

## Resources at Risk for Port Bolivar Region of Galveston Bay, Texas

### I. Spill Source Information

This report covers basic information on sensitive resources and contains information on sensitive resources for the Port Bolivar Region of Galveston Bay. Sensitive resource information will be broken down geographically and seasonally.

### II. Geographic Region Covered

The Port Bolivar Region referred to in this report covers Bolivar Peninsula from Port Bolivar to Sievers Cove on both the Gulf and Galveston Bay sides of the island.

### III. Shoreline Resources at Risk

The shoreline along the tip of Bolivar Peninsula is composed of exposed, man-made structures, fine-grained sand beaches, mixed sand and gravel (shell) beaches, and exposed riprap. Shorelines along the bay coastline are primarily composed of mixed sand and gravel beaches, fine-grained sand beaches, exposed and sheltered solid man-made structures, and salt and brackish marshes. The shorelines along the Gulf coastline are primarily fine-grained sand beaches with exposed tidal flats and marshes in the Bolivar Flats vicinity.

### IV. Biological Resources at Risk

#### Threatened and Endangered Species

Several federally and state listed species occur in the region (Table 1).

**Table 1.** Federally and State Listed Species Present in Port Bolivar Region.

Species	Geography	Activity/ Abundance	Timing
Reddish egret (state threatened)	Tip of Bolivar Peninsula, Bolivar Flats	Present Nesting	Year-round Apr-Sep
Piping plover (state/federally threatened)	Bolivar Flats (high concentrations); Gulf coast beaches	Present	Aug-May
Brown pelican (federally endangered)	Bolivar Roads	Present Nesting	Year-round Apr-Sep
Long-billed curlew (state species of special concern)	Bolivar Flats	Present	Sep-Mar
Loggerhead sea turtle (state endangered, federally threatened)	Bolivar Roads (low concentrations)	Present	Year-round
Kemp's ridley sea turtle (state and federally endangered)	Bolivar Roads (low concentrations)	Present	Year-round

## Other Birds

**Bolivar Flats:** Bolivar Flats is an important wintering and nesting area for numerous species of birds and is a Western Hemispheric Shorebird Reserve Network (WHSRN) site of international importance. Approximately 37 species of shorebirds, totaling 140,000 individuals per year, use this site for feeding and roosting. Key time periods are winter and early spring. Common species are listed in Table 2.

**Table 2.** Bird Species Commonly Observed at Bolivar Flats.

Species	Abundance	Activity	Timing
American avocet	20,000	Wintering	Aug-Apr
American white pelican		Present	Year-round
Black skimmer		Present Nesting	Year-round Apr-Sep
Black-bellied plover	2,500	Present	Mar-May; Aug-Dec
Black-necked stilt	500	Present Nesting	Year-round Apr-Sep
Brown pelican		Present Nesting	Year-round Apr-Sep
Cormorant		Present	Year-round
Dunlin	25,000	Present	Oct-May
Gulls		Present	Year-round
Least tern		Present Nesting	Mar-Oct Apr-Oct
Long-billed curlew		Present	Sep-Mar
Northern harrier		Present Nesting	Year-round Apr-Sep
Peregrine falcon	Low concentrations	Present	Sep-Apr
Piping plover	High concentrations	Present	Aug-May
Red-tailed hawk		Present	Year-round
Reddish egret		Present Nesting	Year-round Apr-Sep
Sanderling		Present	Oct-Apr
Semipalmated sandpiper		Present	Oct-Apr
Short-billed dowitcher		Present	Sep-Apr
Terns		Present	Year-round
Wading birds		Present	Year-round
Western sandpiper		Present	Oct-Apr
Willet		Present Nesting	Year-round Apr-Sep
Wilson's plover		Present Nesting	Mar-Oct Apr-Jun
Clapper rail		Present Nesting	Year-round Mar-Sep

Bolivar Roads: Brown pelicans, black skimmers, frigatebirds, gulls, and terns are observed in Bolivar Roads year round.

Gulf Coast beaches: Birds present along Gulf Coast beaches include American avocet (Aug-Apr), cormorants (year-round), gulls (year-round), shorebirds (Aug-May), terns (year-round), and wading birds (year-round).

Bolivar Peninsula: Migratory songbirds are wintering (Oct-May) and black-crowned night-herons are nesting (Apr-Sep) on Bolivar Peninsula.

### **Fish and Invertebrates**

Common species of fish and invertebrates along the Bolivar Peninsula on the Bay side include: Atlantic croaker, bay anchovy, red drum, gulf menhaden, pinfish, sand seatrout, spot, striped mullet, blue crab, oysters, and brown and white shrimp. Additional species found in the Gulf include: crevalle jack, Florida pompano, mullet, sharks, southern kingfish, and Spanish mackerel.

Species present in Bolivar Roads include: Atlantic croaker, black drum, Florida pompano, gulf menhaden, king mackerel, red drum, seatrout, sheepshead, southern flounder, Spanish mackerel, striped mullet, and tarpon. Seasonal presence for sensitive life stages of species is described in Table 3. Adults are typically present year round.

**Table 3.** Port Bolivar Region of Galveston Bay Fish and Invertebrate Life-History Summary.

<b>Species</b>	<b>Sensitive Life-History Stage</b>	<b>Seasonality</b>
Atlantic croaker	Larvae/Juvenile	Apr-Oct
Gulf menhaden	Spawning Larvae/Juvenile	Nov-Feb Dec-Mar
Sand seatrout	Larvae/Juvenile	Mar-Dec
Spot	Spawning; Larvae/Juvenile	Nov-Feb
Southern flounder	Larvae/Juvenile	Oct-Dec
Spotted seatrout	Spawning; Larvae/Juvenile	Jan-Dec
Red drum	Spawning Larvae/Juvenile	Aug-Nov Sep-Dec
Bay anchovy	Spawning; Larvae/Juvenile	Jan-Dec
Pinfish	Spawning; Larvae/Juvenile	Mar-May
Southern flounder	Larvae/Juvenile	Oct-Dec
Black drum	Spawning Larvae/Juvenile	Jan-Apr Jul-Mar
Striped mullet	Spawning Larvae/Juvenile	Nov-Jan Dec-Feb
Crevalle jack	N/A	N/A
Florida pompano	N/A	N/A
American oyster	Spawning Larvae/Juvenile	Mar-Jul Apr-Jul

Sharks	N/A	N/A
Blue crab	Spawning Larvae/Juvenile	Apr-Jul May-Aug
Brown shrimp	Spawning Larvae/Juvenile	Nov-Mar Feb-Jun
White shrimp	Spawning; Larvae/Juvenile	May-Oct
Southern kingfish	N/A	N/A
Spanish mackerel	N/A	N/A
King mackerel	N/A	N/A
Seatrout	N/A	N/A
Sheepshead	Mar-May	Mar-Aug
Tarpon	N/A	N/A

### **Marine Mammals**

Bottlenose and other dolphins are present year round in Bolivar Roads.

### **Reptiles**

Texas diamondback terrapins are present year round off of Port Bolivar.

### **V. Human-Use Resources**

Sievers Cove and Bolivar Flats are recreational fishing areas. There are three boat ramps at St. Claire Cove and Kona Kai. There are access points along both sides of Bolivar Peninsula. Galveston Bay is important for recreational and commercial fishing.

### Management Areas

Bolivar Flats from the jetties to one kilometer north of Beacon Bayou is USFWS designated critical habitat for wintering piping plover.

Essential Fish Habitat occurs in Galveston Bay for the following species:

- brown shrimp adults and juveniles
- gray snapper juveniles (abundance is rare)
- gulf stone crab adults and juveniles
- pink shrimp adults and juveniles
- red drum adults and juveniles
- Spanish mackerel adults and juveniles
- white shrimp adults and juveniles