

### 3. Barrier Island

**Rarity Rank:** N/A

**Synonyms:** None

**Ecological Systems:**

CES203.469 Louisiana Beach

CES203.471 Southeastern Coastal Plain Interdunal Wetland

**General Description:**

Louisiana’s coastal Barrier Islands are important breeding and nesting habitat for migratory shorebirds and colonial nesting waterbirds. The islands are not classified as a single natural community due to the fact that they are comprised of several habitat types including: Coastal Dune Grasslands, Coastal Dune Shrub Thickets, and Coastal Mangrove-Marsh Shrubland. Marine Submergent Aquatic Vegetation also occurs in bays behind these islands. Predominant plant species include:



*Spartina patens* (marshhay cordgrass), *Spartina alterniflora* (smooth cordgrass), *Sporobolus virginicus* (coast dropseed), and *Avicennia germinans* (black mangrove). Species distribution is determined by elevation gradients and exposure to saltwater spray or tidal overwash. Generally, succulent species and vines are found on the beach fronts, wiregrass on highest dunes, and black mangrove and smooth cordgrass on the sheltered bayside areas.

**Current Extent and Status:**

Barrier islands in Louisiana are old shorelines of abandoned, eroding deltas of the Mississippi River. Since deltaic processes have been altered due to the leveeing of the Mississippi River, we can expect no new barrier islands to form. The current major barrier islands include the Chandeleur Island chain, Grand Isle and Grand Terre, Timbalier Islands, and Isle Dernieres. Louisiana’s barrier islands are much younger and geologically less resistant than non-deltaic barrier islands of adjacent states. Major efforts are being



made to preserve and protect these islands from tropical storm impacts. These include the use of breakwaters to buffer wave action, pumping of material from back bay areas

and sand fencing and planting of vegetation along beaches to anchor sand and stabilize the substrate.

Several barrier islands or portions of islands fall within conservation areas. Much of the Chandeleur chain is captured by Breton NWR, which was established in 1904 and is the second oldest refuge in the national refuge system. Isle Dernieres Barrier Islands Refuge, managed by LDWF, includes Wine, Whiskey, East, Trinity, and Raccoon Islands. Grand Isle is the only inhabited barrier island and as a result, much of the natural habitat is altered. However, examples of native habitats are preserved on sites such as the Lafitte Woods Preserve, managed by TNC, which protects a live oak forest, and Grand Isle State Park which captures beach, coastal dune shrub thicket, and salt marsh habitats.

<b>BARRIER ISLANDS SPECIES OF CONSERVATION CONCERN (23)</b>		
<b>BIRDS</b>	Dunlin	<b>BUTTERFLIES</b>
Brown Pelican	Short-billed Dowitcher	Obscure Skipper
Reddish Egret	Gull-billed Tern	Eastern Pygmy Blue
Yellow-crowned Night-Heron	Caspian Tern	
Snowy Plover	Royal Tern	<b>REPTILES</b>
Wilson's Plover	Sandwich Tern	Loggerhead Seaturtle
Piping Plover	Common Tern	Kemp's Ridley Seaturtle
American Oystercatcher	Forster's Tern	Leatherback Seaturtle
Marbled Godwit	Black Skimmer	Mississippi Diamondback Terrapin

***Priority Species Research and Survey Needs:***

Snowy Plover, Wilson's Plover, Piping Plover: Continue to monitor breeding and wintering populations along the coast and on barrier islands.

Reddish Egret and American Oystercatcher: Conduct research to assess the limiting factors on reproduction and the effects of human coastal recreational activities on bird populations. Intensive surveys are needed to accurately determine population levels.

Terns: Conduct research to determine the factors effecting overall population densities and continue with surveys of breeding sites.

Waterbirds: Continue to conduct rookery surveys to update database information.

Obscure Skipper and Eastern Pygmy Blue: Conduct surveys to determine current distribution and abundance for inclusion in LNHP database.

Mississippi Diamondback Terrapin: Population status in Louisiana is unknown. Drastic declines have been documented in other states, but the source of their decline has not been identified. Conduct trawl/nest surveys.

***Species Conservation Strategies:***

1. Terns:
  - Disturbance and loss of nesting habitat are major threats; develop partnerships to strengthen the protection and restoration of barrier islands.
  - Develop a comprehensive survey methodology to determine long term trends in population abundances.
2. Shorebirds, Wading Birds:
  - Provide public education regarding the importance of waterbird nesting colonies and shorebird feeding areas. Reduce the negative effects on these areas from recreational and other uses.
  - Coordinate with GCJV to implement recommendations of shorebird and wading bird conservation plans.
3. Brown Pelican: Continue with long-term monitoring of nesting colonies.

***Threats Affecting Habitat:***

The following table illustrates the threats identified for this habitat type and the sources of these threats. This represents all threats and sources of threats identified across all ecoregions of the state where this habitat occurs.

Source of Threat	Threat		
	Altered Composition/ Structure	Habitat Destruction or Conversion	Habitat Fragmentation
Commercial/industrial development		XXX	
Development/maintenance of pipelines, roads or utilities			XXX
Invasive/alien species	XXX		
Recreational use/vehicles	XXX		
Residential development		XXX	
Shoreline erosion			XXX

***Habitat Conservation Strategies:***

1. Partner with state and federal agencies, NGOs, private landowners, etc. to promote the protection and restoration of barrier islands.
2. Promote education regarding invasive plant species within this habitat and methods to eradicate and/or control invasives.
3. Support NRCS and LDNR efforts for shoreline stabilization and habitat restoration.
4. Work with LCA, CWPPRA to support coastal restoration projects, specifically targeting important nesting areas and species of conservation concern.
5. Work with local governments to recommend limits on recreational vehicle use of this habitat.

6. Work with appropriate planning commissions to provide LNHP data that illustrates locations of this habitat type.
7. Work with NRCS Plant Materials Center, BTNEP, and OSP to develop restoration program for this habitat.