



A PROGRAM OF THE TCEQ

Bay Briefings



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Habitat Protection

Overview

The Galveston Bay estuary is a rich ecosystem featuring many different types of natural areas, or habitats. Salt marshes, freshwater wetlands, forests, cypress swamps, and prairies are among these unique wild places. By providing food and shelter, these habitats support a great diversity of wildlife and aquatic species.

Galveston Bay's habitats make it one of the nation's most productive estuaries, supporting economically vital fisheries and tourism. Wetlands and other habitats filter pollutants from water, helping to protect the quality of our bayous and bays. Coastal forests, wetlands, and grasslands help control flooding by absorbing rainfall.

Wildlife habitats are also excellent places to have fun—besides fishing, they support recreational activities such as crabbing, hunting, boating, kayaking, bird watching, and wildlife photography. Finally, natural areas are beautiful, peaceful places, contributing greatly to the quality of our community.

Habitat Loss

Between 1950 and 1990, the estuary had a net loss of over 30,000 acres, or 19 percent of its wetlands, and 1,700 acres, or 70 percent of its seagrasses. According to recent studies, 2,913 additional acres of estuarine marsh and 9,124 acres of freshwater marsh were lost between 1992 and 2002. Vast expanses of coastal prairie and forest have also vanished.

Both natural processes and human activities contribute to habitat loss. *Subsidence*—the sinking of land due to groundwater, oil, and natural gas pumping—has caused significant wetland loss around the bay. Fortunately, the regulation of groundwater pumping has greatly reduced subsidence. Erosion caused by waves from wind, ships, and storm surge has taken a tremendous toll on the area's coastal marshes. Increases in mud and silt suspended in the water cut down on light reaching seagrasses. This is considered a major factor in seagrass loss.

Currently, the conversion of land to residential and commercial uses is the primary cause of habitat loss. These land-use changes also fragment remaining wild areas, decreasing their habitat value.

Protecting Habitat

Diverse plant populations are vital components of healthy habitats, and species diversity diminishes when habitat is altered. Loss of wetlands, coastal forests, prairies, and seagrass meadows directly affects fish and wildlife populations. As these areas disappear, vital nursery, nesting, and foraging areas are lost. Habitat loss also limits the ability of the bay ecosystem to absorb flood waters and filter pollutants.

Seagrass meadows and oyster reefs have special ecological significance. Seagrass meadows are preferred habitat for many juvenile fish and shellfish and provide food for threatened and endangered species of sea turtles. Oyster reefs are important economically, contribute to water quality by filtering out algae and sediments, and serve as important habitat for other organisms.

Land Conversion and Population Growth

The use of land in Galveston Bay's surrounding watershed has a profound effect on the resources of the estuary. The amount of developed land (commercial, residential, and agricultural) in a watershed directly affects the amount of available wildlife habitat, the volume of rain entering streams and bayous, and the types and amounts of nonpoint source pollution flowing into the bay.

Galveston Bay is adjacent to the nation's fourth-largest city. Population in the region is increasing, as is the construction of new homes and businesses. Ecosystems that provide wildlife habitat, flood protection, and buffers that protect streams from pollution are being converted into urban and suburban developments.

What the Estuary Program Is Doing

The Galveston Bay Estuary Program implements a Habitat Protection Action Plan. In partnership with businesses, local, state and federal governments, environmental organizations, commercial fishermen, and recreational anglers, the program has:

- created, protected, and restored over 8,000 acres of diverse and important coastal habitats since 1995;
- reestablished over 200 acres of seagrasses in West Bay;
- protected and restored important waterbird nesting and roosting areas; and
- established several citizen-based partnerships and programs to support grassroots conservation efforts.

What You Can Do

- Participate in volunteer restoration and protection activities such as marsh planting, river and bay trash cleanups, and removing abandoned crab traps.
- Establish native plant landscapes to provide habitat for wildlife displaced by development.



Low-altitude aerial photograph of marsh-restoration project in West Bay.

- Volunteer at an area nature center or with citizen groups involved in purchasing and restoring coastal habitats.

Links to the programs described above can be found at the Estuary Program Web site: www.gbep.state.tx.us.



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