

## 2021 Grant PUD / BPA Avian Monitoring Weekly Report 06/21 – 06/27

### WEEKLY ACTIVITIES & UPCOMING EVENTS

ACTIVITIES	DATE
Survey of Lenore Lake	06/21
Survey of Banks Lake	06/21
Survey of Potholes Reservoir: Goose Island and North Potholes	06/22
Survey of Blalocks Islands	06/24
Survey of McNary Pool: Badger, Crescent, and Foundation Islands	06/24
Survey of Sprague Lake	06/25
East Sand Island Aerial Survey Count	06/25
UPCOMING EVENTS	
Survey of McNary Pool: Badger, Crescent, and Foundation Islands	06/28
Survey of Miller Rocks	06/29
Survey of Blalock Islands	06/29
Survey of Potholes Reservoir: Goose Island and North Potholes	07/01

### COLONY MONITORING & WATERBIRD SURVEYS

**Lenore Lake:** Lenore Lake was visited on June 21.

North Rock Island:

No Caspian terns were observed. Several pairs of terns may have attempted to nest here in early June, although all nesting attempts were unsuccessful.

~90 double-crested cormorants and 37 attended cormorant nests were observed. A combined count of 98 cormorant chicks and fledglings were also observed. Ages of chicks were estimated to be 2 - 6 weeks old. Approximately 90% of the northernmost cormorant colony has fledged, and most of the remaining cormorant breeding activity is on the southernmost colony, an area where nesting was initiated later (see *Figure 1*).

~300 nesting gulls were observed. Approximately 95% were California gulls and 5% were ring-billed gulls. A combined count of 210 gull chicks and fledglings were observed. Ages of chicks were estimated to be 2 - 5 weeks old.



*Figure 1. Double-crested cormorant colonies on North Rock Island, the former northern colony on the left and southern colony on the right, on June 21<sup>st</sup>.*

Shoal Island:

~60 Caspian terns and 12 chicks (mid-size to black-cap) were observed (see *Figure 2* below). Four terns were observed in incubating posture. Vegetation and rocks obstructed the view of the entire colony. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.



*Figure 2. Caspian tern and gull chicks on Shoal Island in Lenore Lake.*

~370 gulls, 70 chicks, and 3 gulls in incubating posture were observed (see *Figure 2* above). Approximately 50% were California gulls and 50% were ring-billed gulls. Chicks were estimated to be 3 - 5 weeks old.

Unnamed Island:

18 double-crested cormorants were observed loafing.

~190 nesting gulls were observed on the unnamed island located in the northern region of Lenore Lake (47.497945, -119.515962). Gull species composition could not be confirmed from the land-based survey. Approximately 40% of gulls had chicks that were estimated to be 2 - 4 weeks old.

**Banks Lake:** Banks Lake was visited on June 21.

Twinning Island:

No Caspian terns, double-crested cormorants, or American white pelicans were observed. Caspian terns did not attempt to nest here.

~1,230 nesting gulls were observed. Approximately 95% were California gulls and 5% were ring-billed gulls. Attended nest counts were unavailable and will be counted from aerial imagery in subsequent reports. ~45% of adults attended chicks estimated to be 2 - 5 weeks old and <5% of adults were still observed in incubating posture.

Goose Island:

No Caspian terns, double-crested cormorants, or American white pelicans were observed. Caspian terns did not attempt to nest here.

~330 nesting gulls were observed. Approximately 60% were ring-billed gulls and 40% were California gulls. 56 gull chicks were observed with estimated ages of 3 - 5 weeks old. 5-10% of gulls were observed in incubating posture.

**Potholes Reservoir:** Potholes Reservoir was visited on June 22.

Goose Island:

Caspian terns were counted in 11 different locations on Goose Island and its surrounding islets (see [Table 1](#) below). The main colony area continues to be obstructed from our vantage on the water, although we provided counts conducted from aerial imagery on May 25 (see [Table 1](#)). Peak nest counts of terns on the main colony area will be conducted from fixed-wing and drone imagery in subsequent weeks. 8 Caspian terns were observed in the grassy area on the southern spit of the island (i.e. South Spit), the first terns observed in this location in the past 7 weeks. Of these, 5 terns were in incubating posture on the South Spit. 13 Caspian terns were observed loafing on the land bridge between Northwest Main and Northwest Rocks (see [Table 1](#)).

~4,070 nesting gulls were observed. Approximately 60% were California gulls and 40% were ring-billed gulls. Attended nest counts were unavailable; peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks. <5% of gulls were in incubating posture. Gull chicks were on average 4 weeks old. Fledglings were also observed but were not counted.

Table 1. Caspian tern counts by location at Goose Island from 05/10 – 6/22. [NA: Not Available]

Caspian terns							
LOCATION	05/10	05/17	05/25	06/01	06/09	06/17	06/22
Northwest Main	0	0	0	0	0	0	0
Northeast Main	0	0	0	0	0	0	0
Southeast Main	0	0	0	0	0	0	0
South Spit	0	0	0	0	0	0	8
South Beach	0	0	0	0	0	0	0
Colony Area <sup>1</sup>	NA	NA	33 <sup>3</sup>	NA	NA	NA	NA
Southwest Main	21 <sup>4</sup>	109	19	90	18	9	0
West Main <sup>2</sup>	0	0	0	0	0	0	0
North Beach	0	0	0	0	0	0	0
East Rocks	0	0	0	0	0	0	0
Northeast Rocks	0	0	0	0	0	23	13
Northwest Rocks	0	0	0	0	0	0	0
<b>Total</b>	<b>NA</b>	<b>NA</b>	<b>52</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

<sup>1</sup> Complete obstruction from boat vantage.

<sup>2</sup> Partial obstruction from boat vantage.

<sup>3</sup> Counts conducted from fixed-wing aerial imagery.

<sup>4</sup> Nest dissuasion activities occurred during counts.

Northeastern Potholes (Historic Caspian Tern Colony):

2 Caspian terns and 21 gulls were observed loafing. No nesting activity was observed.

2016 Colony Site, Unnamed, and Solstice (Historic Caspian Tern Colonies):

No colonial waterbird activity was observed at these sites.

**Blalock Islands:** The Blalock Islands complex was visited on June 24.

Anvil Island:

No Caspian terns were observed on Anvil Island.

~320 nesting gulls were observed. Approximately 90% were California gulls and 10% were ring-billed gulls. While gulls were observed flying to and from the island's interior, counts of interior nesting gulls were not conducted due to obstructions from vegetation. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

16 gull chicks, estimated to be 3 - 5 weeks old, were observed along the southern shore.

Long Island:

28 Caspian terns were observed loafing on recently exposed habitat (see *Figure 3* below). No active nesting was observed this week. John Day Pool elevations were ~264 ft (see *Figure 4* below). No Caspian terns have attempted to nest here.

4 American white pelicans and 66 gulls were also observed loafing.

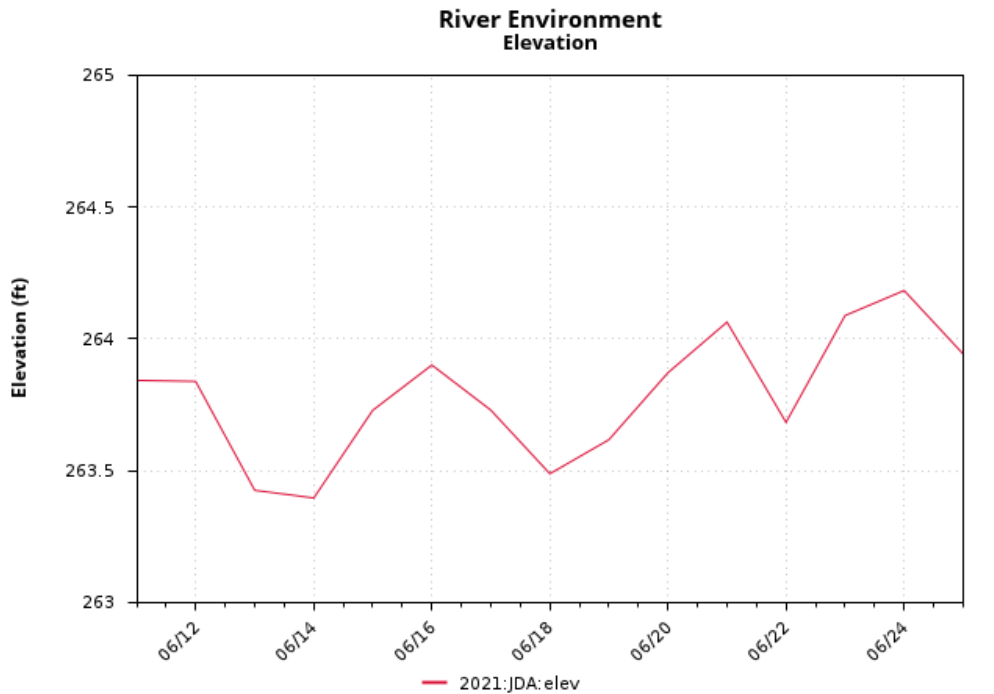


Figure 3. Caspian terns loafing on Long Island on June 24<sup>th</sup>.

**Middle Island:**

No Caspian terns were observed loafing or nesting. Exposed habitat was available with John Day Pool elevations at ~264 ft (see Figure 4 below). No Caspian terns have attempted to nest here.

4 American white pelicans and 3 gulls were observed loafing.



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Figure 4. John Day Pool elevation during June 11 – June 25.



Southern Island:

No Caspian terns were observed, although sandy habitat was available. No Caspian terns have attempted to nest here.

23 gulls were observed loafing.

Straight Six:

No colonial nesting waterbird activity was observed.

Rock Island:

7 Caspian terns were observed loafing on recently exposed low-lying rocky habitat. No Caspian terns have attempted to nest here.

12 American white pelicans and 5 California gulls were also observed loafing.

Basketball Island:

No colonial waterbirds were observed, although additional shoreline habitat was exposed due to lower John Day Pool elevations.

**McNary Pool:** McNary Pool was visited on June 24.

Badger Island:

55 Caspian terns, 9 attended nests, 4 downy chicks, and 7 mid-sized to black-cap chicks were observed on the sandy shoreline on the northeast side of Badger Island. Nest and chick counts were an underestimate due to obstructions from our vantage on the water.

The interior Caspian tern nesting colony was obstructed by vegetation from our vantage on the water. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

Due to a higher pool elevation, the north spit was submerged. No colonial waterbirds were observed loafing.

14 loafing double-crested cormorants, likely fledglings from this year, were observed.

~280 American white pelicans, nesting and loafing, were observed. Most interior nesting colonies were obstructed by vegetation from our vantage on the water. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

~1,400 gulls were observed along the island's west shoreline. While most chicks have fledged, ~10% of gulls had visible chicks with age estimates of 4 - 5 weeks old. ~95% of gulls observed were California gulls, while the remaining 5% were ring-billed gulls. Gulls were also observed in the island's interior. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

Crescent Island:

No Caspian terns were observed during our survey of Crescent Island. Our vantage on the water obstructed our view of the historical colony. Nest counts were unavailable; peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

~420 gulls were observed on the island's shoreline and ~50% were attending chicks (estimated 3 - 4 weeks old). ~20% of gulls were California gulls and ~80% were ring-billed gulls. Most gulls and attended gull nests were obstructed by vegetation from our vantage on the water. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

Foundation Island:

168 double-crested cormorants, 38 attended nests, 35 chicks (age estimates of 5-6 weeks old), and 22 fledglings were observed (see *Figure 5* below). Attended nest counts continued to decline compared to a previous survey on June 18 when 61 attended nests were observed.



*Figure 5. Fewer attended double-crested cormorant nests and chicks near fledging on Foundation Island during a June 24<sup>th</sup> survey.*

**Sprague Lake:** Sprague Lake was visited on June 25.

Harper Island:

2 Caspian terns were observed flying over Harper Island. The interior Caspian tern nesting colony was obstructed from our view on the water. Peak nest counts will be conducted from fixed-wing and drone imagery in subsequent weeks.

During a boat survey, two active cormorant nesting colonies were observed. A combined count of 296 adults and fledglings, 82 chicks, and 53 attended nests were observed in two distinct nesting areas on the northwestern cove/ridge (see *Figure 6* below). Cormorant chicks were estimated to be 2 – 6 weeks old. 208 cormorants were also observed loafing on the island, outside of the nesting area. The tree-nesting cormorant colony on the south side of the island failed.

A combined count of ~460 adult gulls and fledglings and 31 gull chicks were observed on Harper Island. 60% were California gulls and 40% were ring-billed gulls.



*Figure 6. Double-crested cormorants nesting on the northwestern ridge of Harper Island on June 25.*

**East Sand Island:** A fixed-wing aerial survey of East Sand Island was conducted by Oregon State University on June 16 as part of their region-wide surveys funded by the U.S. Fish and Wildlife Service.

East Sand Island:

Provisional counts of Caspian terns in imagery taken on June 16 were unavailable at the time of this report. Peak nest counts of Caspian terns on East Sand Island in 2021 will be provided by the U.S. Army Corps of Engineers in cooperation with our research team.

425 double-crested cormorant nests were counted in the oblique aerial imagery taken on June 16 (see [Figure 7](#) below). These nests, located on the west jetty, were initiated in early June and confirmed from Civil Air Patrol aerial imagery taken on June 8. Nesting activity had increased by mid-June. Since Brandt's cormorants also have a history of nesting on East Sand Island, a small proportion of nests included in the count may be Brandt's cormorants. Peak nest counts of cormorants on East Sand Island in 2021 will be provided by the U.S. Army Corps of Engineers in cooperation with our research team.



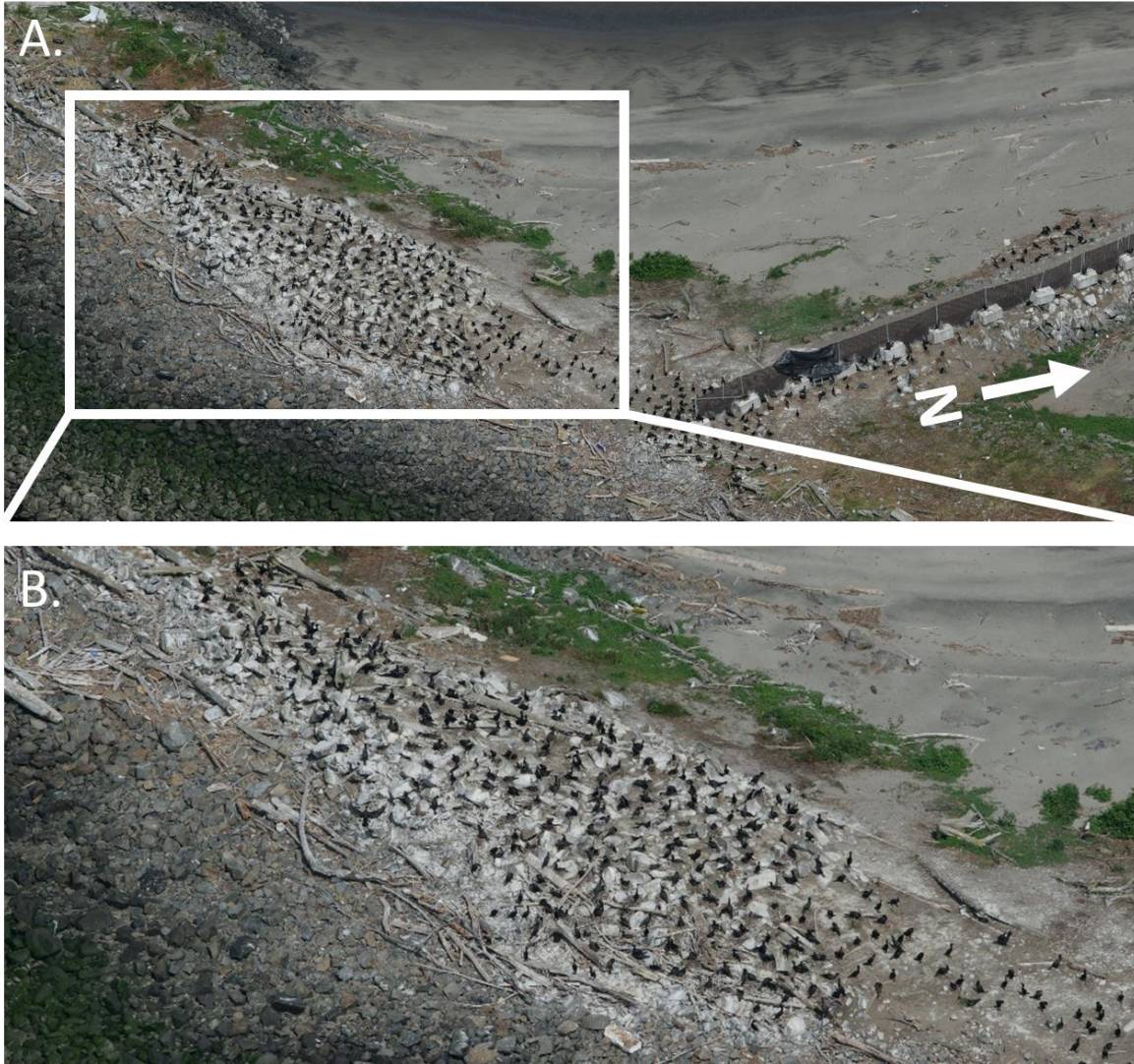


Figure 7. Double-crested cormorants nesting on the west jetty of East Sand Island (A.) and zoomed in portion of the primary nesting area (B.) from an aerial survey on June 16<sup>th</sup>.

## PIT TAGGING OF STEELHEAD AT ROCK ISLAND DAM

Steelhead smolt tagging commenced at Rock Island Dam on 04/09 and ended on 06/13. In total, 5,583 hatchery and 1,655 wild steelhead smolts were tagged, totaling 7,238 steelhead smolts, reaching our target goal of ~ 7,000. Steelhead were selected for tagging at random, regardless of fish size, condition, or rear-type (hatchery, wild) and smolts were tagged in proportion to and in-concert with the run at-large (tagged and untagged) passing Rock Island Dam in 2021. We will start to scan bird colonies for smolt PIT tags starting in August of 2021 or as soon as birds abandon their breeding sites.