Piping Plover 2013 Survey of the Caminada Headland, Louisiana: January 11, 2013

A Report of the:

Barataria-Terrebonne National Estuary Program

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Introduction

Louisiana's wetland loss crises mean serious troubles for our coastal citizens, their property and livelihoods, and the productive ability of this bountiful natural system. Decades of wetland and barrier island losses are blamed for larger and larger storm surges associated with tropical storms that now routinely wreak havoc on homes and infrastructure. That same loss is also attributed to likely declines for some species of terrestrial and aquatic animals, particularly nesting seabirds. For these reasons and a myriad of others, numerous efforts have been undertaken to understand and reverse these trends if possible. Initially, it started with regional plans such as the Barataria Basin Plan followed soon after by the Barataria-Terrebonne National Estuary Program's Plan in 1996. Later, planners began looking at the coast as a whole. Published in 1998, Coast 2050 was one of the first larger scale plans to address each of the State's coastal basins. Today, years later, we're now seeing the development of the Louisiana Coastal Master Plan, last updated in 2012. Hereto this plan addresses all of the State's coastal waters and wetland habitats.

Almost occurring simultaneously with these planning efforts was the initiation of funding streams designed to provide the monetary resources needed to combat Louisiana's wetland loss problem. The Coastal Wetlands Trust Fund followed by the Coastal Wetlands Planning, Protection, and Restoration Act were the precursors to the Coastal Impact Assessment Program, Gulf of Mexico Energy Security Act of 2006 and now the Restore Act of 2012. Due to these ever increasing funding streams, Louisiana now seems poised to construct many large-scale restoration projects. While most see these projects as providing positive benefits to people and animals, short term impacts associated with active ongoing restoration efforts may pose temporary short-term problems for certain species. This project attempts to document impacts, if any, to Piping Plover and a small suite of other shorebirds that may directly result from construction activities of the CPRA's Caminada Beach and Dune Restoration Project (BA-45).

Caminada Headland Beach and Dune Restoration Project (BA-45)

Soon, the Caminada Headland Beach and Dune Restoration Project (BA-45) will be in the construction phase. Expected to begin in early 2013, the goal of this project is to protect and preserve the structural integrity of the barrier shoreline and provide for restoration of hydrologic conditions, ecosystem processes, and habitats of the Caminada Headland (Figure 1).

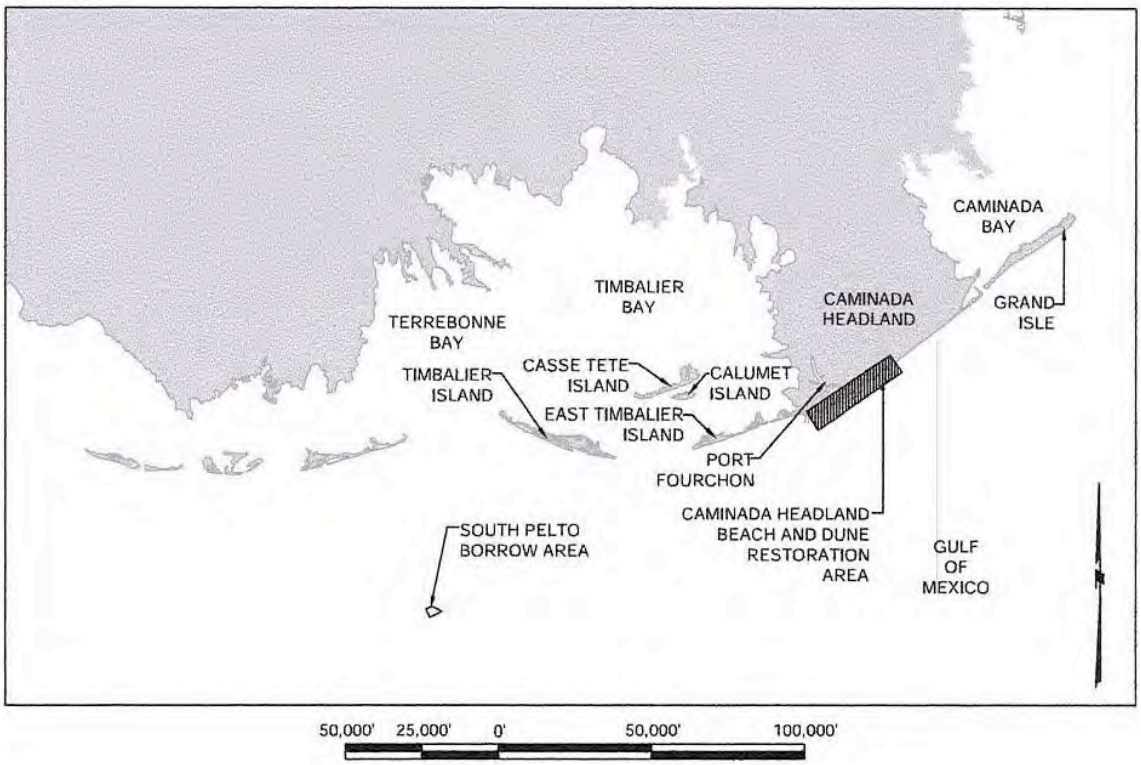

Figure 1. Location of the Caminada Headland Project.

Benefits of restoration of the headland shoreline would protect and sustain significant and unique coastal habitats important to foraging and nesting terns, plovers, gulls, and many other bird species including the endangered Piping Plover (*Charadrius melodus*). Both spring/summer breeding bird surveys of nesting Wilson's Plover (*Charadrius wilsonia*) and Least Tern (*Sternula antillarum*) along with winter surveys of Piping Plover have shown the Caminada Headland to be important nesting/foraging areas for these and other birds.

In addition, the Gulf of Mexico is a key wintering area for Piping Plover with much of it designated as critical habitat under the Endangered Species Act (ESA). Data from the International Piping Plover Survey, conducted every five years since 1991, indicate that 73-93% of all wintering plovers counted have been on the shores of the Gulf of Mexico. Therefore protection and restoration of these critical habitats are warranted. Figure 2 defines both the breeding range and wintering range for this species. Figure 3 defines critical habitat for Piping Plover in the Port Fourchon area of Louisiana.

Figure 2. Piping Plover Breeding and Winter Range (courtesy of Cornell Laboratory of Ornithology).

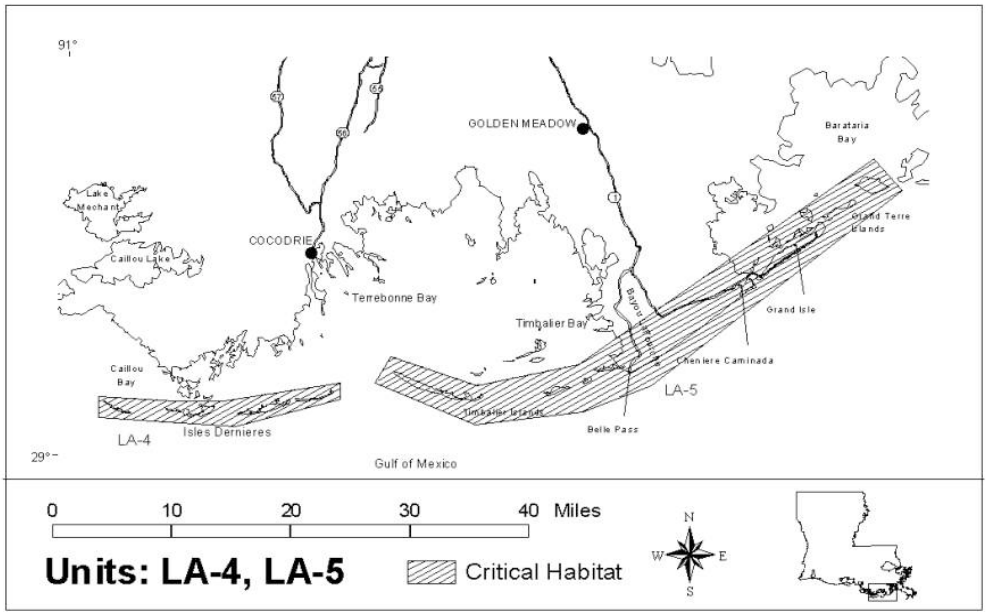

Figure 3. Critical Habitat Designated for Piping Plover along the lower Louisiana coastline.

A condition of the 404 and Coastal Use permit for the Caminada Headland Beach and Dune Restoration Project requires both winter surveys for Piping Plover and breeding bird surveys in the spring. An ongoing series of surveys/reports will be undertaken/developed prior to, during, and post construction. These reports will present the findings of the numerous surveys conducted throughout the life of the project.

Survey Methodology

Permit requirements necessitate pre-construction surveys of the Project Area following methods outlined within the Louisiana Piping Plover Non-Breeding

Season Survey Guidelines with observations recorded on provided field census forms (Appendix D, FWS, 2010).

The first pre-construction survey was conducted on September 28, 2012 by a team of qualified observers who surveyed all suitable open habitats (beach, algal flat, wrack line, and other intertidal and sub-tidal flats) in an attempt to identify all Piping Plover across much of the Caminada Headland. The September 2012 survey covered approximately 11 miles of beachfront from Belle Pass (mouth of bayou Lafourche) east to the Elmer's Island entrance road. Subsequent surveys conducted on October 30, 2012 and again on November 28, 2012 employed the same methodology as previous surveys. However, the geographic extent of these more recent surveys may have covered more beachfront habitats.

This survey, completed on January 11, 2013, also utilized the same methodology. Coverage for this fourth survey included the geographic area between Belle Pass on the west to Caminada Pass on the east including Elmer's Island; a distance of 13 miles (Figure 4).

The study site was divided up into 4 - 5 sections and was surveyed on foot. Surveyors walked the length of each section, using binoculars and spotting scopes to identify target species and document band combinations. Parts of the survey site were expansive and surveyors had to spread out across the beach to account for birds located among the various habitats. Figure 5 shows a surveyor using his equipment to find and locate target species.

Each surveyor collected the following: coordinates, number of individuals, color band combinations if applicable, and photo documentation if possible. Additional data collected included: 1) location on the beach (bay, gulf shoreline or open beach) and 2) behavioral activity (loafing, foraging, aggressive behavior, and/or flying.)

Figure 4. Green line represents the geographic extent of the survey.

Surveyors collected this information for Piping Plovers (*Charadrius melodus*), Snowy Plovers (*Charadrius nivosus*), Wilson's Plover (*Charadrius wilsonia*), and Red Knot (*Calidris canutus*), and counted and identified any other bird species encountered.

Results

The survey conducted on January 11, 2013 resulted in the detection of 86 Piping Plovers, three Snowy Plovers, two Wilson's Plovers, and zero Red Knots (Figure 6). Most Piping Plovers were found foraging near shoreline edges either along the gulf beach or back mud flats. Of the 86 Piping Plovers encountered, 16 individuals were color banded. Eight and possibly up to five others were observed during previous surveys.

Figure 5. Surveyor glassing exposed mudflats during low tide.

Figure 6. Locations and abundance of select shorebird species.

Figure 7: Snowy Plover encountered during the January 11, 2013 survey.

Acknowledgments:

We thank the Coastal Protection and Restoration Authority for funding this project. We thank the Wisner Foundation for their support of this project and their approval to access their property. We also would like to thank the following surveyors who helped to make this project possible. They include Delaina LeBlanc, Dan O'Malley, Don Norman, Tori Bacheler, Dave Patton, Donna Dittmann, Steve Cardiff, Jeff Leichty, and Erik Johnson. We also thank Robbie Smith (Greater Lafourche Port Commission) and Forrest Travirca, III (Wisner Foundation) for providing logistical support.

APPENDIX D

Non-breeding Piping Plover Survey Guidelines

Louisiana Piping Plover Non-Breeding Season Survey Guidelines

The purpose of these guidelines is to assess and/or monitor piping plover use of coastal restoration features related to the Barataria Basin Barrier Shoreline Restoration Project. Survey locations should include the coastal restoration features plus adjacent suitable shorebird habitat (i.e., intertidal beaches, mud flats, sand flats, algal flats, wash-over passes, and associated dunes and flats above annual high tide). Monitoring should be conducted July 15 through May 15 to follow the International Shorebird Survey (ISS) census dates listed below. The ISS schedule usually results in three surveys per month. If this is not feasible, try to do at least two surveys per month on the ISS census dates. Surveys should be conducted on ISS dates plus or minus two days. For example, a survey scheduled for the 15th could be conducted on any day between the 13th through the 17th of that month.

Spring Migration	Fall Migration	Winter
February 25	July 15	October 15
March 5	July 25	October 25
March 25	August 5	November 5
April 5	August 15	November 15
April 15	August 25	November 25
April 25	September 5	December 5
May 5	September 15	December 15
May 15	September 25	December 25
	October 5	January 5
		January 15
		January 25
		February 5
		February 15

To the extent possible, surveys should be conducted when birds are foraging. The best time is at low tide, but surveys can also be conducted on a falling or rising tide provided

that the foraging areas are not completely covered. During high tide, birds will be roosting. Although Piping Plovers often roost near foraging areas, the birds will be more difficult to locate. Avoid conducting surveys during poor weather conditions (e.g. high winds, rain).

Methods

In most cases surveys will be conducted by foot. All terrain vehicles (ATVs) may be used to expedite the transport of observers over long stretches of linear routes ("leapfrogging" teams down a beach in 0.5 to 1 mile increments), but all bird counting will be conducted while walking. (**Driving on vegetated areas shall not be permitted. Any ATV use should be coordinated with the Louisiana Department of Wildlife and Fisheries" Isles Dernieres Wildlife Refuge management staff**.) Birds on exposed mudflats that may be inaccessible by foot should be counted from boats. Each survey crew should use their best professional judgment on the most efficient way to conduct the survey and should document in detail if any deviations to these guidelines are deemed necessary.

Observers should work in teams of two to four people, depending on the width of the beach and beach/tidal interface. Wide coastal beaches will require a greater number of observers in order to assure that birds are not missed on the back (aft) side of the dune. Observers working on beaches that contain moderate to high dunes should climb them every 0.5 to 1 mile and look for wash-over flats and pools that may not be visible from the beach. Coastal islands will be surveyed on both the gulf and bay sides (this may require multiple teams of observers in order to finish the surveys in a timely manner).

Piping Plover locations will be recorded with global positioning system (GPS) units. GPS locations will be recorded in universal transverse Mercator (UTM) map datum NAD 83 CONUS. Each survey team should carry aerial photography of the survey route so that new breaks (cuts) in the beach or island can be noted on the survey maps. Habitat data will also be collected and will include foraging substrate, portion of the beach used and side of the island on which the birds are found (see attached data sheet). These

habitat criteria have been adapted from the 2006 International Winter Piping Plover Census organized by the U.S. Geological Survey. Behavioral data (e.g., foraging, roosting, preening, bathing, flying, aggression, walking) of Piping Plovers when seen should also be documented.

Negative data is as important as positive data. Indicate when surveys have been done and no birds where observed. Although Piping Plovers are the target species, any additional observations of other species would help the U. S. Fish and Wildlife Service to identify shorebird concentration areas and management needs.

Louisiana Piping Plover Survey Form

(Note: Most criteria adopted from the 2006 Wintering Piping Plover Census Form)

A. Total # Piping Plovers Observed: ___86_____

B. Location Description (Name): __Caminada Headland including Elmer's Island_____

1 Parish: __Lafourche and Jefferson_____

2 UTM location NAD 83 CONUS (center):

3 Northing_____ Easting_____

4 Land Ownership: __Federal _X_State __Municipal _X_Private __County __Tribal

C. Date of survey:___Jan 11, 2013_____ Time survey conducted: __8:30AM__to __2:30PM__

D. Weather Conditions:

1 Tide stage(s): _X__Low __Mid __High (_X__Rising / __Falling)

2 General weather: __Sunny _X__Partly cloudy __Overcast __Rain __Fog __Other

3 Approximate temperature: __72__ Fahrenheit

4 Wind speed: _5 to 10__miles/hr Wind direction:__SSE___

E. Description of Habitat Surveyed (check as many as apply). The Code designation will be used in Section F table below:

· **Body of Water Type**: ____I. Ocean ____II. Protected bay, harbor, cove, lagoon __X__III. Gulf of Mexico ____IV. Ocean Inlet ____V. Other describe)_____

· **Shoreline Type**:

_X__A. Mainland ____B. Barrier Island ____C. Spoil Island ____D. Bar
____E. Other Island ____F. Washover area ____G. Other (describe)_____

· **Specific Description**:

__**X**_1. Sand beach ____2. Sand spit ____3. Sand flat ____4. Sand bar
____5. Salt flat ____6. Gravel shore ____7. Oyster reef _X__8. Mudflat
____9. Vegetation (algal) mat ____10. Vegetated shoreline
____11. Other (describe)_____

· **Location Description** (criteria for islands only):

____ i. Gulf-side of island ____ii. Bay-side of island
____a. Tidal interface ____b. Fore dune ____c. Top of dune ____d. Aft dune

F. Numbers, behaviors, habitat types, and GPS location(s) of Piping Plovers observed (mark on map if possible).

Number of Plovers Observed	**Behavior Displayed** *(e.g., foraging, roosting, preening, walking, flying, aggression, etc.)*	**Habitat Type where Plovers were found** *Use designations from Section E above, e.g., IIC8ii, IIIB9ia*	**UTM Location** ***Northing***	**UTM Location** ***Easting***

G Mode(s) of transportation:
__X__Foot ____Car/Truck ____ATV ____Boat ____Airboat ____Other_____

H. Habitat (shoreline) covered: __13___miles (please calculate using aerial photograph's scale)

I. Observers: _Delaina Leblanc, Richard DeMay, Tori Bacheler, Erik Johnson, and Dan O'Malley_____

J. Additional comments or notes: _____
_____
_____

K. Additional species encountered (for flying flocks lump as peeps and estimate number). Species of special interest are listed below; please add any additional species.

OTHER SPECIES	TOTAL#	OTHER SPECIES	TOTAL#
Reddish Egret	5		
Marbled Godwit	0		
Red Knot	0		
Western Sandpiper	70		
Stilt Sandpiper	0		
Short-billed Dowitcher	179		
Snowy Plover	3		
Wilson's Plover	2		
Long-billed Curlew	0		
American Oystercatcher	0		

TARGET BIRDS OBSERVED:

						BANDS/FLAGS			
DATE	OBSERVER	SPECIES	COORDINATES		#	UL	LL	UR	LR
1/11/13	DL	PIPL	29.17995	-90.07104	5	G – Flag	P/B	-	W/B
1/11/13	DL	PIPL	29.17995	-90.07104	-	LB – Flag	-	S or A	R/R
1/11/13	DL	PIPL	29.17995	-90.07104	-	G – Flag	G/R	-	B/G
1/11/13	DL	PIPL	29.17995	-90.07104	-	S	Y/K	Y - Flag	Y/Y
1/11/13	DL	PIPL	29.17995	-90.07104	-	LB – Flag	A/R	S	R/R
1/11/13	DL	PIPL	29.18444	-90.06217	2	-	-	-	-
1/11/13	DL	PIPL	29.18507	-90.06211	5	-	-	-	-
1/11/13	DL	PIPL	29.09156	-90.21257	1	-	-	-	-
1/11/13	EJ	PIPL	29.14118	-90.13313	3	-	-	-	-
1/11/13	EJ	PIPL	29.14115	-90.13312	1	-	-	-	-
1/11/13	EJ	PIPL	29.13943	-90.13603	13	-	-	-	-
1/11/13	EJ	PIPL	29.13624	-90.13978	5	-	-	-	-
1/11/13	EJ	PIPL	29.11430	-90.17542	2	G - Flag	R/A(?)	?	K/W*
1/11/13	EJ	PIPL	29.11108	-90.18034	9	Y – Flag	-	S?	G/?
1/11/13	RD	PIPL	29.14360	-90.12460	1	LB – Flag	G/K	S	Y/A
1/11/13	TB & DO	PIPL	29.17932	-90.07115	19	G - Flag	B/G	-	W/W
1/11/13	TB & DO	PIPL	29.17932	-90.07115	-	S	K/K	Y - Flag	HP
1/11/13	TB & DO	PIPL	29.17932	-90.07115	-	G – Flag	G/G	-	B/G
1/11/13	TB & DO	PIPL	29.17932	-90.07115	-	G – Flag	Y/Y	-	B/G
1/11/13	TB	PIPL	29.17054	-90.08684	1	G – Flag	G/Y	-	B/G
1/11/13	TB & DO	PIPL	29.16844	-90.09373	8	S	V/G	Y – Flag	HP

						BANDS/FLAGS			
DATE	OBSERVER	SPECIES	COORDINATES		#	UL	LL	UR	LR
1/11/13	TB	PIPL	29.15611	-90.10619	3	-	-	-	-
1/11/13	TB	PIPL	29.15187	-90.11164	2	LB – Flag	R/R	-	W/HP
1/11/13	TB	PIPL	29.15010	-90.11454	2	-	-	-	-
1/11/13	TB	PIPL	29.14736	-90.11883	2	Y – Flag	HP	S	HP or O/K
1/11/13	DO	PIPL	29.16358	-90.09708	2	-	-	-	-
1/11/13	DL	SNPL	29.18508	-90.06211	2	-	-	-	-
1/11/13	EJ	SNPL	29.11108	-90.18083	1	-	-	-	-
1/11/13	EJ	WIPL	29.11128	-90.17985	2	-	-	-	-

TOTAL PIPL: 86

TOTAL BANDED PIPL: 16

MINIMUM # PIPL RESIGHTED FROM EARLIER SURVEYS: 8

MAXIMUM # PIPL RESIGHTED FROM EARLIER SURVEYS: 13

TOTAL REKN: 0

TOTAL SNPL: 3

TOTAL WIPL: 2

SPECIES: PIPL – Piping Plover, SNPL – Snowy Plover, WIPL – Wilson's Plover, REKN - Red Knot

BAND/FLAG Colors: LB-Light Blue, G-Green, Y-Yellow, P-Pink, HP-Hot Pink, LG-Light Green, W-White, A-Gray, K-Black, B-Blue, R-Red, S-Metal, MG-Mint Green, O=Orange, T=Tan, V=Violet

BAND/FLAG Positions: UL-Upper Left, LL-Lower Left, UR-Upper Right, LR-Lower Right

OBSERVERS: DL-Delaina Leblanc, EJ-Erik Johnson, RD-Richard DeMay, TB-Tori Bacheler, DO-Dan O'Malley

TOTAL BIRDS OBSERVED:

	Delaina LeBlanc East Belle Pass to 3090	Erik Johnson, Richard DeMay Bay Champagne to Bayou Moreau	Tori Bacheler, Dan O'Malley Bayou Moreau to Parish Line	Tori Bacheler, Dan O'Malley Parish Line to Elmer's Island Entrance	Delaina LeBlanc Elmer's Island from entrance to east	**TOTAL**
Snow Goose	0	0	0	0	0	**0**
Gadwall	0	56	10	20	0	**86**
Mottled Duck	0	0	0	0	0	**0**
Blue-winged Teal	0	0	0	0	8	**8**
Green-winged Teal	0	0	0	0	0	**0**
Redhead	0	0	0	0	0	**0**
Ring-necked Duck	0	0	0	0	0	**0**
Lesser Scaup	0	4	0	0	0	**4**
Aythya sp.	0	0	0	0	0	**0**
Black Scoter	0	0	0	0	0	**0**
Bufflehead	0	0	0	0	0	**0**
Hooded Merganser	0	0	0	0	0	**0**
Red-breasted Merganser	0	18	2	1	0	**21**
Duck sp.	0	0	0	0	0	**0**
Magnificent Frigatebird	0	0	0	0	0	**0**
Common Loon	0	1	0	1	0	**2**
Pied-billed Grebe	0	0	0	2	0	**2**
Northern Gannet	0	0	0	1	0	**1**
Double-crested Cormorant	40	195	15	35	30	**315**
American White Pelican	44	85	20	150	0	**299**
Brown Pelican	9	20	10	30	70	**139**
Great Blue Heron	3	12	5	2	2	**24**
Great Egret	4	9	3	4	1	**21**
Snowy Egret	6	2	2	0	0	**10**
Little Blue Heron	0	1	1	0	0	**2**
Tricolored Heron	0	3	1	5	2	**11**
Reddish Egret	0	2	0	2	1	**5**

Black-crowned Night-Heron	0	0	0	0	0	**0**
Yellow-crowned Night-Heron	0	0	0	0	0	**0**
White Ibis	18	3	0	1	0	**22**
Roseate Spoonbill	0	3	1	1	0	**5**
Osprey	1	1	0	1	0	**3**
Northern Harrier	2	1	0	1	0	**4**
Rough-legged Hawk	0	0	0	0	0	**0**
Cooper's Hawk	0	0	0	0	0	**0**
Clapper Rail	0	0	0	0	0	**0**
Black-bellied Plover	2	39	15	30	70	**156**
Snowy Plover	0	1	0	0	2	**3**
Wilson's Plover	0	2	0	0	0	**2**
Semipalmated Plover	0	60	34	6	30	**130**
Piping Plover	1	34	20	19	12	**86**
Killdeer	0	0	0	0	0	**0**
American Oystercatcher	0	0	0	0	0	**0**
Spotted Sandpiper	0	0	0	0	0	**0**
Greater Yellowlegs	0	5	6	1	0	**12**
Willet	0	10	4	0	1	**15**
Lesser Yellowlegs	0	0	0	0	0	**0**
Greater/Lesser Yellowlegs	0	0	0	0	1	**1**
Whimbrel	0	0	0	0	0	**0**
Marbled Godwit	0	0	0	0	0	**0**
Ruddy Turnstone	6	14	8	7	4	**39**
Red Knot	0	0	0	0	0	**0**
Sanderling	145	170	20	59	50	**444**
Western Sandpiper	0	45	0	25	0	**70**
Least Sandpiper	0	3	0	5	0	**8**
Dunlin	0	405	75	185	175	**840**
peep sp.	0	0	0	0	13	**13**
shorebird sp.	0	0	0	0	0	**0**
Short-billed Dowitcher	0	175	0	0	4	**179**
Long-billed Dowitcher	0	0	0	0	0	**0**
Short-billed/Long-billed Dowitcher	0	0	0	0	0	**0**
Boneparte's Gull	0	0	0	0	0	**0**

Laughing Gull		55	15	0	0	0	**70**
Ring-billed Gull		19	6	0	1	0	**26**
Herring Gull		9	8	2	4	0	**23**
Lesser Black-backed Gull		0	0	0	0	0	**0**
Glaucous Gull		0	0	0	0	0	**0**
Gull sp.		0	0	0	0	0	**0**
Caspian Tern		0	28	1	18	4	**51**
Forster's Tern		3	65	9	11	13	**101**
Royal Tern		8	65	1	1	1	**76**
Sandwich Tern		0	0	0	0	0	**0**
Tern sp.		0	0	0	0	0	**0**
Black Skimmer		0	0	0	0	0	**0**
American Kestrel		0	1	1	0	1	**3**
Chimney Swift		0	0	0	0	0	**0**
Belted Kingfisher		0	0	0	0	0	**0**
Short-eared Owl		0	0	0	0	0	**0**
Peregrine Falcon		0	1	0	1	0	**2**
Eastern Phoebe		0	0	0	0	0	**0**
Tree Swallow		0	0	0	0	0	**0**
Barn Swallow		0	0	0	0	0	**0**
Sedge Wren		0	0	0	0	0	**0**
Marsh Wren		0	0	1	1	0	**2**
Ruby-crowned Kinglet		0	0	0	0	0	**0**
Gray Catbird		0	0	0	0	0	**0**
Northern Waterthrush		0	0	0	0	0	**0**
Orange-crowned Warbler		0	0	0	0	0	**0**
Common Yellowthroat		0	0	0	0	0	**0**
Palm Warbler		0	0	0	0	0	**0**
Yellow-rumped Warbler		6	0	0	0	0	**6**
Prairie Warbler		0	0	0	0	0	**0**
Savannah Sparrow		8	9	5	12	0	**34**
Nelson's Sparrow		0	1	0	0	0	**1**
Seaside Sparrow		0	2	3	0	0	**5**
Swamp Sparrow		0	0	0	1	0	**1**
White-crowned Sparrow		0	0	0	1	0	**1**
Ammodramus sp.		0	0	0	0	0	**0**

Red-winged Blackbird	[redacted]	25	13	0	0	0	**38**
Boat-tailed Grackle		0	0	0	0	0	**0**