

2022 BPA/GPUD Avian Monitoring Report 05/23 – 05/29/2022

WEEKLY ACTIVITIES & UPCOMING EVENTS

| ACTIVITIES | DATE |
|-----------------------------------------------------------------|-------------|
| Survey of sites in Sprague Lake | 05/23 |
| Survey of sites in McNary Pool below the Snake River confluence | 05/24 |
| Survey of sites in Potholes Reservoir | 05/25 |
| Survey of sites in Lake Lenore | 05/25 |
| Survey of Astoria-Megler Bridge | 05/26 |
| UPCOMING EVENTS | |
| Survey of sites in Lake Lenore | 05/30-06/05 |
| Survey of sites in Banks Lake | 05/30-06/05 |
| Survey of sites in McNary Pool above the Snake River confluence | 05/30-06/05 |
| Survey of sites in Potholes Reservoir | 05/30-06/05 |
| Survey of sites in McNary Pool below the Snake River confluence | 05/30-06/05 |
| Fixed-wing aerial surveys of Columbia River basin | 05/30-06/05 |

COLONY MONITORING & WATERBIRD SURVEYS

Sprague Lake: Sites were visited May 23.

Harper Island

1 Caspian tern was observed flying overhead. No tern nesting colony has been confirmed this year.

~430 double-crested cormorants and ~ 140 attended nests with chicks were observed (ages 1-3 weeks).

45 loafing American white pelicans were observed.

~1,400 nesting gulls were observed with chicks (ages 1-2 weeks).

East Sprague Lake

~370 American white pelicans and 30 double-crested cormorants were observed foraging and loafing east of Harper Island.

McNary Pool below the Snake River confluence: Sites were visited on May 24.

Foundation Island

3 loafing Caspian terns were observed.

~400 double-crested cormorants and ~250 attended nests with chicks (ages 4-6 weeks) were observed.

Badger Island

Drone survey was conducted, and 442 nesting Caspian terns were counted from preliminary analysis of drone imagery (same as preliminary count from 5/20). Final counts of adult terns and attended nests in the drone imagery will be conducted at a later date.

From the boat, ~350 nesting Caspian terns were observed on the shoreline colony which appeared to be much more settled compared to the previous visit when multiple unknown disturbances were observed. Tern nesting at interior sites on Badger Island has not been confirmed this year.

~170 loafing American white pelicans were observed along the shoreline. Pelicans are actively nesting at the island's interior but counts from a boat are not possible due to vegetation obstructing our view of the colony. Colony size for pelicans on Badger Island will be determined from counts of pelicans in aerial imagery taken at the peak of incubation.

~970 nesting gulls were observed on the western shoreline.

Crescent Island

Drone survey was conducted, and 223 nesting Caspian terns (preliminary) were counted on the historical colony area (preliminary count from 5/20 was 236). Final counts of adult terns and attended nests in the drone imagery will be conducted at a later date.

From the boat, 23 Caspian terns were observed loafing on the shoreline (*Figure 1*).



Figure 1. Caspian terns loafing on Crescent Island, May 24, 2022.

72 double crested cormorants and 43 attended nests (in trees) were observed.

~450 nesting gulls with chicks (1-2 weeks) were observed. ~60% of the gulls were California gulls and ~40% were ring-billed gulls.

Potholes Reservoir: Sites were visited on May 25.

Goose Island

Drone survey was conducted with preliminary analysis identifying 2 nesting Caspian terns on top of the main island. Nesting by Caspian terns has been confirmed from previous aerial imagery (5/14 and 5/17) on Northwest Rocks and the historic main colony, although both locations had <3 breeding pairs. Active and passive dissuasion appears to be limiting sustained nesting in any one location as Caspian terns observed from the latest drone imagery were in a new location on the historic nesting colony.

During a boat survey, Caspian terns were also counted in 12 different locations on Goose Island and its surrounding islets (*Table 1*).

Table 1. Caspian tern counts by location at Goose Island from 4/12 – 5/24. [NA: Not Available]

| Caspian Terns | | | | | | |
|--------------------------|----------|----------|--------------------|----------|----------|-------------------|
| LOCATION | 04/12 | 04/18 | 04/27 ² | 5/03 | 5/17 | 5/25 ³ |
| Northwest Main | 0 | 0 | 0 | 0 | 2 | 0 |
| Northeast Main | 0 | 0 | 0 | 0 | 1 | 0 |
| Southeast Main | 0 | 0 | 0 | 0 | 0 | 0 |
| South Spit | 0 | 0 | 0 | 2 | 1 | 0 |
| South Beach | 0 | 0 | 0 | 0 | 0 | 0 |
| Colony Area ¹ | NA | NA | NA | NA | NA | 2 |
| Southwest Main | 0 | 0 | 0 | 0 | 0 | 0 |
| West Main | 0 | 0 | 0 | 0 | 0 | 0 |
| North Beach | 0 | 0 | 0 | 0 | 0 | 0 |
| East Rocks | 0 | 0 | 0 | 4 | 0 | 0 |
| Northeast Rocks | 0 | 0 | 0 | 0 | 0 | 0 |
| Northwest Rocks | 0 | 0 | 0 | 0 | 4 | 0 |
| Total | 0 | 0 | 0 | 6 | 7 | 2 |

¹ Complete obstruction from boat vantage.

² Nesting dissuasion activities occurred during counts.

³ Counts conducted from aerial imagery.

26 double crested cormorants and 5 attended nests were observed in the trees on the main island along the shoreline.

~ 6,590 nesting gulls were observed on the island.

Columbia River Estuary: Site was visited on May 26 (boat and drone survey).

Astoria-Megler Bridge

The second of three surveys for nesting cormorants (double-crested, Brandt's, and pelagic) was conducted for the Astoria-Megler bridge on May 26 (*Figure 2* and *Table 2*).

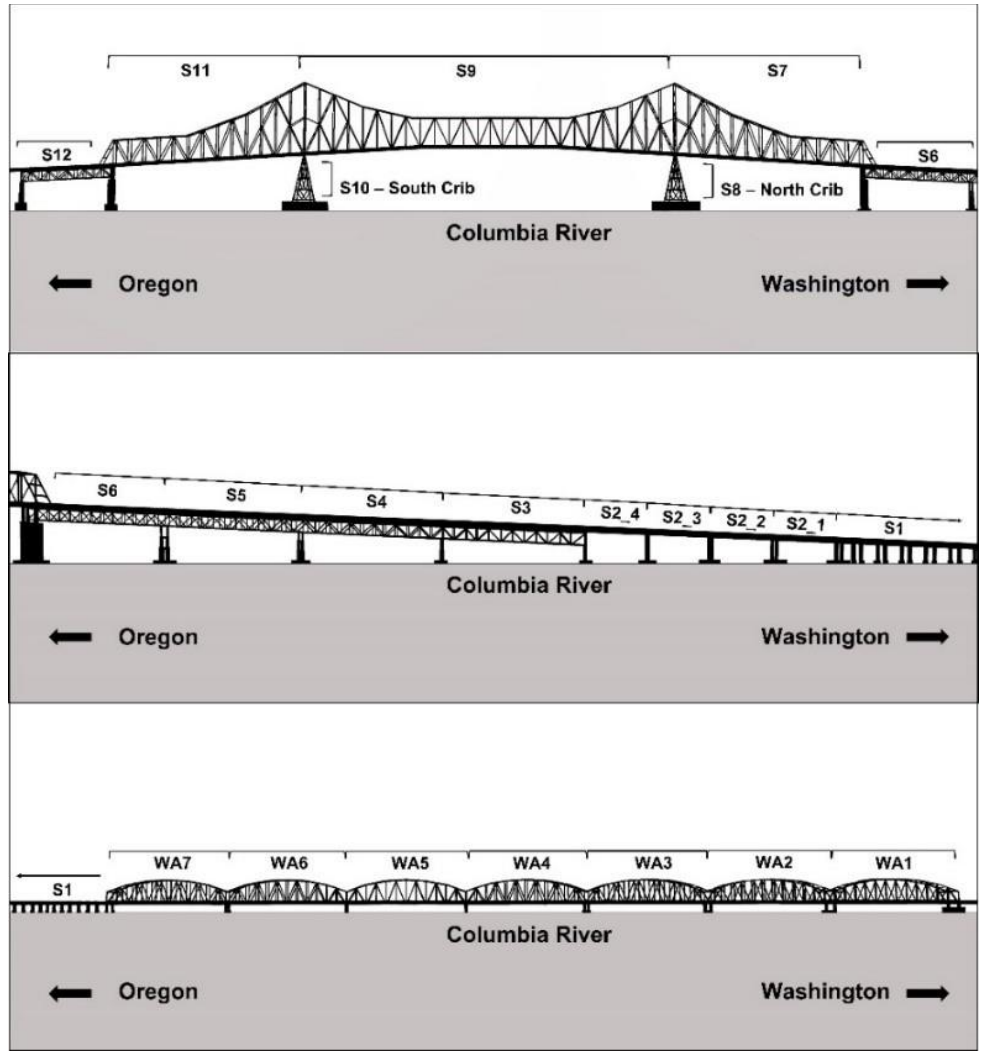


Figure 2. Sections of the Astoria-Megler Bridge for nesting surveys.

Table 2. Preliminary nest counts by cormorant species and bridge section from the North (Section WA 1) to South (Section 12) during boat surveys on May 9 and May 26. Two observers conducted counts and values presented are the average count. [DCCO: double-crested cormorant; BRAC: Brandt’s cormorant; PECO: pelagic cormorant; NA: Not Available and will be counted from aerial imagery]

| Section | Cormorants nesting on Astoria-Megler Bridge | | | | | |
|--------------------------|---------------------------------------------|------------|-----------|--------------|------------|-----------|
| | 5/9/2022 | | | 5/26/2022 | | |
| | DCCO | BRAC | PECO | DCCO | BRAC | PECO |
| WA 1 | 32 | 0 | 0 | 44 | 0 | 0 |
| WA 2 | 55 | 97 | 0 | 84 | 95 | 0 |
| WA 3 | 61 | 74 | 0 | 76 | 87 | 0 |
| WA 4 | 50 | 44 | 0 | 63 | 55 | 0 |
| WA 5 | 49 | 36 | 0 | 57 | 52 | 0 |
| WA 6 | 87 | 57 | 0 | 134 | 57 | 0 |
| WA 7 | 124 | 63 | 0 | 150 | 81 | 0 |
| 1 | 256 | 230 | 28 | 205 | 263 | 33 |
| 2.1 | 63 | 0 | 9 | 85 | 0 | 4 |
| 2.2 | 28 | 0 | 3 | 51 | 0 | 0 |
| 2.3 | 17 | 0 | 0 | 17 | 0 | 0 |
| 2.4 | 3 | 0 | 0 | 7 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 15 | 0 | 0 | 0 | 0 | 0 |
| 5 | 191 | 0 | 0 | 74 | 0 | 0 |
| 6 | 258 | 0 | 0 | 118 | 0 | 0 |
| 7 | 29 | 0 | 0 | 26 | 8 | 0 |
| 8 | 968 | 0 | 0 | NA | NA | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | NA | NA | 0 | NA | NA | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total¹ | 2,286 | 601 | 40 | 1,191 | 698 | 37 |

¹ At the time of this report, totals do not include all attended nests on bridge sections 8 and 10 for DCCO and BRAC.

1,191 double-crested cormorant attended nests (preliminary estimate) were counted during a boat survey on May 26 of the Astoria-Megler Bridge. Nest counts from sections 8 and 10 (not visible from the boat) will be conducted once aerial imagery is processed. Double-crested cormorant nests were observed across most sections of the bridge. Sections 3 and 4 continue to be impacted by bridge construction and maintenance (*Figure 2* and *Table 2*). Breeding individuals were identified building nests, incubating nests, and attending nests with chicks (ages 1-3 weeks, *Figure 3*). Thousands of double-crested cormorants were also observed loafing on the bridge, although were not counted.



Figure 3. Double-crested cormorants with chicks (section S1, left) and Brandt's cormorants on the Washington side of the Astoria Megler Bridge (right) on May 26.

698 Brandt's cormorant attended nests (preliminary estimate) were counted across the entire length of the Astoria-Megler Bridge (see *Figure 2, Table 2, Figure 3* above). Nest counts from sections 8 and 10 will be conducted once aerial imagery is processed. Breeding status included Brandt's cormorants incubating nests and nest building. No chicks were observed.

37 pelagic cormorant attended nests (preliminary estimate) were counted in sections 1-2.2 (see *Figure 2* and *Table 2* above) of the Astoria-Megler Bridge. Breeding status included cormorants incubating nests and nest building (*Figure 4*). No chicks were observed.



Figure 4. Pelagic cormorants nesting in Section 1 near the Washington sections of the Astoria-Megler Bridge on May 26.

The second of three drone surveys of section 8 (see *Figure 2*) was conducted on May 26. Section 8 is where experimental plots were set up to assist in estimating per-capita (per breeding pair) predation rates by nesting double-crested cormorants. For details on experimental design and estimates of predation rates on the Astoria-Megler Bridge, see 2021 Annual Report, Appendix A (Evans et al. 2022).

PIT TAGGING OF STEELHEAD AT ROCK ISLAND DAM

Steelhead smolt tagging commenced at Rock Island Dam on April 8. As of May 29, a total of 5,003 steelhead smolts (3,658 hatchery and 1,345 wild) have been captured, PIT-tagged, and released (Figure 5). Steelhead are selected for tagging at random, regardless of their size, condition, or rear-type (hatchery, wild) and are tagged in proportion to and in-concert with the run at-large (tagged and untagged) passing Rock Island Dam. Following the 2022 breeding season (August-September), we will scan bird colonies for smolt PIT tags to estimate predation rates on steelhead and on other groups of tagged fish.

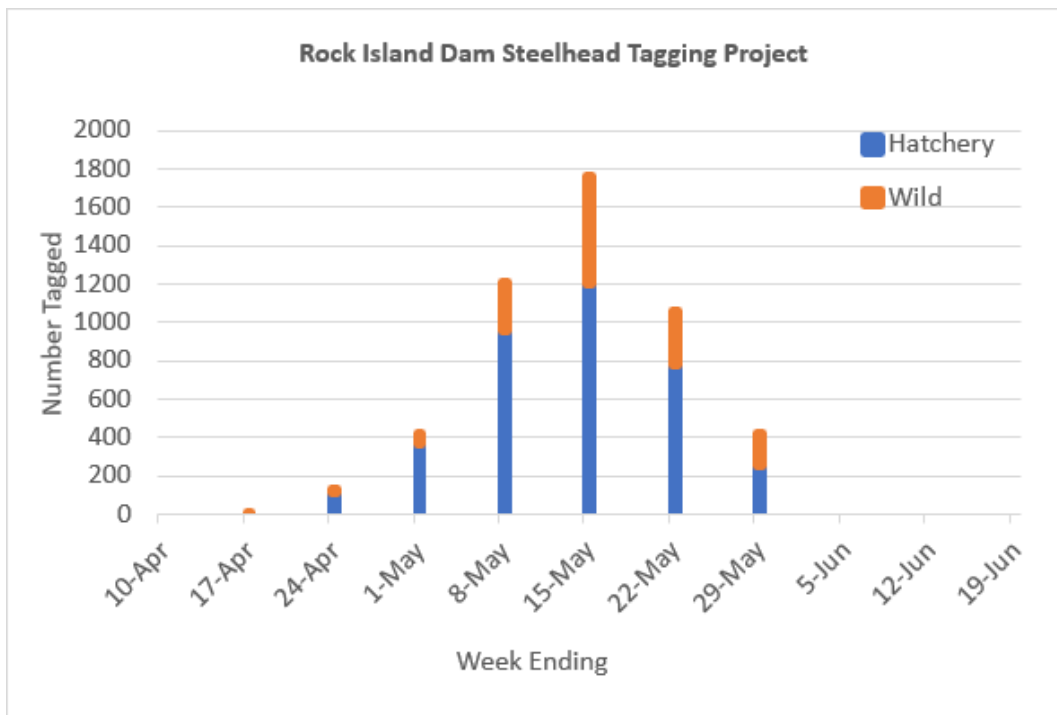


Figure 5. Steelhead smolt tagging at Rock Island Dam in 2022.