

TEXAS PARKS AND WILDLIFE



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REGIONAL DESCRIPTION

The Texas Gulf Coast stretches along the Gulf of Mexico for 367 miles from the Louisiana border south to the Texas-Mexico border. It is the most biologically rich and ecologically diverse region in the state. Major cities such as Corpus Christi, Galveston and Houston are located in this region.

The 21,000-square-mile region includes barrier islands along the coast, salt-grass marshes surrounding bays and estuaries, remnant tallgrass prairies, oak parklands and oak mottes scattered along the coast, and tall woodlands in the river bottomlands.

The earliest known inhabitants of Gulf Coast were Atakapa and Karankawa Native Americans. The Atakapas lived in the northern part of the coast. The Karankawas lived on the southern part of the coast. Both Atakapas and Karankawas hunted ducks and geese, and depended heavily on shellfish and mussels for food.



Many of the barrier islands and fragile ecosystems are dependent upon the coastal sand dunes. Sand dunes are the product of wind-deposited sand anchored by sparse mats of vegetation. The height of well-vegetated dunes may reach 35 feet, though 15-20 feet is average. The dunes are capable of

reducing the destructive might of hurricane-driven waves and protecting bay and mainland areas. The vegetation holding the dunes in place is drought-resistant species such as sea oats, beach panic grass, and beach morning glory. Coastal wetland habitats contain the largest diversity of plants and animals of any Texas aquatic ecosystem. This is due in large part to the diversity of habitats that make up coastal wetlands.

Coastal wetlands provide habitat for millions of migrating waterfowl and songbirds, and protection from storms that erode the shoreline. Wetlands also serve as nurseries for many saltwater fish, shrimp and shellfish. The wetland areas are also sources of food



and protection for shore birds, small mammals and terrestrial invertebrates, such as crabs. Coastal wetlands support 60 – 90 percent of the commercial fisheries in the U.S. Saltwater fishing in Texas generates \$2 billion annually.

The success of these wetlands depends on having the right amount of freshwater flowing in to the saltwater. Most major Texas rivers flow to coastal bays and estuaries, and it is through these rivers and streams that the flow of freshwater helps maintain a fragile balance of water chemistry that sustains many specially-adapted plants and animals.

In addition to aquatic species, coastal wetlands also support a diversity of bird life such as shore birds, wading birds and waterfowl. Songbirds migrating in the spring often travel great distances across the Gulf of Mexico before landing safely on Texas shores. Bird-watchers from all over the world visit this region to view endangered species such as the whooping crane.

Texas bays and estuaries are some of the most biologically productive places in the marine environment. Bays and estuaries are nursery and spawning areas for marine species, and habitat for oysters and clams that filter tons of pollutants out of gulf coast waters. Most of the fish and invertebrate species people are familiar with spend large parts of their sub-adult periods in the seagrass areas or near the shorelines. In addition to functioning as nurseries, seagrasses also act as biofilters and provide erosion control.



Artificial reefs, both in bays and offshore, have the similar functions to wetlands on shore. Artificial reefs rise like oases in the desert—dotting the vast expanses of mud and sand covering the floor of the Gulf of Mexico. These underwater havens provide hard surfaces required for attachment by invertebrates such as

barnacles, corals, sponges, clams, bryozoans and hydroids. These organisms are the beginnings of an interactive food web that supports a host of reef fish species. By providing food and shelter, artificial reefs enhance not only fishery resources but also fishing and diving opportunities for hundreds of thousands of anglers and divers each year.

Learn more about the Gulf Coast [artificial reefs](#), [seagrasses](#), [wetlands](#), [wildlife](#), [history](#) and [state parks](#).

Topography and Characteristics

Major Rivers: San Jacinto, Trinity, Brazos, Nueces, San Antonio

Major Aquifer: Gulf Coast, Carrizo-Wilcox

Size: 21,000 sq. mi.

The Texas Gulf Coast is a narrow, long strip of low, flat terrain dissected by meandering streams and rivers flowing into the Gulf of Mexico. The sediment deposits from these rivers slowly built up the region over time. Tall woodlands can be found in the river bottomlands. Potholes, wet prairies and forested wetlands are found just inland from the tidal zone.

From the Louisiana border south to Galveston, the coastline is characterized by marshy plains and narrow beach ridges. Long barrier islands stretch along the coastline from Galveston south to the Texas-Mexico border. The barrier islands

separate the mainland coast from the Gulf waters. At 113 miles long, Padre Island is the longest barrier island in the world.

Inland areas feature a few remaining patches of tall grass prairies and oak mottes. Bays and estuaries (where the river meets the sea) are surrounded by salt-grass marshes. In the bays, water is salty but fairly shallow. Gulf Coast wetlands are mostly flat and defined by their mix of salty and fresh water although sometimes the water is entirely fresh.

The Gulf waters range from beachfront to offshore environments with depths varying from 1 or 2 feet for the beachfront to depths of over 100 feet offshore. The beachfront contains fine shell deposits and sandbars. Sand bars, spoil island and shell reefs also provide structure. Learn more about the [rivers](#) and [lakes](#) in this region.

Major Cities / Rainfall / Elevation

Average Net Evaporation rate: 16-28 inches

CITY	AVERAGE ANNUAL PRECIPITATION	ELEVATION
Alvin	51.73 in.	28 ft.
Baytown	53.75 in.	34 ft.
Beaumont	57.38 in.	27 ft.
Corpus Christi	32.26 in.	41 ft.
Galveston	43.84 in.	10 ft.
Houston	47.84 in.	95 ft.
Port Arthur	59.89 in.	16 ft.
Port Isabel	28.56 in.	17 ft.
Raymondville	27.97 in.	31 ft.
Sugarland	49.34 in.	82 ft.
Victoria	40.10 in.	115 ft.
Wharton	45.62 in.	111 ft.
Source: National Climate Data Center, U.S. Dept of Commerce, www.ncdc.noaa.gov		

Common Vegetation

American elm

Holly

Yaupon

Red mulberry

Mangrove

Wax myrtle

Cherry-laurel

Sweet bay

Red chokecherry

Short-leaf pine

Inland sea oats

Gulf cord grass

Sugarberry

Green ash

Sweetgum

Water oak

Willow oak

Coastal live oak

Learn more on our Wildscapes page: [Plant Guidance for Gulf Coast Prairies and Marshes](#)

Rare Plants & Habitats

Prairie dawn

Slender rush pea

South Texas ambrosia

Learn more about [Endangered and Threatened Plants](#).

Common Wildlife

Alligators
Black skimmer
Blue crab
Bull frog
Bottlenose dolphin
Coyote
Diamond back terrapin
Gulls
Lightning whelk
Marsh rice rat
Mink
Muskrat
Oyster
River otter
Roseate spoonbill
Pelicans

Sea turtles
Shrimp
Terns

Near shore fish:

Red drum
Sheepshead
Southern flounder
Spotted sea trout
Striped mullet

Off shore fish:

Groupers
Snappers
Spadefish

Learn more about these animals on our [Wildlife Fact Sheets](#).

Rare Animals

Attwater's prairie chicken
Eastern brown pelican
Eskimo curlew
Piping plover
Whooping crane

Learn more about [Endangered and Threatened Species](#).

ISSUES AND TOPICS OF CONCERNS

To become environmentally literate, we first have to consider these core concepts:

1. Fish and wildlife resources are a public trust.

Did you know that ownership of land does not convey ownership of wildlife? For example, a deer inhabiting Joe's ranch does not belong to Joe—the deer belongs to all of us.

2. Conservation and management of terrestrial and water resources are essential to sustaining fish and wildlife, the outdoor landscape, and the quality of our lives.

Would you agree that we all enjoy looking at a beautiful and healthy scenic landscape?

3. Understanding and active participation in the stewardship and support of our natural resources is key.

Would you agree that when one participates in a service project such as a tree planting, that they take pride and ownership in that habitat now and in the future?

These are the first three of five core concepts endorsed by Association of Fish & Wildlife Agencies (AFWA). Learn more about the [AFWA Core Concepts](#).

With the above concepts in mind, TPWD held a series of focus meetings with leading biologists across the state. They were asked: *“What issues in your area are most important for people to know or understand?”*

Terrestrial Issues:

- Habitat Destruction/Urban Sprawl
- Human/Wildlife Conflict (including Alligators)
- Invasive Species

Aquatic Issues:

- Water for a Growing Texas
- Wetland Loss
- Problems of Invasive Plants

Explore the [Wildlife Management Areas \(WMA\) of Gulf Coast](#).

Learn more about the [state of water in the Gulf Coast](#) region.

Project WILD Activities relative to regional issues

- Dragonfly Pond (habitat destruction/urban sprawl)
- To Zone or Not to Zone (habitat destruction/urban sprawl)
- Too Close for Comfort (human/wildlife conflicts)
- Aquatic Roots (invasive species)
- How Wet is Our Planet? (water for a growing Texas)
- Marsh Munchers (wetlands)
- Wetland Metaphors (wetlands)

Project WILD Activities with Texas Adaptations

- Checks and Balances
- Here Today, Gone Tomorrow
- Migration Headache (Aquatic)
- Shrinking Habitat
- Watershed (Aquatic)
- World Travelers

TPWD Resources

People:

Find your local [Game Warden](#)
Find your local Wildlife [Biologist](#)

Student publications and activities:

[Coloring pages](#) for the Gulf Coast
[Teacher activities](#) for the Gulf Coast
Learn about [Sea Beans](#)

Maps:

Gulf Coast Eco Region [Map](#)
Major Aquifers [map](#)
Minor Aquifers [map](#)
Texas Bays and Estuaries [map](#)
Additional [maps](#) (rainfall, vegetation, river basins, etc)

Media, Videos and Web casts:

[Videos](#) about the state parks of the Gulf Coast region
[Videos](#) about the sinking of the Texas Clipper
[Webcasts](#) for the Gulf Coast region
Search the [TPW Magazine](#) for articles about the Gulf Coast region

Habitat and Wildlife Publications:

Habitat:

- [The Dirty Dozen](#): Prohibited species in the seafood market
- [Land Fragmentation in Texas: Meeting the Challenge](#)

- [An Analysis of Texas Waterways](#): A Report on the Physical Characteristics of Rivers, Streams, and Bayous in Texas
 - [Brazos River](#)
 - [Colorado River](#)
 - [Nueces River](#)
 - [San Antonio River](#)
 - San Jacinto River: [West Fork](#); [East Fork](#)
 - [Trinity River](#)

Artificial Reefs:

- [Artificial Reefs in Texas](#)
- [Artificial Reef Program: Scientific Diving Standards and Safety Manual](#)
- [Texas Artificial Reef Plan Reef](#)
- [Freeport Liberty Ship Reef](#)
- [George Vancouver Liberty Ship Reef](#)
- [Matagorda Island Liberty Ship Reef](#)
- [Mustang Island Liberty Ship Reef](#)
- [Port Mansfield Liberty Ship Reef](#)
- [S.S. John Worthington WW II Tanker Wrecker](#)
- [Texas Liberty Ships](#)

Seagrass:

- [Seagrass Protection Regulation Brochure](#)
- [Redfish Bay State Scientific Area Brochure](#)

Wetlands:

- [Texas Wetlands Conservation Plan](#)
- [Wetlands Assistance Guide for Landowners](#)
- [Texas Treasures: Wetlands](#)

Wildlife:

- [On the Waterfowl of Texas](#)
- [Migratory Birds of Texas](#)
- [Quick Reference Guide to the Hummingbirds of Texas](#)
- [Attwater's Prairie Chicken Brochure](#)
- [Attwater's Prairie Chicken fact sheet](#)
- [Attwater's Prairie Chicken Management Guidelines](#)
- [History of Alligators](#)
- [Alligator Fact Sheet](#)
- [If you See an Alligator](#)
- [Distribution of Alligators in Texas](#) (with map)



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