 | 127.9 | 129.8 | 130.7 | 24 | 126.1 | 128.3 | 129.7 | 24 |
| 7/12 | 124.6 | 125.3 | 125.9 | 24 | 127.6 | 128.2 | 128.6 | 24 | 126.1 | 127.6 | 129.1 | 24 | 127.6 | 129.7 | 130.2 | 24 | 125.4 | 127.2 | 128.8 | 24 |
| 7/13 | 124.4 | 125.0 | 125.8 | 24 | 127.6 | 128.3 | 129.5 | 24 | 124.5 | 125.8 | 126.7 | 24 | 128.6 | 129.5 | 130.8 | 24 | 126.1 | 128.5 | 129.5 | 24 |
| 7/14 | 125.0 | 126.0 | 126.8 | 24 | 127.5 | 128.0 | 128.8 | 24 | 125.4 | 126.3 | 127.6 | 24 | 128.4 | 129.0 | 129.7 | 24 | 125.3 | 126.6 | 127.2 | 24 |
| 7/15 | 124.8 | 125.4 | 126.1 | 24 | 127.7 | 128.8 | 129.8 | 24 | 123.9 | 124.5 | 125.0 | 24 | 129.3 | 129.6 | 130.2 | 24 | 123.6 | 124.5 | 125.5 | 24 |
| 7/16 | 123.5 | 124.0 | 124.2 | 24 | 125.7 | 126.2 | 126.9 | 24 | 124.5 | 125.7 | 126.6 | 24 | 128.2 | 129.3 | 130.3 | 24 | 124.6 | 126.5 | 127.6 | 24 |
| 7/17 | 123.6 | 124.1 | 124.3 | 24 | 125.8 | 126.4 | 126.7 | 24 | 124.1 | 125.1 | 126.3 | 24 | 124.8 | 127.5 | 129.5 | 24 | 124.8 | 127.0 | 128.2 | 24 |
| 7/18 | 123.5 | 124.1 | 124.6 | 24 | 125.6 | 126.1 | 126.7 | 24 | --- | --- | --- | 0 | --- | --- | --- | 0 | --- | --- | --- | 0 |
| 7/19 | 122.6 | 123.5 | 124.0 | 24 | 124.6 | 124.9 | 125.1 | 24 | --- | --- | --- | 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 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> | | |
| | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>hr</u> | <u>Avg</u> | <u>Avg</u> | | <u>High</u> | <u>hr</u> | <u>Avg</u> | | <u>Avg</u> | <u>High</u> | <u>hr</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | |
| 7/6 | 119.5 | 120.3 | 120.7 | 24 | 121.4 | 122.0 | 122.7 | 24 | 114.7 | 115.3 | 115.8 | 24 | 119.3 | 119.8 | 119.9 | 24 | 114.6 | 115.3 | 116.0 | 24 |
| 7/7 | 120.4 | 121.1 | 121.9 | 24 | 120.1 | 120.4 | 120.8 | 24 | 117.2 | 118.3 | 119.0 | 24 | 117.1 | 118.1 | 119.1 | 24 | 115.0 | 115.7 | 116.3 | 24 |
| 7/8 | 121.0 | 121.8 | 122.5 | 24 | 119.8 | 119.9 | 120.2 | 24 | 119.5 | 120.1 | 120.7 | 24 | 117.2 | 118.0 | 119.3 | 24 | 116.3 | 117.0 | 117.6 | 24 |
| 7/9 | 119.7 | 120.0 | 120.5 | 24 | 121.7 | 122.3 | 122.7 | 24 | 119.9 | 120.3 | 120.7 | 24 | 119.1 | 119.4 | 120.4 | 24 | 116.4 | 117.0 | 117.5 | 24 |
| 7/10 | 119.2 | 119.9 | 120.4 | 24 | 121.3 | 122.4 | 122.7 | 24 | 118.6 | 118.9 | 119.7 | 24 | 118.8 | 119.3 | 119.5 | 24 | 114.7 | 115.6 | 116.0 | 24 |
| 7/11 | 119.2 | 120.0 | 120.6 | 24 | 121.4 | 122.2 | 122.7 | 24 | 117.3 | 117.6 | 118.0 | 24 | 118.2 | 118.6 | 119.2 | 24 | 115.3 | 116.3 | 117.3 | 24 |
| 7/12 | 119.0 | 119.6 | 120.2 | 24 | 120.9 | 121.2 | 121.4 | 24 | 116.6 | 116.9 | 117.2 | 24 | 118.0 | 119.2 | 119.7 | 24 | 113.8 | 114.2 | 115.3 | 24 |
| 7/13 | 118.3 | 118.8 | 119.1 | 24 | 121.1 | 122.2 | 122.9 | 22 | 116.1 | 116.6 | 117.0 | 21 | 118.7 | 119.2 | 119.5 | 21 | 113.6 | 114.3 | 115.3 | 21 |
| 7/14 | 116.7 | 117.3 | 117.7 | 24 | 120.4 | 120.7 | 120.9 | 24 | 116.5 | 116.9 | 117.4 | 24 | 118.5 | 118.9 | 119.4 | 24 | 114.3 | 115.0 | 115.7 | 24 |
| 7/15 | 116.1 | 116.6 | 117.3 | 24 | 120.6 | 120.9 | 122.6 | 23 | 114.5 | 115.7 | 116.8 | 24 | 118.6 | 119.0 | 119.5 | 24 | 113.0 | 113.8 | 114.9 | 24 |
| 7/16 | 113.8 | 114.2 | 114.7 | 24 | 122.6 | 123.0 | 123.2 | 24 | 112.0 | 112.6 | 112.9 | 24 | 118.6 | 118.9 | 119.4 | 24 | 113.2 | 114.3 | 115.1 | 24 |
| 7/17 | 115.0 | 116.4 | 116.9 | 24 | 121.7 | 122.6 | 123.2 | 24 | 112.7 | 113.0 | 113.8 | 24 | 117.5 | 118.2 | 118.4 | 24 | 112.9 | 113.4 | 114.4 | 24 |
| 7/18 | 116.9 | 117.3 | 117.7 | 24 | 119.7 | 120.2 | 120.5 | 24 | 111.3 | 111.5 | 112.0 | 24 | 117.0 | 118.1 | 118.3 | 24 | 110.9 | 111.9 | 113.9 | 24 |
| 7/19 | 117.1 | 117.6 | 118.0 | 24 | 120.1 | 120.8 | 121.1 | 24 | 113.4 | 115.0 | 116.2 | 24 | 116.4 | 117.7 | 118.8 | 24 | 111.0 | 112.5 | 113.7 | 24 |

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> | | |
| | <u>Avg</u> | <u>Avg</u> | <u>High</u> | | <u>hr</u> | <u>Avg</u> | <u>Avg</u> | | <u>High</u> | <u>hr</u> | <u>Avg</u> | | <u>Avg</u> | <u>High</u> | <u>hr</u> | | <u>Avg</u> | <u>Avg</u> | <u>High</u> | |
| 7/6 | 118.5 | 118.9 | 119.3 | 24 | 116.4 | 116.6 | 116.9 | 24 | 118.8 | 119.1 | 119.3 | 24 | 117.4 | 118.3 | 118.9 | 24 | 124.4 | 124.7 | 125.1 | 24 |
| 7/7 | 118.6 | 119.0 | 119.5 | 24 | 116.1 | 116.4 | 116.6 | 24 | 117.6 | 117.9 | 118.6 | 24 | 117.3 | 117.8 | 118.3 | 24 | 122.1 | 122.8 | 124.1 | 24 |
| 7/8 | 119.4 | 119.9 | 120.6 | 24 | 116.4 | 116.7 | 116.9 | 24 | 117.5 | 117.7 | 117.9 | 24 | 116.6 | 117.6 | 118.4 | 24 | 120.9 | 121.0 | 121.1 | 24 |
| 7/9 | 119.1 | 119.4 | 119.6 | 24 | 114.9 | 115.4 | 115.8 | 24 | 117.5 | 117.9 | 118.4 | 24 | 115.8 | 116.5 | 117.2 | 24 | 122.7 | 123.3 | 123.7 | 24 |
| 7/10 | 118.2 | 118.6 | 118.9 | 24 | 112.3 | 112.6 | 113.4 | 24 | 116.6 | 117.4 | 117.7 | 24 | 115.2 | 115.6 | 116.1 | 24 | 122.6 | 123.6 | 124.0 | 24 |
| 7/11 | 119.2 | 119.8 | 120.4 | 24 | 113.9 | 114.5 | 115.2 | 24 | 117.7 | 117.9 | 118.2 | 24 | 116.9 | 118.1 | 119.0 | 24 | 123.5 | 123.7 | 124.0 | 24 |
| 7/12 | 119.2 | 120.2 | 121.7 | 24 | 114.9 | 115.3 | 115.5 | 24 | 118.1 | 118.5 | 119.0 | 24 | 116.8 | 117.5 | 118.0 | 24 | 123.5 | 123.8 | 124.1 | 24 |
| 7/13 | 118.2 | 118.4 | 119.3 | 21 | 113.3 | 113.6 | 114.2 | 20 | 116.5 | 117.1 | 118.0 | 21 | 115.3 | 115.7 | 116.4 | 21 | 122.1 | 123.2 | 123.6 | 21 |
| 7/14 | 119.3 | 119.8 | 120.2 | 24 | 114.1 | 114.6 | 114.9 | 24 | 117.0 | 117.2 | 117.5 | 24 | 115.7 | 116.5 | 117.3 | 24 | 123.4 | 123.8 | 124.2 | 24 |
| 7/15 | 119.3 | 120.4 | 121.1 | 24 | 113.9 | 114.2 | 114.9 | 24 | 116.0 | 116.3 | 117.0 | 24 | 114.6 | 115.0 | 115.8 | 24 | 121.2 | 121.9 | 123.1 | 24 |
| 7/16 | 119.2 | 120.0 | 121.2 | 24 | 115.0 | 115.9 | 117.0 | 24 | 119.3 | 119.7 | 120.2 | 24 | 116.3 | 118.4 | 119.2 | 24 | 123.9 | 124.1 | 124.3 | 24 |
| 7/17 | 118.7 | 119.4 | 119.9 | 24 | 117.3 | 117.8 | 118.2 | 24 | 119.4 | 119.9 | 120.6 | 24 | 117.9 | 118.7 | 119.7 | 24 | 123.3 | 124.0 | 124.3 | 24 |
| 7/18 | 117.5 | 118.2 | 119.3 | 24 | 112.8 | 113.3 | 114.9 | 24 | 114.9 | 115.7 | 118.3 | 24 | 115.2 | 116.3 | 116.7 | 24 | 119.9 | 120.5 | 122.9 | 24 |
| 7/19 | 117.3 | 118.2 | 119.4 | 24 | 112.3 | 113.2 | 114.4 | 24 | 114.0 | 114.4 | 114.9 | 24 | 112.8 | 113.3 | 113.7 | 24 | 119.1 | 119.4 | 119.7 | 24 |

Two-Week Summary of Passage Indices

| 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) |
| 07/06/2012 * | --- | 8 | --- | --- | 6 | 0 | 8 | 3 | 246 | 595 | 0 |
| 07/07/2012 * | --- | --- | --- | --- | 8 | 14 | 52 | 0 | --- | 513 | 666 |
| 07/08/2012 | --- | --- | --- | --- | 0 | 0 | 84 | 0 | 0 | 457 | 16 |
| 07/09/2012 * | --- | 6 | --- | --- | 0 | 0 | 31 | 0 | --- | 458 | 0 |
| 07/10/2012 | --- | 3 | --- | --- | 9 | 5 | 15 | 0 | 0 | 616 | 0 |
| 07/11/2012 * | --- | 11 | --- | --- | 0 | 16 | 16 | 0 | --- | 157 | 0 |
| 07/12/2012 * | --- | 10 | --- | --- | 8 | 7 | 30 | 0 | 0 | 385 | 0 |
| 07/13/2012 * | --- | 6 | --- | --- | 0 | 58 | 46 | 0 | --- | 0 | 0 |
| 07/14/2012 | --- | --- | --- | --- | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| 07/15/2012 * | --- | --- | --- | --- | 10 | 0 | 0 | 0 | --- | 0 | 0 |
| 07/16/2012 * | --- | 0 | --- | --- | 0 | 32 | 8 | --- | 0 | 0 | 0 |
| 07/17/2012 * | --- | 3 | --- | --- | 0 | 19 | 8 | 0 | --- | 413 | 0 |
| 07/18/2012 | --- | --- | --- | --- | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| 07/19/2012 * | --- | --- | --- | --- | 0 | 0 | 8 | 0 | --- | 0 | 0 |
| 07/20/2012 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0 |
| Total: | 0 | 47 | 0 | 0 | 41 | 151 | 322 | 3 | 246 | 3,594 | 682 |
| # Days: | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 | 15 |
| Average: | 0 | 6 | 0 | 0 | 3 | 11 | 23 | 0 | 35 | 257 | 45 |
| YTD | 58,098 | 10,889 | 26,417 | 13,494 | 4,042,634 | 2,265,886 | 754,384 | 25,797 | 2,179,371 | 4,290,258 | 2,538,762 |

| 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) |
| 07/06/2012 * | --- | 0 | --- | --- | 3,967 | 5,678 | 1,683 | 425 | 162,997 | 85,137 | 79,899 |
| 07/07/2012 * | --- | --- | --- | --- | 3,235 | 5,299 | 4,255 | 462 | --- | 110,515 | 75,609 |
| 07/08/2012 | --- | --- | --- | --- | 4,259 | 5,650 | 4,638 | 671 | 89,620 | 95,708 | 66,151 |
| 07/09/2012 * | --- | 1 | --- | --- | 3,002 | 3,307 | 1,820 | 737 | --- | 72,173 | 77,741 |
| 07/10/2012 | --- | 0 | --- | --- | 3,387 | 3,783 | 2,091 | 783 | 153,490 | 99,059 | 110,321 |
| 07/11/2012 * | --- | 0 | --- | --- | 9,478 | 3,091 | 998 | 728 | --- | 127,643 | 121,411 |
| 07/12/2012 * | --- | 0 | --- | --- | 5,283 | 8,816 | 1,673 | 874 | 127,145 | 190,381 | 116,127 |
| 07/13/2012 * | --- | 0 | --- | --- | 3,538 | 9,021 | 1,466 | 729 | --- | 143,389 | 104,197 |
| 07/14/2012 | --- | --- | --- | --- | 3,091 | 3,535 | 1,634 | 796 | 59,601 | 102,625 | 96,877 |
| 07/15/2012 * | --- | --- | --- | --- | 4,649 | 5,851 | 517 | 568 | --- | 79,353 | 74,747 |
| 07/16/2012 * | --- | 0 | --- | --- | 7,331 | 6,751 | 1,051 | --- | 124,332 | 91,883 | 58,504 |
| 07/17/2012 * | --- | 0 | --- | --- | 10,517 | 8,082 | 1,948 | 596 | --- | 89,911 | 62,039 |
| 07/18/2012 | --- | --- | --- | --- | 6,531 | 5,438 | 1,502 | 633 | 119,465 | 109,505 | 59,409 |
| 07/19/2012 * | --- | --- | --- | --- | 5,052 | 5,325 | 1,361 | 984 | --- | 123,992 | 52,849 |
| 07/20/2012 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 55,064 |
| Total: | 0 | 1 | 0 | 0 | 73,320 | 79,627 | 26,637 | 8,986 | 836,650 | 1,521,274 | 1,210,945 |
| # Days: | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 | 15 |
| Average: | 0 | 0 | 0 | 0 | 5,237 | 5,688 | 1,903 | 691 | 119,521 | 108,662 | 80,730 |
| YTD | 0 | 3 | 67 | 327 | 1,017,597 | 1,001,124 | 363,021 | 18,689 | 1,900,134 | 2,644,232 | 4,920,171 |

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) |
| 07/06/2012 | * | --- | 0 | --- | --- | 0 | 43 | 0 | 3 | 0 | 0 |
| 07/07/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 3 | --- | 0 |
| 07/08/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 7 | 0 | 0 |
| 07/09/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 5 | --- | 0 |
| 07/10/2012 | | --- | 0 | --- | --- | 0 | 0 | 0 | 7 | 0 | 165 |
| 07/11/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 7 | --- | 0 |
| 07/12/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 7 | 0 | 0 |
| 07/13/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 0 | --- | 0 |
| 07/14/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 0 | 0 | 0 |
| 07/15/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 2 | --- | 0 |
| 07/16/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | --- | 0 | 0 |
| 07/17/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 6 | --- | 327 |
| 07/18/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 8 | 0 | 0 |
| 07/19/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 8 | --- | 0 |
| 07/20/2012 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0 |
| Total: | | 0 | 0 | 0 | 0 | 43 | 0 | 63 | 0 | 165 | 327 |
| # Days: | | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 |
| Average: | | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 12 | 22 |
| YTD | | 0 | 0 | 0 | 80 | 69,763 | 78,611 | 19,953 | 49,510 | 145,761 | 287,207 |

| COMBINED STEELHEAD | | | | | | | | | | | |
|--------------------|---------------|---------------|---------------|---------------|----------------|------------------|------------------|----------------|----------------|----------------|------------------|
| Date | WTB (Coll) | IMN (Coll) | GRN (Coll) | LEW (Coll) | LGR (INDEX) | LGS (INDEX) | LMN (INDEX) | RIS (INDEX) | MCN (INDEX) | JDA (INDEX) | BO2 (INDEX) |
| 07/06/2012 | * | --- | 1 | --- | --- | 39 | 129 | 56 | 13 | 246 | 296 |
| 07/07/2012 | * | --- | --- | --- | --- | 81 | 143 | 59 | 10 | --- | 333 |
| 07/08/2012 | | --- | --- | --- | --- | 79 | 186 | 107 | 5 | 0 | 0 |
| 07/09/2012 | * | --- | 1 | --- | --- | 25 | 201 | 31 | 21 | --- | 0 |
| 07/10/2012 | | --- | 1 | --- | --- | 74 | 109 | 15 | 5 | 0 | 0 |
| 07/11/2012 | * | --- | 2 | --- | --- | 74 | 49 | 16 | 7 | --- | 0 |
| 07/12/2012 | * | --- | 3 | --- | --- | 24 | 37 | 25 | 13 | 0 | 0 |
| 07/13/2012 | * | --- | 1 | --- | --- | 0 | 131 | 15 | 4 | --- | 0 |
| 07/14/2012 | | --- | --- | --- | --- | 38 | 49 | 8 | 6 | 0 | 0 |
| 07/15/2012 | * | --- | --- | --- | --- | 10 | 17 | 0 | 6 | --- | 0 |
| 07/16/2012 | * | --- | 1 | --- | --- | 25 | 0 | 8 | --- | 0 | 321 |
| 07/17/2012 | * | --- | 0 | --- | --- | 9 | 16 | 0 | 20 | --- | 0 |
| 07/18/2012 | | --- | --- | --- | --- | 0 | 64 | 8 | 22 | 0 | 12 |
| 07/19/2012 | * | --- | --- | --- | --- | 0 | 29 | 8 | 14 | --- | 0 |
| 07/20/2012 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0 |
| Total: | | 0 | 10 | 0 | 0 | 478 | 1,160 | 356 | 146 | 246 | 962 |
| # Days: | | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 |
| Average: | | 0 | 1 | 0 | 0 | 34 | 83 | 25 | 11 | 35 | 64 |
| YTD | | 2,722 | 21,599 | 2,065 | 2,311 | 3,538,899 | 1,490,057 | 610,976 | 17,234 | 543,076 | 2,834,971 |

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) | |
| 07/06/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 0 | 246 | 297 | 0 |
| 07/07/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 10 | --- | 299 | 333 |
| 07/08/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 5 | 448 | 229 | 351 |
| 07/09/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 0 | --- | 218 | 0 |
| 07/10/2012 | | --- | 0 | --- | --- | 0 | 0 | 0 | 2 | 0 | 240 | 0 |
| 07/11/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 0 | --- | 225 | 0 |
| 07/12/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 2 | 560 | 882 | 0 |
| 07/13/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | 2 | --- | 0 | 0 |
| 07/14/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 4 | 464 | 192 | 0 |
| 07/15/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 0 | --- | 2,405 | 630 |
| 07/16/2012 | * | --- | 0 | --- | --- | 0 | 0 | 0 | --- | 0 | 243 | 0 |
| 07/17/2012 | * | --- | 0 | --- | --- | 9 | 16 | 0 | 0 | --- | 0 | 0 |
| 07/18/2012 | | --- | --- | --- | --- | 0 | 0 | 0 | 0 | 247 | 0 | 0 |
| 07/19/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 0 | --- | 204 | 0 |
| 07/20/2012 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0 |
| Total: | | 0 | 0 | 0 | 0 | 9 | 16 | 0 | 25 | 1,965 | 5,434 | 1,314 |
| # Days: | | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 | 15 |
| Average: | | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 281 | 388 | 88 |
| YTD | | 5 | 0 | 0 | 475 | 43,236 | 37,113 | 18,243 | 46,692 | 1,132,680 | 849,717 | 777,461 |

| 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) | |
| 07/06/2012 | * | --- | 0 | --- | --- | 0 | 40 | 0 | 1 | 1,300 | 6,625 | 200 |
| 07/07/2012 | * | --- | --- | --- | --- | 5 | 10 | 0 | 0 | --- | 5,743 | 0 |
| 07/08/2012 | | --- | --- | --- | --- | 5 | 0 | 0 | 0 | 1,000 | 5,140 | 120 |
| 07/09/2012 | * | --- | 0 | --- | --- | 0 | 10 | 0 | 1 | --- | 2,300 | 0 |
| 07/10/2012 | | --- | 0 | --- | --- | 10 | 40 | 0 | 1 | 1,000 | 1,827 | 0 |
| 07/11/2012 | * | --- | 0 | --- | --- | 0 | 40 | 0 | 2 | --- | 1,800 | 12 |
| 07/12/2012 | * | --- | 0 | --- | --- | 0 | 5 | 0 | 3 | 2,000 | 800 | 0 |
| 07/13/2012 | * | --- | 0 | --- | --- | 0 | 100 | 5 | 0 | --- | 1,429 | 200 |
| 07/14/2012 | | --- | --- | --- | --- | 0 | 40 | 0 | 0 | 800 | 614 | 100 |
| 07/15/2012 | * | --- | --- | --- | --- | 0 | 0 | 0 | 1 | --- | 0 | 8 |
| 07/16/2012 | * | --- | 0 | --- | --- | 5 | 20 | 5 | --- | 900 | 2,292 | 0 |
| 07/17/2012 | * | --- | 0 | --- | --- | 5 | 20 | 5 | 1 | --- | 3,000 | 0 |
| 07/18/2012 | | --- | --- | --- | --- | 5 | 30 | 0 | 2 | 400 | 1,143 | 8 |
| 07/19/2012 | * | --- | --- | --- | --- | 0 | 70 | 5 | 1 | --- | 1,571 | 0 |
| 07/20/2012 | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0 |
| Total: | | 0 | 0 | 0 | 0 | 35 | 425 | 20 | 13 | 7,400 | 34,284 | 648 |
| # Days: | | 0 | 8 | 0 | 0 | 14 | 14 | 14 | 13 | 7 | 14 | 15 |
| Average: | | 0 | 0 | 0 | 0 | 3 | 30 | 1 | 1 | 1,057 | 2,449 | 43 |
| YTD | | 6 | 0 | 0 | 0 | 6,955 | 6,169 | 2,176 | 113 | 114,030 | 476,481 | 31,069 |

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.

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

Two Week Transportation Summary

Source: Fish Passage Center

Updated:

7/20/12 10:02 AM

| | | 07/06/12 | TO | 07/20/12 | | | | |
|--------------------------------|--------------------------|----------|-----|----------|----|-------|-------------|---------|
| | | Species | | | | | | |
| Site | Data | CH0 | CH1 | CO | ST | SO | Grand Total | |
| LGR | Sum of NumberCollected | 40,675 | 24 | | | 274 | 5 | 40,978 |
| | Sum of NumberBarged | 40,367 | 19 | | | 269 | 2 | 40,657 |
| | Sum of NumberBypassed | 6 | 0 | | | 0 | 0 | 6 |
| | Sum of Numbertrucked | 0 | 0 | | | 0 | 0 | 0 |
| | Sum of SampleMorts | 136 | 2 | | | 3 | 0 | 141 |
| | Sum of FacilityMorts | 166 | 3 | | | 2 | 3 | 174 |
| | Sum of ResearchMorts | 0 | 0 | | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 302 | 5 | | | 5 | 3 | 315 |
| LGS | Sum of NumberCollected | 50,155 | 90 | 30 | | 781 | 10 | 51,066 |
| | Sum of NumberBarged | 49,917 | 88 | 30 | | 778 | 9 | 50,822 |
| | Sum of NumberBypassed | 5 | 0 | 0 | | 0 | 0 | 5 |
| | Sum of Numbertrucked | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Sum of SampleMorts | 34 | 0 | 0 | | 0 | 1 | 35 |
| | Sum of FacilityMorts | 199 | 2 | 0 | | 3 | 0 | 204 |
| | Sum of ResearchMorts | 0 | 0 | 0 | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 233 | 2 | 0 | | 3 | 1 | 239 |
| LMN | Sum of NumberCollected | 17,017 | 210 | | | 232 | | 17,459 |
| | Sum of NumberBarged | 16,547 | 210 | | | 230 | | 16,987 |
| | Sum of NumberBypassed | 351 | 0 | | | 2 | | 353 |
| | Sum of Numbertrucked | 0 | 0 | | | 0 | | 0 |
| | Sum of SampleMorts | 18 | 0 | | | 0 | | 18 |
| | Sum of FacilityMorts | 101 | 0 | | | 0 | | 101 |
| | Sum of ResearchMorts | 0 | 0 | | | 0 | | 0 |
| | Sum of TotalProjectMorts | 119 | 0 | | | 0 | | 119 |
| MCN | Sum of NumberCollected | 335,615 | 100 | | | 100 | 800 | 336,615 |
| | Sum of NumberBarged | 0 | 0 | | | 0 | 0 | 0 |
| | Sum of NumberBypassed | 335,570 | 100 | | | 100 | 800 | 336,570 |
| | Sum of Numbertrucked | 0 | 0 | | | 0 | 0 | 0 |
| | Sum of SampleMorts | 11 | 0 | | | 0 | 0 | 11 |
| | Sum of FacilityMorts | 34 | 0 | | | 0 | 0 | 34 |
| | Sum of ResearchMorts | 0 | 0 | | | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 45 | 0 | | | 0 | 0 | 45 |
| Total Sum of NumberCollected | | 443,462 | 424 | 30 | | 1,387 | 815 | 446,118 |
| Total Sum of NumberBarged | | 106,831 | 317 | 30 | | 1,277 | 11 | 108,466 |
| Total Sum of NumberBypassed | | 335,932 | 100 | 0 | | 102 | 800 | 336,934 |
| Total Sum of Numbertrucked | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 199 | 2 | 0 | | 3 | 1 | 205 |
| Total Sum of FacilityMorts | | 500 | 5 | 0 | | 5 | 3 | 513 |
| Total Sum of ResearchMorts | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Total Sum of TotalProjectMorts | | 699 | 7 | 0 | | 8 | 4 | 718 |

YTD Transportation Summary

Source: Fish Passage Center

Updated:

7/20/12 10:02 AM

TO: 07/20/12

| | | Species | | | | | |
|--------------------------------|--------------------------|-----------|-----------|---------|---------|-----------|-------------|
| Site | Data | CH0 | CH1 | CO | SO | ST | Grand Total |
| LGR | Sum of NumberCollected | 646,825 | 2,693,473 | 47,635 | 30,550 | 2,353,326 | 5,771,809 |
| | Sum of NumberBarged | 633,306 | 989,031 | 39,435 | 29,057 | 949,578 | 2,640,407 |
| | Sum of NumberBypassed | 11,454 | 1,702,758 | 8,165 | 1,422 | 1,403,470 | 3,127,269 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 300 | 180 | 2 | 9 | 61 | 552 |
| | Sum of FacilityMorts | 1,765 | 1,429 | 33 | 62 | 182 | 3,471 |
| | Sum of ResearchMorts | 0 | 75 | 0 | 0 | 35 | 110 |
| | Sum of TotalProjectMorts | 2,065 | 1,684 | 35 | 71 | 278 | 4,133 |
| LGS | Sum of NumberCollected | 632,164 | 1,498,421 | 53,296 | 25,699 | 971,108 | 3,180,688 |
| | Sum of NumberBarged | 631,410 | 1,109,428 | 51,693 | 25,003 | 683,414 | 2,500,948 |
| | Sum of NumberBypassed | 118 | 388,249 | 1,601 | 689 | 287,507 | 678,164 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 66 | 30 | 0 | 2 | 15 | 113 |
| | Sum of FacilityMorts | 570 | 714 | 2 | 5 | 172 | 1,463 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 636 | 744 | 2 | 7 | 187 | 1,576 |
| LMN | Sum of NumberCollected | 243,459 | 543,297 | 14,381 | 13,396 | 438,603 | 1,253,136 |
| | Sum of NumberBarged | 230,032 | 531,183 | 14,352 | 13,372 | 428,299 | 1,217,238 |
| | Sum of NumberBypassed | 12,901 | 11,582 | 19 | 13 | 9,825 | 34,340 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 77 | 60 | 0 | 3 | 35 | 175 |
| | Sum of FacilityMorts | 449 | 472 | 10 | 8 | 147 | 1,086 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 526 | 532 | 10 | 11 | 182 | 1,261 |
| MCN | Sum of NumberCollected | 721,775 | 1,040,136 | 72,875 | 554,339 | 247,888 | 2,637,013 |
| | Sum of NumberBarged | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of NumberBypassed | 721,599 | 1,039,959 | 72,875 | 554,264 | 247,862 | 2,636,559 |
| | Sum of NumberTrucked | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of SampleMorts | 94 | 43 | 0 | 28 | 10 | 175 |
| | Sum of FacilityMorts | 82 | 134 | 0 | 47 | 16 | 279 |
| | Sum of ResearchMorts | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sum of TotalProjectMorts | 176 | 177 | 0 | 75 | 26 | 454 |
| Total Sum of NumberCollected | | 2,244,223 | 5,775,327 | 188,187 | 623,984 | 4,010,925 | 12,842,646 |
| Total Sum of NumberBarged | | 1,494,748 | 2,629,642 | 105,480 | 67,432 | 2,061,291 | 6,358,593 |
| Total Sum of NumberBypassed | | 746,072 | 3,142,548 | 82,660 | 556,388 | 1,948,664 | 6,476,332 |
| Total Sum of NumberTrucked | | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sum of SampleMorts | | 537 | 313 | 2 | 42 | 121 | 1,015 |
| Total Sum of FacilityMorts | | 2,866 | 2,749 | 45 | 122 | 517 | 6,299 |
| Total Sum of ResearchMorts | | 0 | 75 | 0 | 0 | 35 | 110 |
| Total Sum of TotalProjectMorts | | 3,403 | 3,137 | 47 | 164 | 673 | 7,424 |

Cumulative Adult Passage at Mainstem Dams Through: 07/20

| DAM | EndDate | Spring Chinook | | | | | | Summer Chinook | | | | | | Fall Chinook | | | | | |
|-----|---------|----------------|------|--------|-------|------------|-------|----------------|-------|-------|-------|------------|-------|--------------|------|-------|------|------------|------|
| | | 2012 | | 2011 | | 10-Yr Avg. | | 2012 | | 2011 | | 10-Yr Avg. | | 2012 | | 2011 | | 10-Yr Avg. | |
| | | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack | Adult | Jack |
| BON | 07/19 | 158075 | 7591 | 167097 | 50945 | 152015 | 20110 | 75921 | 10730 | 99630 | 46907 | 86080 | 15862 | 0 | 0 | 0 | 0 | 0 | 0 |
| TDA | 07/19 | 117071 | 7173 | 124164 | 40146 | 112195 | 16495 | 61882 | 8392 | 72380 | 34942 | 72598 | 12057 | 0 | 0 | 0 | 0 | 0 | 0 |
| JDA | 07/19 | 107655 | 6755 | 103401 | 39823 | 94492 | 15370 | 52914 | 8511 | 66692 | 30579 | 65451 | 12328 | 0 | 0 | 0 | 0 | 0 | 0 |
| MCN | 07/19 | 102763 | 4787 | 101246 | 31750 | 86252 | 13687 | 54021 | 3854 | 62166 | 24632 | 59930 | 9590 | 0 | 0 | 0 | 0 | 0 | 0 |
| IHR | 07/19 | 71957 | 2905 | 69306 | 18161 | 60108 | 8392 | 13195 | 1311 | 25015 | 11598 | 18041 | 4209 | 0 | 0 | 0 | 0 | 0 | 0 |
| LMN | 07/19 | 68608 | 2891 | 69832 | 18094 | 58469 | 7193 | 13957 | 1347 | 29310 | 12961 | 18923 | 3996 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGS | 07/19 | 68247 | 3449 | 67321 | 23492 | 54053 | 8198 | 12510 | 1340 | 38625 | 16882 | 17170 | 4700 | 0 | 0 | 0 | 0 | 0 | 0 |
| LGR | 07/19 | 66366 | 3525 | 59342 | 22063 | 54084 | 9639 | 11240 | 1378 | 33591 | 14959 | 15967 | 5183 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRD | 07/14 | 19495 | 1015 | 15246 | 6030 | 16630 | 1325 | 29124 | 524 | 25707 | 1910 | 40045 | 1321 | 0 | 0 | 0 | 0 | 0 | 0 |
| RIS | 07/16 | 19881 | 800 | 13089 | 8394 | 14658 | 2236 | 27663 | 703 | 19292 | 7523 | 35734 | 2900 | 0 | 0 | 0 | 0 | 0 | 0 |
| RRH | 07/16 | 6641 | 459 | 6989 | 3491 | 5643 | 822 | 16891 | 545 | 13247 | 3414 | 22860 | 1881 | 0 | 0 | 0 | 0 | 0 | 0 |
| WEL | 07/15 | 5311 | 700 | 4153 | 3969 | 4833 | 817 | 10113 | 631 | 4800 | 1073 | 13066 | 537 | 0 | 0 | 0 | 0 | 0 | 0 |
| WFA | 07/17 | 34935 | 1220 | 41837 | 1284 | 50037 | 1026 | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 0 |

| DAM | Coho | | | | | | Sockeye | | | Steelhead | | | | | |
|-----|-------|------|-------|------|------------|------|---------|--------|------------|-----------|-------|------------|-----------|-----------|------------|
| | 2012 | | 2011 | | 10-Yr Avg. | | 2012 | 2011 | 10-Yr Avg. | 2012 | 2011 | 10-Yr Avg. | Wild 2012 | Wild 2011 | 10-Yr Avg. |
| | Adult | Jack | Adult | Jack | Adult | Jack | | | | | | | | | |
| BON | 0 | 0 | 0 | 0 | 0 | 0 | 514450 | 182852 | 129932 | 43715 | 40554 | 60706 | 19191 | 19709 | 26845 |
| TDA | 0 | 0 | 0 | 0 | 0 | 0 | 408541 | 134788 | 108215 | 20665 | 16810 | 30741 | 9572 | 8340 | 14507 |
| JDA | 0 | 0 | 0 | 0 | 0 | 0 | 391934 | 138166 | 111943 | 13388 | 11871 | 24448 | 6608 | 5872 | 10359 |
| MCN | -1 | 0 | 0 | 0 | 0 | 0 | 361028 | 106381 | 91255 | 9248 | 8918 | 14297 | 3723 | 3831 | 5369 |
| IHR | 0 | 0 | 0 | 0 | 0 | 0 | 375 | 909 | 364 | 5279 | 6218 | 8547 | 1774 | 2008 | 2593 |
| LMN | 0 | 0 | 0 | 0 | 0 | 0 | 392 | 1082 | 442 | 6068 | 6352 | 8359 | 2657 | 2874 | 2930 |
| LGS | 0 | 0 | 0 | 0 | 0 | 0 | 336 | 1039 | 404 | 4795 | 7688 | 5885 | 2642 | 3804 | 2310 |
| LGR | 0 | 0 | 0 | 0 | 0 | 0 | 296 | 935 | 466 | 9557 | 13246 | 12083 | 4181 | 6075 | 3842 |
| PRD | 0 | 0 | 0 | 0 | 0 | 0 | 332382 | 90759 | 102665 | 783 | 253 | 847 | 0 | 0 | 0 |
| RIS | 0 | 0 | 0 | 0 | 0 | 0 | 309666 | 77560 | 96660 | 656 | 220 | 676 | 394 | 148 | 453 |
| RRH | 0 | 0 | 0 | 0 | 0 | 0 | 251475 | 61926 | 75307 | 1007 | 648 | 681 | 752 | 546 | 438 |
| WEL | 0 | 0 | 0 | 0 | 0 | 0 | 167669 | 27882 | 62365 | 253 | 140 | 209 | 162 | 109 | 129 |
| WFA | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | 28175 | 26036 | 26254 | - | - | - |

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.

Page last updated on: 07/20/12

BON counts from January 1, 2012 to March 14, 2012 (historical counts begin March 15):

| Year | Chinook Adult | Chinook Jack | Steelhead | Wild Steelhead |
|------|---------------|--------------|-----------|----------------|
| 2012 | 12 | 1 | 1,471 | 497 |
| 2011 | 47 | 0 | 1,370 | 580 |

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 | | | | | | | | | | | |
| Little Goose Dam | | | | | | | | | | | |
| | 07/09/12 | Chinook + Steelhead | 84 | 1 | 1 | 1.19% | 0.00% | 1 | 0 | 0 | 0 |
| | 07/16/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| Lower Monumental Dam | | | | | | | | | | | |
| | 07/11/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/18/12 | Chinook + Steelhead | 69 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| McNary Dam | | | | | | | | | | | |
| | 07/09/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/13/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/15/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/19/12 | Chinook + Steelhead | 100 | 2 | 2 | 2.00% | 0.00% | 2 | 0 | 0 | 0 |
| Bonneville Dam | | | | | | | | | | | |
| | 07/07/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/10/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/14/12 | Chinook + Steelhead | 100 | 0 | 0 | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| | 07/17/12 | Chinook + Steelhead | 100 | 2 | 1 | 1.00% | 0.00% | 1 | 0 | 0 | 0 |
| Rock Island Dam | | | | | | | | | | | |
| | 07/06/12 | Chinook + Steelhead | 100 | 8 | 7 | 7.00% | 0.00% | 6 | 1 | 0 | 0 |
| | 07/07/12 | Chinook + Steelhead | 100 | 4 | 4 | 4.00% | 0.00% | 4 | 0 | 0 | 0 |
| | 07/10/12 | Chinook + Steelhead | 100 | 3 | 3 | 3.00% | 0.00% | 3 | 0 | 0 | 0 |
| | 07/12/12 | Chinook + Steelhead | 101 | 6 | 6 | 5.94% | 0.00% | 6 | 0 | 0 | 0 |
| | 07/17/12 | Chinook + Steelhead | 100 | 3 | 3 | 3.00% | 0.00% | 2 | 1 | 0 | 0 |
| | 07/19/12 | Chinook + Steelhead | 100 | 3 | 3 | 3.00% | 0.00% | 3 | 0 | 0 | 0 |