ROOSTING BIRD SURVEY REPORT

RINCON ISLAND PHASE 2 DECOMMISSIONING PROJECT
VENTURA COUNTY, CALIFORNIA

Project No. 2002-7861

Prepared for:

California State Lands Commission
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JANUARY 2023

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

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1.0 INTRODUCTION

On behalf of California State Lands Commission (CSLC), Padre Associates, Inc. (Padre) has prepared this Roosting Bird Survey Report (Report) of roosting[1] birds at Rincon Island (Island) and associated causeway located offshore Ventura, California (Survey Area) (Figure 1-1). The purpose of the roosting bird survey was to document the bird species that utilize Rincon Island and the associated causeway for roosting. In addition, their abundances during the latter months of the year during typical southern winter migration and non-breeding period (September, October and December). The following sections of this Report describe the drone survey and photo review methods, qualitative and quantitative data, as well as any noticeable trends in the abundance of roosting birds.

1.1 BACKGROUND

In support of the Rincon Island Phase 2 Decommissioning Project (Project), a characterization of the roosting birds on the Island and causeway was conducted to better assess the existing conditions and potential impacts to biological resources that could result from any proposed changes to the structure(s). The focus of the surveys was to quantify the roosting birds on the Island's and causeway structures. This analysis did not include characterization of the birds floating or foraging in the waters surrounding the Island or causeway. However, information from supplemental surveys conducted by the National Audubon Society during their 2021 and 2022 annual Christmas Bird Counts were utilized in combination with the study findings to characterize bird use on and around the Island (National Audubon Society, 2021 and 2022) (Appendix A).

[1] The definition of bird "roosting" means to rest or sleep somewhere. It is important to note that roosting does not equate to bird nesting behavior.

LEGEND:

Study Area

MAP EXTENT:

Source: Esri Online Imagery Basemap
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Notes: This map was created for informational and display purposes only.

padre associates, inc.
ENGINEERS, GEOLOGISTS & ENVIRONMENTAL SCIENTISTS

PROJECT NAME:		
RINCON PHASE 2 DECOMMISSIONING VENTURA COUNTY, CA		
PROJECT NUMBER: 2002-7861	DATE: December 2022	

STUDY AREA LOCATION MAP

FIGURE 1-1

Z:\GIS Projects\GIS Maps\Map Project\Rincon Island Decommissioning\Survey Area Location Map.mxd 12/27/2022

2.0 METHODS

Padre biologist conducted roosting bird surveys utilizing an aerial drone to capture photographs and video of Rincon Island and the associated causeway deck. Six survey events (i.e. drone flights) were conducted: two surveys in September, two surveys in October, and two in December 2022. Surveys took place in the morning within one hour of sunrise and in the evening within one hour before sunset. Photographs were taken with a DJI Mini 2 drone from a height of approximately 130-feet, which in pre-survey tests was shown to be high enough to not disturb the resting birds.

Aerial photos and video were then analyzed to identify the taxa and to quantify the abundance of roosting birds during each survey event. Representative aerial photos are included in Appendix B. Birds were categorized by species and where they were roosting (i.e., causeway, or either North, South, East, or West sides of Rincon Island). Birds were identified to the lowest taxonomic level; however, due to image clarity some birds were identified down to their genus, or if a determination could not be made to genus, then the birds was counted as unidentified. Lastly, site-specific weather data including temperature, wind speeds, and cloud cover was noted for each survey event.

3.0 RESULTS

Padre conducted drone surveys in the morning of September 6, in the evening of September 7, and in the morning and evening on October 28 and December 21, 2022. Weather during each survey event was clear with temperatures ranging between 54 and 73 degrees Fahrenheit, clear to partially cloudy, and wind speeds of 0 to 6 miles per hour. The birds identified from the aerial photography included the brown pelican (*Pelecanus occidentalis*), cormorants (*Nannopterum auritum and Phalacrocorax sp.)*, gulls (*Larus spp.*), and rock pigeon (*Columba livia*). Table 3-1 details the habitat, food, nesting requirements, and migration for the birds observed during roosting bird surveys.

Birds were observed roosting along the causeway's railings and deck, and on all sides of Rincon Island. The birds primarily occupied the ocean side of the tetrapods but were occasionally seen roosting beyond the tetrapods on the Island's deck, tops of boat dock pilings and palm trees. Birds were also observed on the water presumably resting or foraging; however, these birds were not included in the total bird count. Although the surveys were not conducted during nesting season (February through August), there were no remnant nests or signs of recent nesting activity observed within the Survey Area.

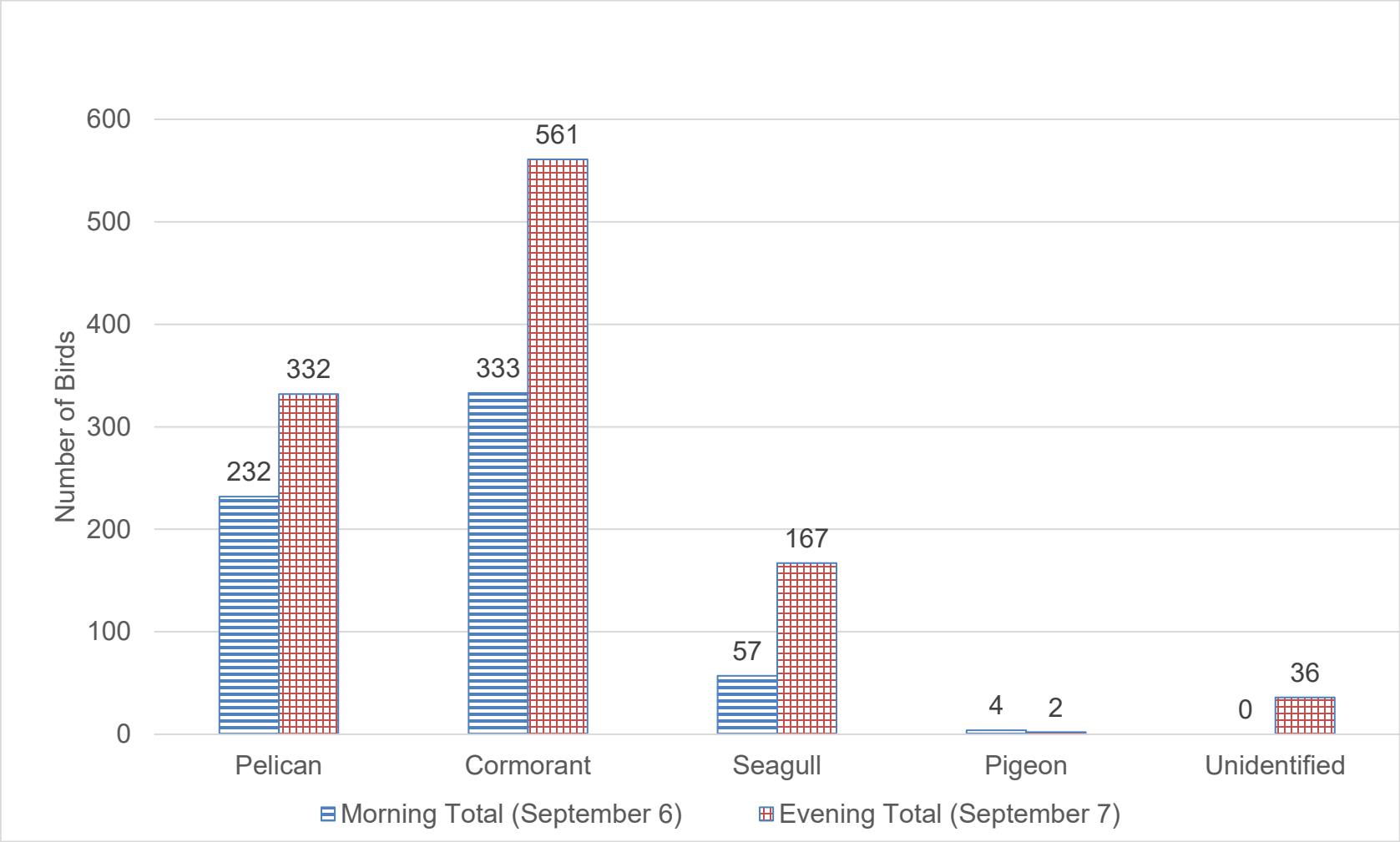
In September, the most abundant bird roosting on Rincon Island and the causeway was the cormorant, with an evening roosting number of 561 birds. However, the brown pelican was more abundant in October and December, totaling 221 pelicans during the October evening survey and 584 for the December evening survey. The least abundant species during the survey period was the rock pigeon, with a maximum total of 77 birds during the December morning survey. In general, the highest abundances of all taxa were observed during the evening surveys. Figures 3-1 through 3-3 illustrate the abundance of each taxon by month and time of day. Figure 3-4 illustrates the total abundance numbers for each taxon for each month and Appendix C provides complete data tables for each survey event.

Table 3-1. Rincon Island and Causeway Roosting Bird Life Histories

Bird	Habitat	Food	Nesting	Migration
California brown pelican *Pelecanus occidentalis*	Estuaries and coastal roosting habitats including sandbars, jetties, breakwaters, and offshore rocks.	Small schooling fish including northern anchovies, herring, Pacific sardines.	The only breeding colonies of California brown pelicans in the western United States are on West Anacapa and Santa Barbara Islands. Ground nests are in areas covered with dense vegetation or low shrubs with nearby perches. Nests are bulky and built from sticks, grass, seaweed and can measure 30 inches across.	Brown pelicans are residents in much of their breeding range. Breeding adults will migrate out to Channel Islands in March and may stay on the Islands until late summer or early fall. After breeding, flocks move north along the coasts. In the Pacific, they migrate up to British Columbia. In early winter they return south to warmer waters. Small numbers of immature birds wander inland in summer, especially in the southwest.
Cormorants (*Nannopterum auritum and Phalacrocorax spp.)*	Some species are exclusively coastal, while the double crested cormorant is found inland as well. Roosting habitat includes rocks, wires, tops of dead trees, ship masts, piers, and sometimes sandy beaches.	93 species of fish are recorded as prey items, including northern anchovy, herring, rockfish, sand dab, señorita, cabezon, kelp surfperch, shiner surfperch, and Pacific butterfish.	Form breeding colonies in clusters of trees in or near water or nest sites on windward slopes of offshore rocky islands, steep cliffs, and areas of boulders. Pelagic cormorant will also nest on manmade structures such as ships, bridges and piers. Nests are circular bowls of grass, moss, weeds, sticks, marine algae, and bits of driftwood. Nests measure on average 14 inches to three feet in diameter.	Cormorant populations on the California coast generally are permanent residents. Birds from Alaska will migrate to southern California and Baja in the winter.

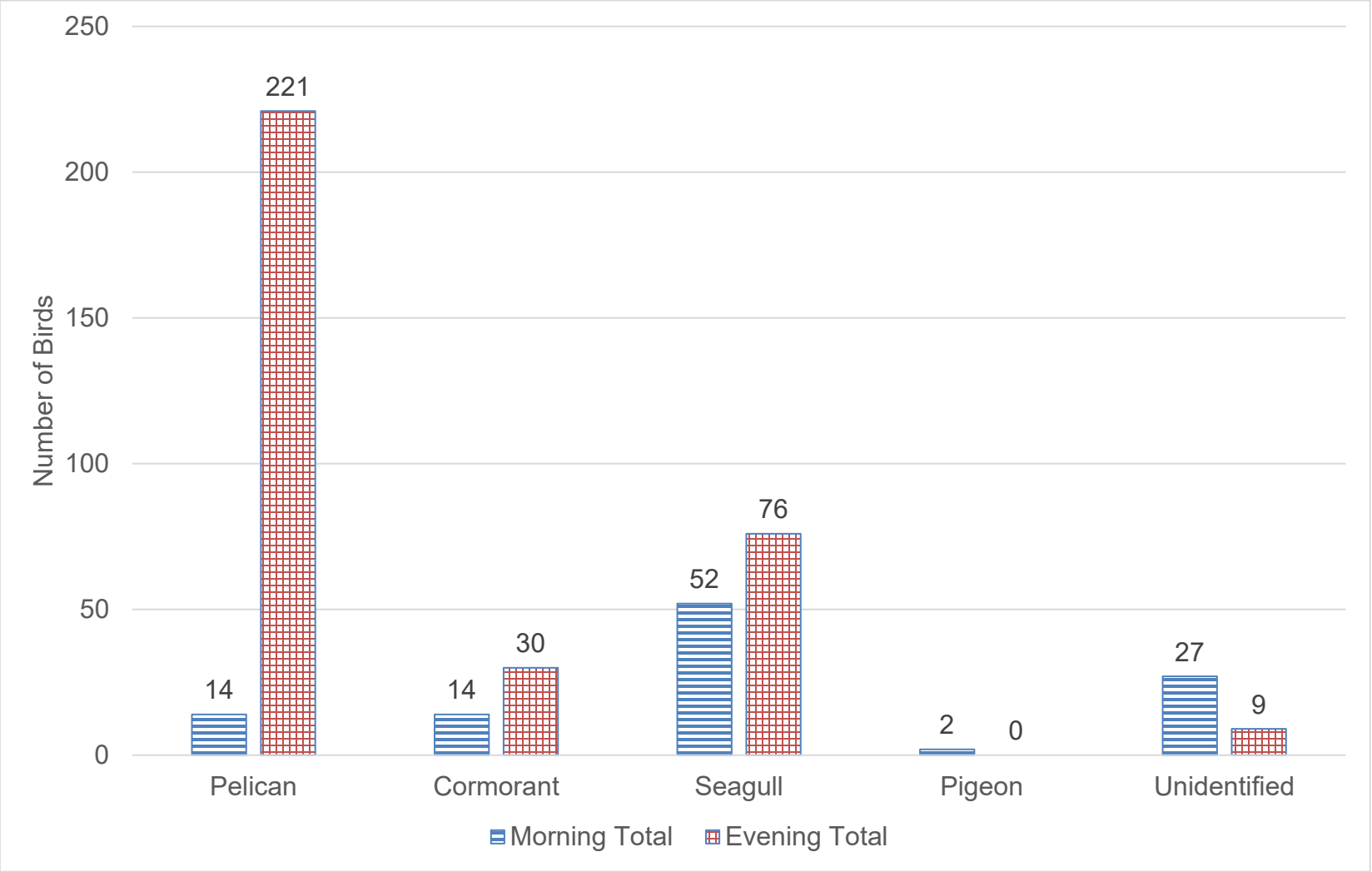
Bird	Habitat	Food	Nesting	Migration
Gulls (*Larus* spp.)	Coastal mudflats, rocky shorelines, beaches, estuaries, and river deltas.	Omnivores that eat fish, oysters, clams, insects, annelids, small mammals, fruits, bird eggs, carrion, and grains.	Nest in colonies. Build scrape nest on ground or flat surface, usually on offshore islands, offshore rocks, or abandoned piers. Nest is built from bone, feathers, grasses, and other vegetation. Nests measure 9 to 14 inches in diameter.	Many western gulls do not migrate; the rest cover very short distances to remain on the Pacific coast of North America. Some move south of the breeding range into Baja California. Fall movements peak in October and most adult birds return to their breeding grounds in March. California gulls mostly migrate to the Pacific coast in winter and breed inland from spring to fall. Heermann's gulls nest in colonies off west coast of Mexico. Migrate north to California coast in late May and return to Mexican breeding grounds in early February.
Rock pigeon	Urban areas, farmland, and rocky cliffs.	Seeds, fruits, rarely invertebrates.	Nest site is a nook, cranny, or ledge on either cliffs or manmade structures, often beneath eaves or an overhang. Pigeons may nest in stairwells, in rooms of abandoned buildings, or below pier decks.	Not migratory.
Source: The National Audubon Society, Guide to North American Birds https://www.audubon.org/bird-guide and The Cornell Ornithology Lab https://www.allaboutbirds.org/news/				

Figure 3-1. Bird Species and Abundance on September 6 and 7, 2022



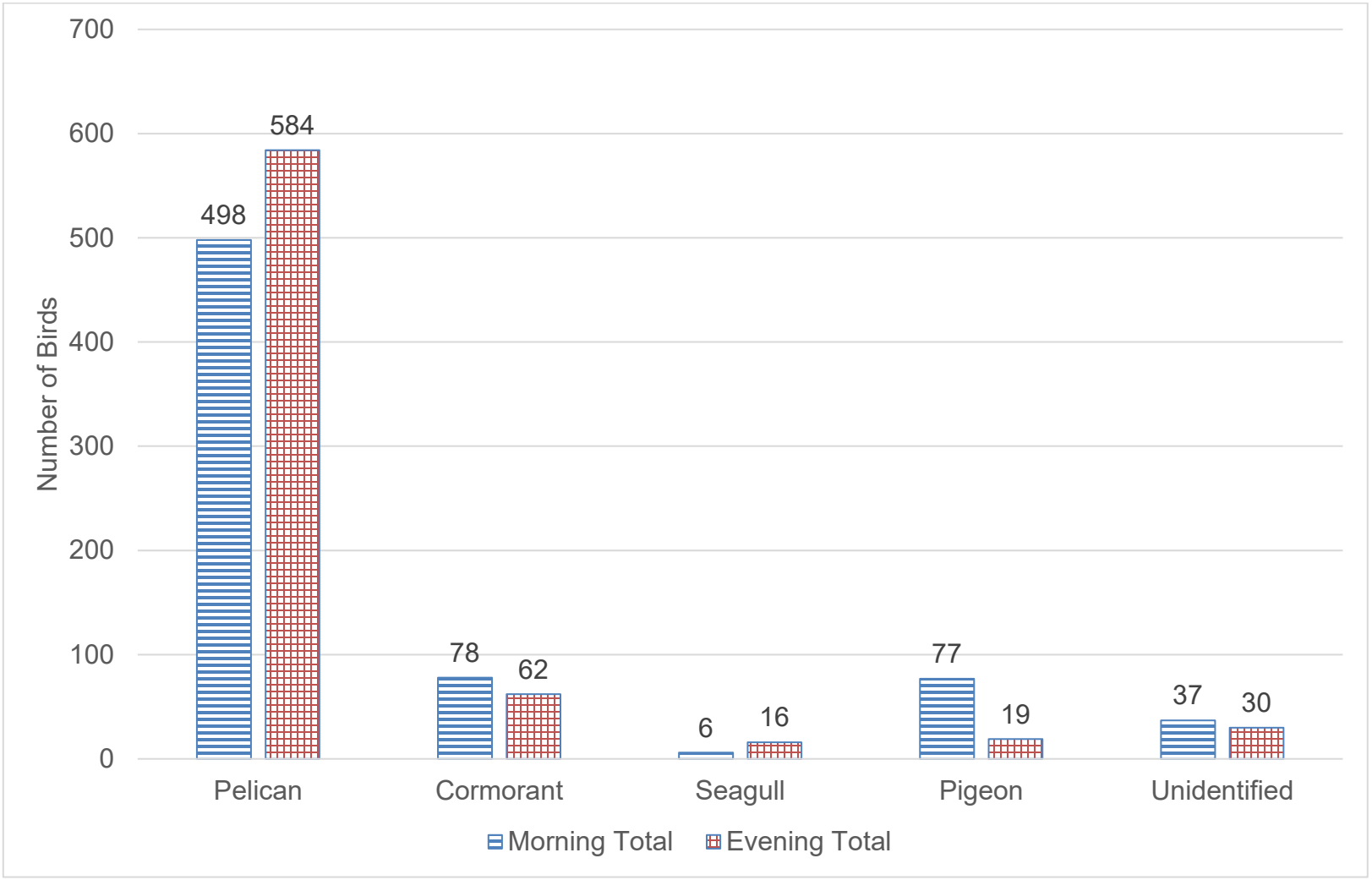
Note: Birds were identified to the lowest taxonomic level; however, due to image clarity some birds were identified down to their genus, or if a determination could not be made to genus, then the birds was counted as unidentified.

Figure 3-2. Bird Species and Abundance on October 28, 2022



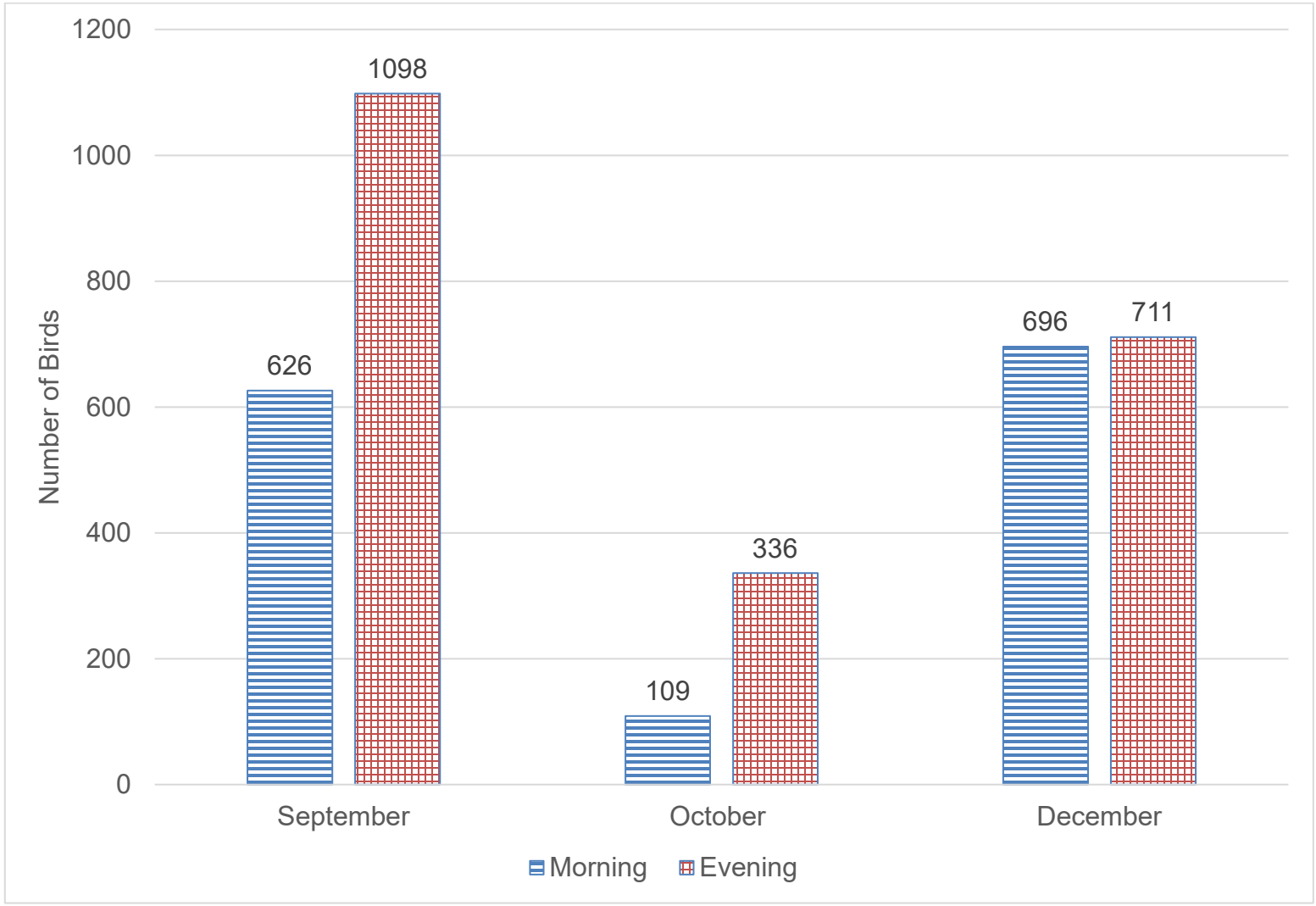
Note: Birds were identified to the lowest taxonomic level; however, due to image clarity some birds were identified down to their genus, or if a determination could not be made to genus, then the birds was counted as unidentified.

Figure 3-3. Bird Species Abundance on December 21, 2022



Note: Birds were identified to the lowest taxonomic level; however, due to image clarity some birds were identified down to their genus, or if a determination could not be made to genus, then the birds was counted as unidentified.

Figure 3-4. Total Number of Roosting Birds During Morning and Evening Surveys



4.0 DISCUSSION

Padre biologists completed a characterization of the taxa and abundance of roosting birds on Rincon Island and causeway during September, October and December of 2022. Species observed using the structures included the brown pelican, cormorants, gulls, and rock pigeon. The most abundant species overall was the brown pelican. Although some birds were found to be roosting on the causeway, most of the birds were roosting on the tetrapods along the perimeter of Rincon Island. In addition, the National Audubon Society completed separate surveys which give broader look at what species of birds are utilizing the habitats surrounding the Island and causeway.

It was noted that abundance for every bird species was lower on October 28, during both morning and evening survey events when compared to September and December numbers. Survey conditions were similar during the October survey with mild temperatures, partially clear skies and low winds. Commercial lobster season begins in October and anecdotally, a large increase in lobster pot buoys were observed immediately adjacent to the Island during the October survey event; therefore, it is likely that the decrease in abundance across species (especially during the morning survey event), is due to a disturbance from commercial boating or fishing activities.

The National Audubon Society Christmas Bird Counts did observe a wider diversity of aquatic and rare species that were not observed roosting on the Island or causeway during Padre's survey events (National Audubon Society, 2021 and 2022) (Appendix A). However, based on each bird's habitat, migration patterns and nesting requirements presented in Table 3-1, as well as the lack of evidence of any recent nesting, it appears the Island and causeway structures provide local bird populations with valuable refuge along either local or long-distance migration corridors and likely a suitable foraging area, but the structures do not currently support any breeding activities or valuable nesting habitat.

5.0 REFERENCES

The National Audubon Society. 2021. EBird Checklist for Mussel Shoals and Rincon Island. Checklist S99050713. December 18, 2021. https://ebird.org/checklist/S99050713

_____2022. EBird Checklist for Mussel Shoals and Rincon Island. Checklist S124140437 and S124151158. December 17, 2022. https://ebird.org/checklist/S124140437 and https://ebird.org/checklist/S124151158

_____2023. Guide to North American Birds website: https://www.audubon.org/bird-guide. Accessed on January 8, 2023.

The Cornell Ornithology Lab. 2023. All About Birds, species profiles for California brown pelican, pelagic cormorant, double-crested cormorant, Brandt's cormorant, Western gull, California gull, Heermann's gull, and rock pigeon. Website: https://www.allaboutbirds.org/news/. Accessed on January 8, 2023.

APPENDIX A

THE NATIONAL AUDUBON SOCIEITY BIRD LISTS

CHECKLIST S99050713

Sat **18 Dec 2021** 8:52 AM

Mussel Shoals and Rincon Island Ventura County, California, United States

John Callender

Traveling Complete

2 1 hr, 36 min 1 mi

58F, clear, calm. Birding Rincon Island for the Carpinteria CBC with Rob Farber, thanks to the California State Lands Commission.

Submitted from eBird for iOS, version 2.7.16

20
Species observed

6
Species with photos

14	**Surf Scoter**
2	Western/Clark's Grebe
7	**Rock Pigeon (Feral Pigeon)** *
2	**Eurasian Collared-Dove** *
2	**Black Oystercatcher**
1	**Spotted Sandpiper**
28	**Willet**
200	**Heermann's Gull**
4	**Western Gull**
7	**Pacific Loon**

7	loon sp.
12	**Brandt's Cormorant**
2	**Pelagic Cormorant**
2	**Double-crested Cormorant**
420	**Brown Pelican**
1	**Osprey**
1	**Peregrine Falcon**
1	**Say's Phoebe**
1	**Northern Mockingbird**
8	**House Sparrow** *
2	**House Finch**
4	**White-crowned Sparrow**

CHECKLIST S124140437

Sat **17 Dec 2022** 8:00 AM

Mussel Shoals, Rincon Island Ventura County, California, United States

Hugh Ranson

Carpinteria CBC

Traveling Complete

3 3 hr, 30 min 15 mi

31
Species observed

2
Species with photos

2 King Eider

Next to the pier at Rincon "Island." 2 birds together in small Surf Scoter flock. The birds looked a little bigger than the scoters. Both stood out from the female scoters by having buff-colored heads and necks, and lacking the pale head markings shown by the scoters. The dark bills were relatively small compared with the scoters. Photos show that one of the birds has a more convex bill shape (adult v. 1st winter?). The gape line continued up onto the face giving a "grinning" appearance. Both had a well-marked pale crescent above the eye. The bodies of both were a darker brown than the head and photos show darker barring on the flanks and back. When one bird flapped it showed a narrow white upper wing bar and well-marked white "armpits".

17 Surf Scoter

1 Long-tailed Duck

At Rincon "Island" under the pier. A small duck, with whitish face, a dark crown and cheek patch. The pink towards the bill tip indicates a young male.

1 Bufflehead

3 Red-breasted Merganser

3 Horned Grebe

1 Eared Grebe

178	Western Grebe
6	Clark's Grebe
1	Whimbrel
1	Marbled Godwit
1	Black Turnstone
1	Spotted Sandpiper
4	Willet
140	Heermann's Gull
1	Ring-billed Gull
83	Western Gull
53	California Gull
1	Glaucous-winged Gull
10	Royal Tern
5	Red-throated Loon
33	Pacific Loon
4	Common Loon
25	Black-vented Shearwater
125	Brandt's Cormorant
1	Pelagic Cormorant
97	Double-crested Cormorant
64	Brown Pelican

3	**Snowy Egret**
3	**Turkey Vulture**
1	**Belted Kingfisher**

CHECKLIST S124151158

Sat **17 Dec 2022** 6:52 AM

Rincon Island Ventura County, California, United States

Linus Blomqvist

Carpinteria CBC

Traveling Complete

2 5 hr, 33 min 1 mi

Submitted from eBird for Android, version 2.11.1

34
Species observed

4
Species with photos

2 Mallard

2 Green-winged Teal

2 King Eider

Found in the morning by Hugh Ranson, swimming back and forth under the pier.

AGE & SEX:

	Juvenile	Immature	Adult	Age Unknown
Male				
Female	**1**		**1**	
Sex Unknown				

25 Surf Scoter

1 Long-tailed Duck

Found by Hugh Ranson.

5	Eared Grebe
15	Western Grebe
30	Rock Pigeon (Feral Pigeon) *
2	Black Oystercatcher
17	Whimbrel
7	Long-billed Curlew
4	Marbled Godwit
1	Spotted Sandpiper
2	Willet
1	Parasitic Jaeger
200	Heermann's Gull
30	Western Gull
10	California Gull
1	Herring Gull
3	Royal Tern
10	Red-throated Loon
15	Pacific Loon
3	Common Loon
120	Black-vented Shearwater

250	Brandt's Cormorant
2	Pelagic Cormorant
15	Double-crested Cormorant
1000	Brown Pelican
1	Belted Kingfisher
1	Say's Phoebe
5	American Crow
1	American Pipit
2	House Finch
1	Lesser Goldfinch

APPENDIX B

SURVEY PHOTOGRAPHS

Representative Aerial Photos of Causeway

Photo 1a: September 6, 2022, morning survey.

Photo 1b: October 28, 2022, morning survey.

Photo 1c: December 21, 2022, morning survey.

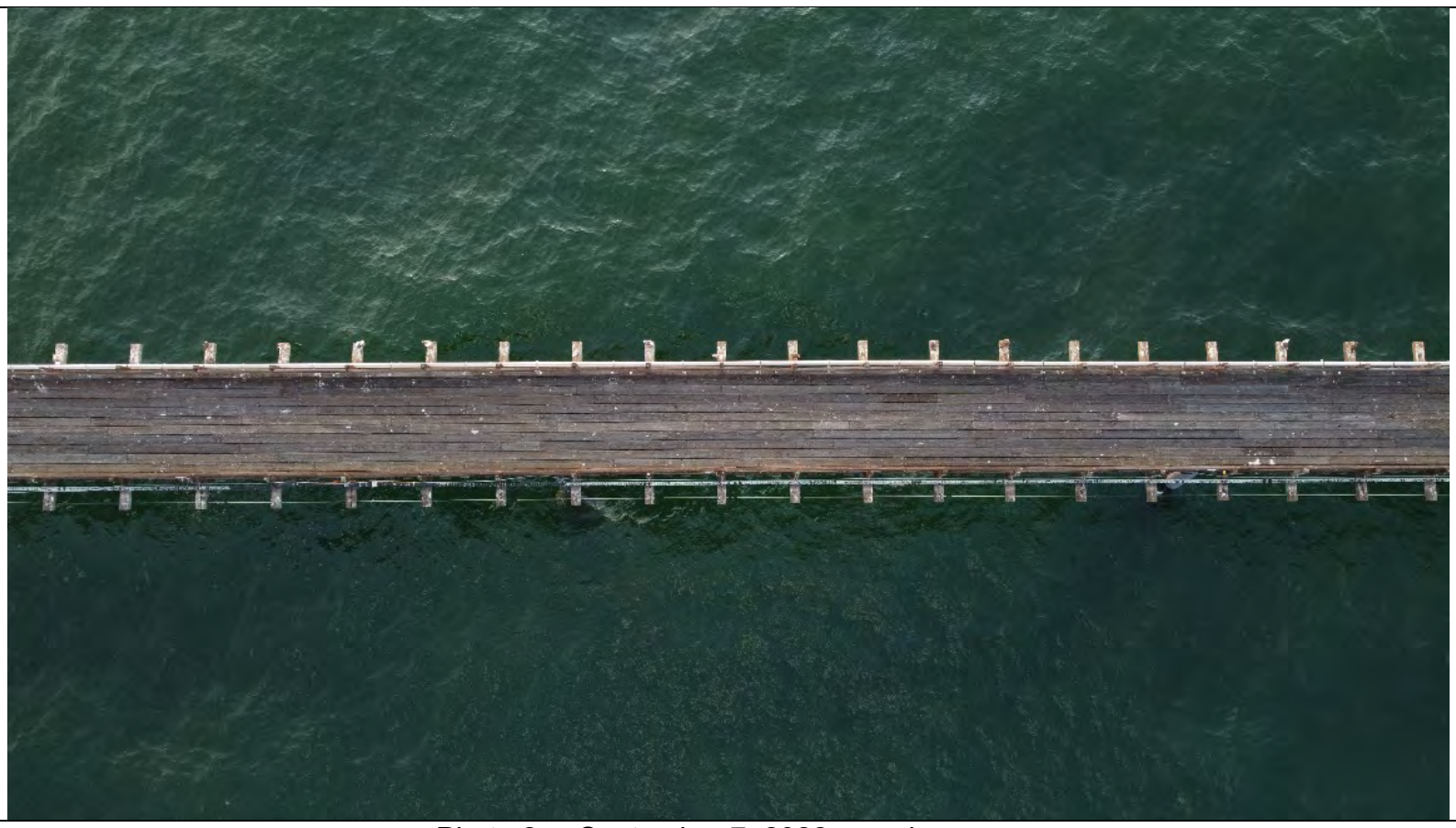


Photo 2a: September 7, 2022, evening survey.

Photo 2b: October 28, 2022, evening survey.

Photo 2c: December 21, 2022, evening survey.

Representative Aerial Photos of East Rincon Island

Photo 3a: September 6, 2022, morning survey.

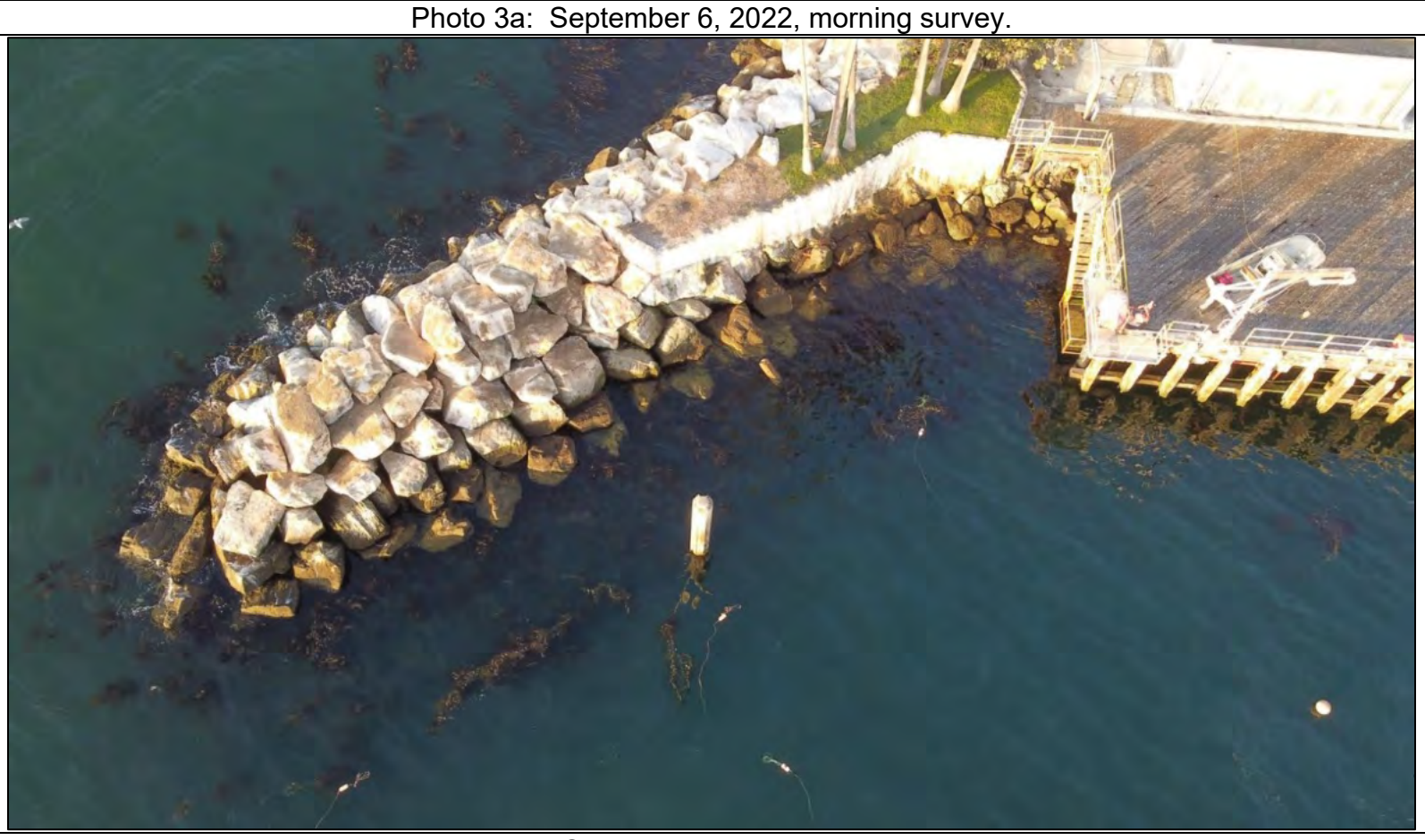


Photo 3b: October 28, 2022, morning survey.

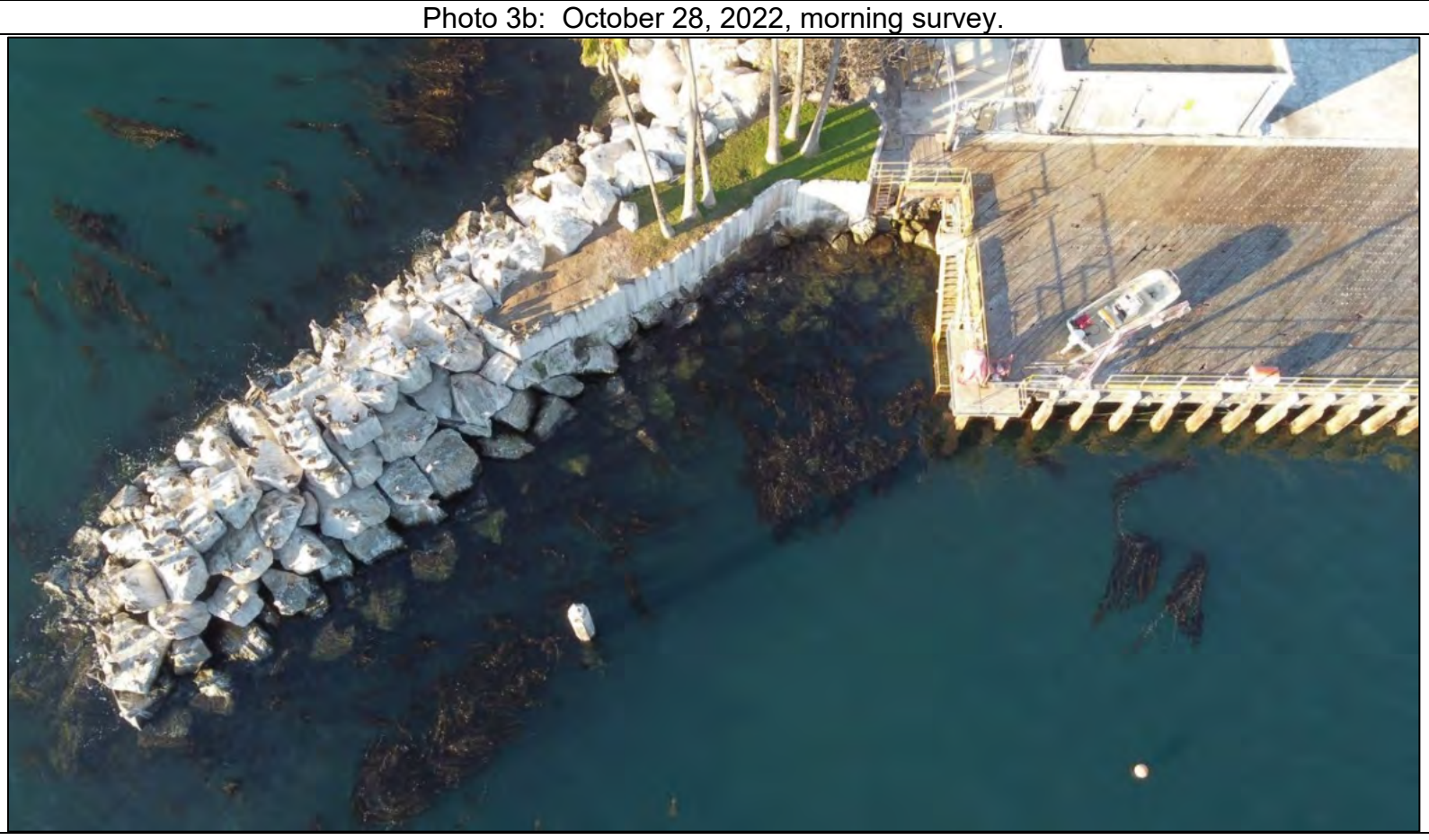


Photo 3c: December 21, 2022, morning survey.

Photo 4a: September 7, 2022, evening survey.

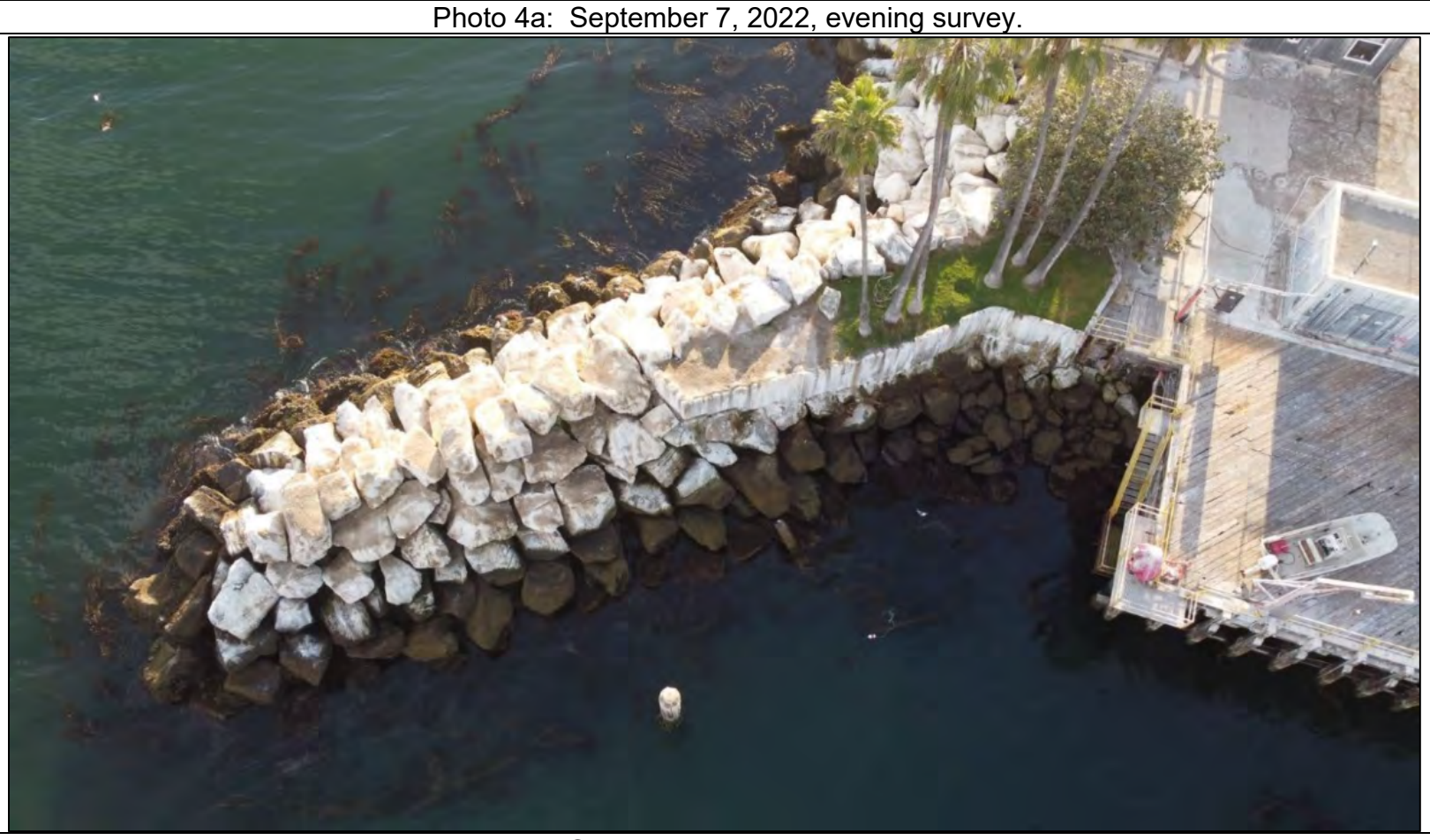


Photo 4b: October 28, 2022, evening survey.

Photo 4c: December 21, 2022, evening survey.

Representative Aerial Photos of West Rincon Island

Photo 5a: September 6, 2022, morning survey.

Photo 5b: October 28, 2022, morning survey.

Photo 5c: December 21, 2022, morning survey.

Photo 6a: September 7, 2022, evening survey.

Photo 6b: October 28, 2022, evening survey.

Photo 6c: December 21, 2022, evening survey.

Representative Aerial Photos of North Rincon Island

Photo 7a: September 6, 2022, morning survey.

Photo 7b: October 28, 2022, morning survey.

Photo 7c: December 21, 2022, morning survey.

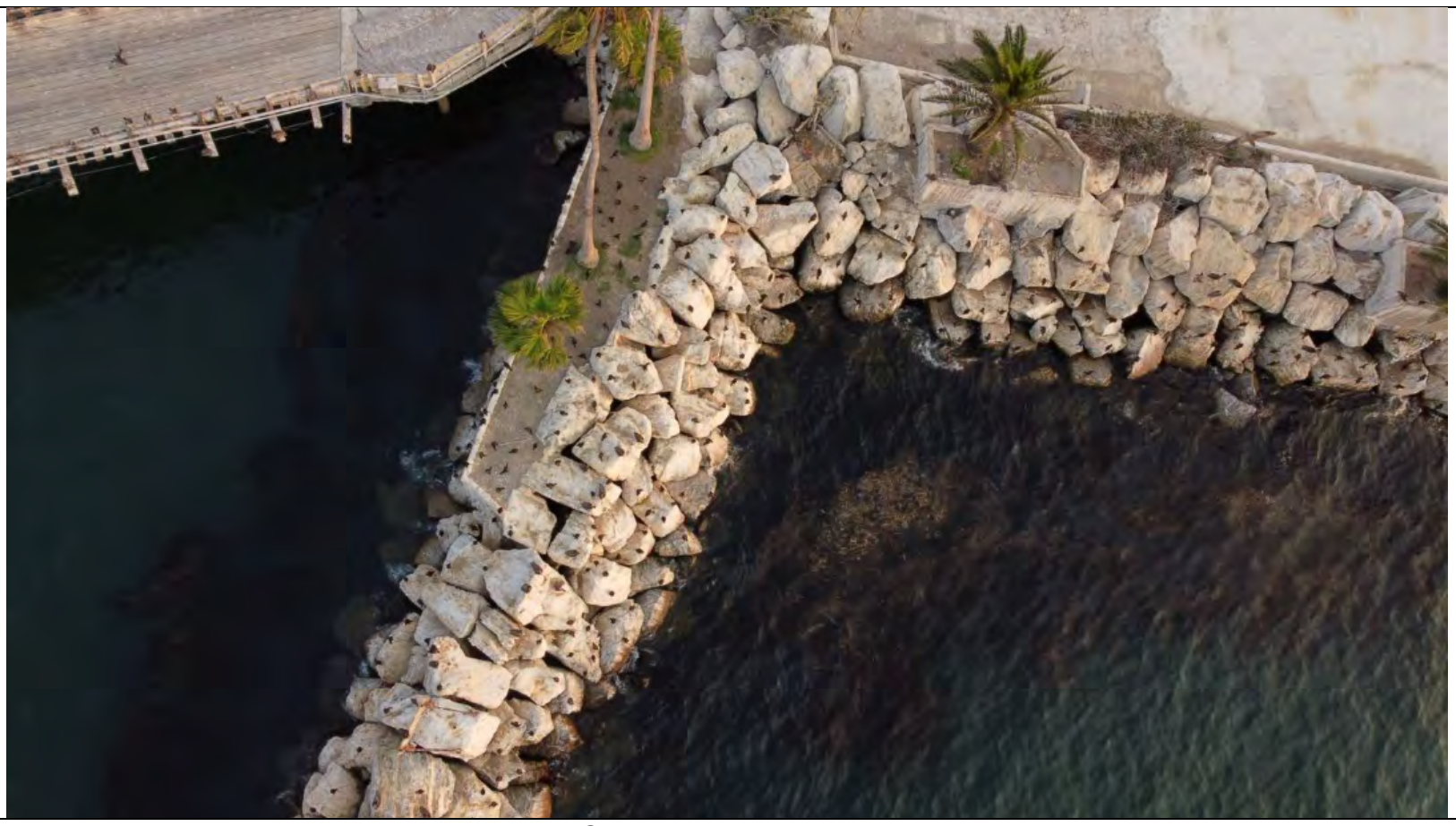


Photo 8a: September 7, 2022, evening survey.

Photo 8b: October 28, 2022, evening survey.

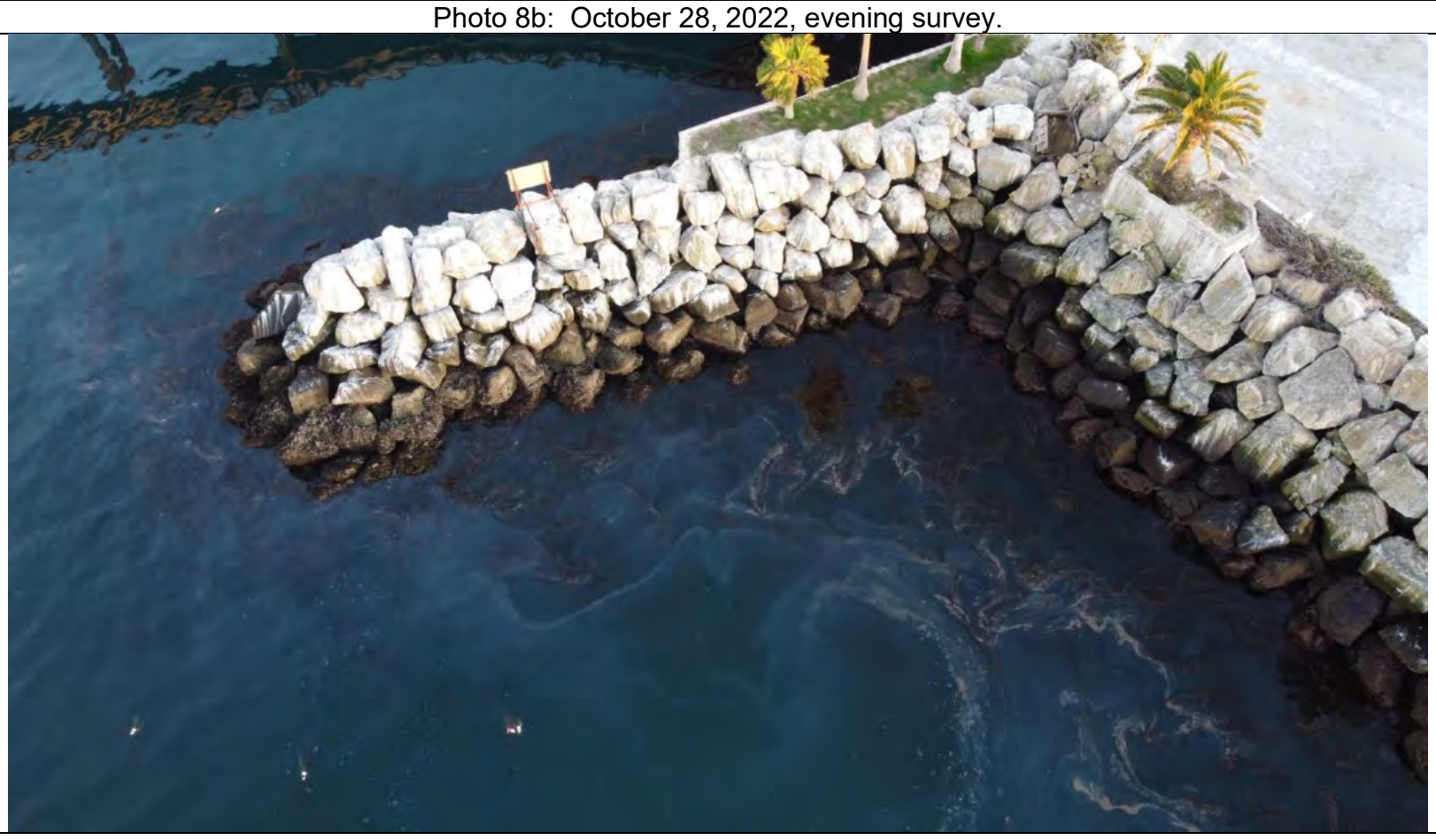


Photo 8c: December 21, 2022, evening survey.

Representative Aerial Photos of South Rincon Island

Photo 9a: September 6, 2022, morning survey.

Photo 9b: October 28, 2022, morning survey.

Photo 9c: December 21, 2022, morning survey.

Photo 10a: September 7, 2022, evening survey.

Photo 10b: October 28, 2022, evening survey.

Photo 10c: December 21, 2022, evening survey.

APPENDIX C

DATA TABLES

RINCON ISLAND AND CAUSEWAY ROOSTING BIRD COUNTS

Date	Time	Weather
9/6/2022	7:49	Temp: 73, mostly sunny, Wind: 6 mph

Number of Birds

	Pelican	Cormorant	Seagull	Pigeon	Unidentified
Causeway	0	47	52	0	0
S. Island	148	210	0	0	0
W. Island	56	21	4	4	0
N. Island	27	53	1	0	0
E. Island	1	2	0	0	0
Total	**232**	**333**	**57**	**4**	**0**

Date	Time	Weather
9/7/2022	18:46	Temp: 71, mostly sunny, Wind: 6 mph

Number of Birds

	Pelican	Cormoran	Seagull	Pigeon	Unidentified
Causeway	28	44	162	1	10
S. Island	39	224	3	0	0
W. Island	143	136	0	0	6
N. Island	113	97	2	1	20
E. Island	9	60	0	0	0
Total	**332**	**561**	**167**	**2**	**36**

Date	Time	Weather
10/28/2022	7:47	Temp: 60, mostly sunny, Wind: 0 mph

Number of Birds

	Pelican	Cormorant	Seagull	Pigeon	Unidentified
Causeway	0	12	48	0	5
S. Island	13	0	3	0	16
W. Island	0	0	0	0	0
N. Island	1	1	1	2	1
E. Island	0	1	0	0	5
Total	**14**	**14**	**52**	**2**	**27**

Date	Time	Weather
10/28/2022	17:06	Temp: 64, mostly sunny, Wind: 5 mph

Number of Birds

	Pelican	Cormoran	Seagull	Pigeon	Unidentified
Causeway	2	29	74	0	3
S. Island	96	0	0	0	2
W. Island	0	0	0	0	0
N. Island	104	1	2	0	3
E. Island	19	0	0	0	1
Total	**221**	**30**	**76**	**0**	**9**

Date	Time	Weather
12/21/2022	8:02	Temp: 54, mostly sunny, Wind: 0 mph

Number of Birds

	Pelican	Cormorant	Seagull	Pigeon	Unidentified
Causeway	0	4	5	1	6
S. Island	358	18	0	0	0
W. Island	126	44	1	72	31
N. Island	14	12	0	4	0
E. Island	0	0	0	0	0
Total	**498**	**78**	**6**	**77**	**37**

Date	Time	Weather
12/21/2022	16:29	Temp: 64, mostly sunny, Wind: 3 mph

Number of Birds

	Pelican	Cormoran	Seagull	Pigeon	Unidentified
Causeway	2	31	14	0	11
S. Island	249	14	0	0	0
W. Island	321	14	2	19	19
N. Island	12	3	0	0	0
E. Island	0	0	0	0	0
Total	**584**	**62**	**16**	**19**	**30**