**NWW Juvenile Fish Passage Status Report (March 1- June 20, 2021)**

Lower Granite bypass systems were watered-up for early start on February 24th and February 28th, respectively. Every day conditon sampling began at Lower Granite Dam March 1st. McNary Dam early start collection was scheduled to start in March as well but was delayed because repairs were needed to the collection channel cleaning brush. Lower Granite Dam collection during the March 1-31 early start-up totaled 2,673 smolts in 2021 compared to 8,099 in 2020.

Bypass systems were watered up March 22 at Little Goose Dam, March 24 at Ice Harbor, March 25 at Lower Monumental Dam and March 26 at McNary Dam. Collection for every other day condition sampling began April 1st at Little Goose and McNary dams. Condition sampling began every third day at Lower Monumnetal Dam April 1 and every other day April 15. Samples are being collected bi-weekly at Ice Harbor Dam starting April 1. Daily fish collection for barge transport began April 23rd at Lower Granite, Little Goose and Lower Monumental dams. The attached spreadsheet provides daily collection, bypass and transport numbers passing through the bypass systems for April 1 – June 20 for Lower Granite, Little Goose and Lower Monumental dams. Alternate day barge trips began May 19 with the last barge trip occuring on June 20.

This year’s springtime collection numbers at Snake River transport projects during April 1 – June 20 have been approximately 11% of the 10-year average (2011-2020; Table 1). The number of smolts transported this year through June 20 is 12% of the 10-year average (Table 2). At McNary Dam, 470,069 smolts have been collected through June 20 and all were bypassed. At Ice Harbor Dam, 2,849 fish have been sampled as of June 20, and all were bypassed.

Table 1. Collection numbers 2018 to 2021 and the 10-year average (2011-2020) for April 1 – June 20 at Lower Granite Dam, Little Goose Dam, Lower Monumental Dam and overall.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Collected | 2018 | 2019 | 2020 | 2021 | 10y avg. |
| Lower Granite Dam | 6,362,056 | 5,003,430 | 1,368,418 | 571,193 | 5,015,726 |
| Little Goose Dam | 4,460,656 | 3,177,229 | 1,062,141 | 282,571 | 3,062,522 |
| Lower Monumental Dam | 2,682,100 | 2,985,027 | 803,298 | 246,792 | 2,128,026 |
| Overall | 13,504,812 | 11,165,686 | 3,233,857 | 1,100,556 | 10,206,274 |

Table 2. Transported numbers 2018 to 2021 and the 10-year average (2011-2020) for April 1 – June 20 at Lower Granite Dam, Little Goose Dam, Lower Monumental Dam and overall.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Transported | 2018 | 2019 | 2020 | 2021 | 10y avg.\* |
| Lower Granite Dam | 5,011,927 | 3,040,753 | 1,141,914 | 366,654 | 2,915,978 |
| Little Goose Dam | 3,507,536 | 2,277,118 | 1,012,087 | 255,901 | 2,265,678 |
| Lower Monumental Dam | 2,224,739 | 2,104,049 | 793,498 | 209,181 | 1,623,766 |
| Overall | 10,744,202 | 7,421,920 | 2,947,499 | 831,736 | 6,805,422 |

\*Previous to 2018 barge transport operations did not begin until May 1st,from 2018-2021 collection for barge transport

began April 23 or 24.

A total of 255,777 PIT-tagged juvenile salmon and steelhead have been detected passing Lower Granite from April 3 – June 20. Of those, 243,578 were detected moving through the removable spillway weir (RSW) and 12,199 were detected in the juvenile bypass system (JBS). During the same timeframe in 2020, a total of 183,476 juvenile salmon and steelhead were detected, of which 151,654 were detected at the RSW and 31,822 detected in the JBS (Table 3).

Table 3. Proportional spillway PIT tag detection (%) for juvenile salmon and steelhead for April 3 – June 20 at Lower Granite Dam, 2020 and 2021.

|  |  |  |
| --- | --- | --- |
| Species | 2020 | 2021 |
| Chinook salmon\* | 79% | 95% |
| Steelhead | 85% | 95% |
| Coho salmon | 85% | 96% |
| Sockeye Salmon | 92% | 99% |
| Combined | 83% | 95% |

\*Yearling and subyearling Chinook salmon.

The 2021 spring fish passage spill operations began at 00:01 April 3rd on the Snake River and 00:01 April 10th on the Columbia River with summer spill beginning on June 21 and June 16, respectively. Snake River average river flow was 61% of the 10-year average so far (Table 4). Average river flow in the Columbia River at McNary Dam was 67% of the 10-year average. Percent spill levels in 2021 during the spring have averaged between 158% to 171% of the 10-yr average at the three upper Snake River projects, 101% at Ice Harbor Dam and 108% of the 10-yr average at McNary Dam to date.

Table 4. Average flow, spill and percent spill 2018-2021 and the 10-year average (2011-2020) from April 1 – June 20 at Walla Walla projects on the Snake and Columbia rivers.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Flow (kcfs) | | | | | Spill (kcfs) | | | | | Spill (%) | | | | |
|  | 2018 | 2019 | 2020 | 2021 | 10-yr. | 2018 | 2019 | 2020 | 2021 | 10-yr. | 2018 | 2019 | 2020 | 2021 | 10-yr. |
| Lower Granite Dam (4/1-5/23) | 111 | 119 | 87 | 61 | 100 | 41 | 45 | 52 | 38 | 36 | 39% | 38% | 60% | 62% | 36% |
| Little Goose Dam (4/1-5/23) | 107 | 116 | 85 | 55 | 97 | 39 | 50 | 51 | 33 | 38 | 37% | 43% | 59% | 59% | 38% |
| Lower Monumental (4/1-5/23) | 107 | 115 | 85 | 60 | 98 | 43 | 42 | 58 | 41 | 40 | 41% | 37% | 67% | 68% | 42% |
| Ice Harbor Dam (4/1-5/23) | 114 | 120 | 90 | 62 | 102 | 84 | 82 | 64 | 40 | 64 | 75% | 68% | 69% | 63% | 63% |
| McNary Dam (4/10-5/23) | 341 | 251 | 257 | 194 | 290 | 205 | 145 | 163 | 114 | 157 | 58% | 56% | 59% | 56% | 51% |