Seagrass!
A Cornerstone of Bay Productivity

Did you know?

- **Seagrass beds in the Coastal Bend comprise about 40% (92,500 acres) of all seagrass in Texas.**
- **Fragmentation of seagrass beds has been attributed to propeller scarring, dredging of navigational channels, and placement of dredged material.**
- **Studies indicate that 1/3 of the scarred seagrass beds in the Coastal Bend are either moderately or severely scarred.**
- **The brown tide event in the Laguna Madre is the longest documented algal bloom in the world and caused the loss of approximately 2,300 acres of shoalgrass since 1988.**

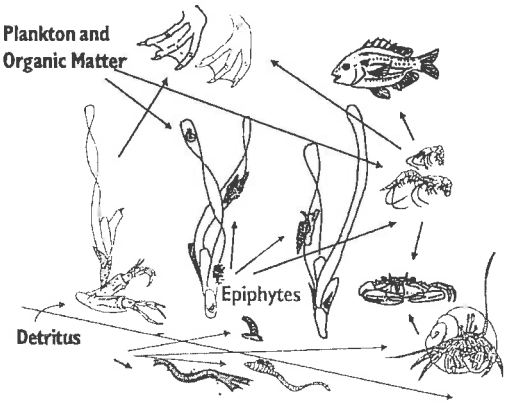
Seagrasses, or submerged aquatic vegetation (SAV), are flowering plants that live in shallow saline waters usually in a protected lagoon or bay environment. Seagrasses require sunlight, water, nutrients, and a soft muddy substrate. Vast expanses of seagrass meadows provide a unique habitat for many estuarine dependent plants and animals.

Seagrass habitat plays a major role in the reproductive cycles of many recreationally and commercially important species in the Coastal Bend. Fish and shellfish utilize seagrass habitats in the early stages of their life cycles, feeding on organic matter produced by decomposing seagrasses and hiding from larger predators among the seagrass blades.

Although seagrass beds have been recognized as highly important and productive habitats, they do not go undisturbed. Such factors as brown tide, degradation of water quality, channel dredging activities, boat propeller scarring, and shoreline development are identified as contributors to the fragmentation of seagrass beds.

Why Seagrass Matters

Habitat: Seagrass meadows serve as nursery areas, providing refuge for many commercially and recreationally sought after fish and shellfish. In addition, seagrasses serve as a substrate for attachment of plants and animals, known as epiphytes. These epiphytic organisms provide an important food source for small fish and invertebrates.

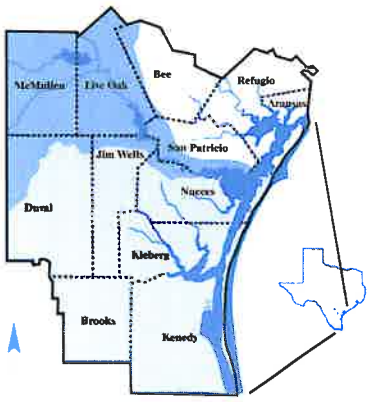


Food Source: When seagrasses die and decompose, they form detritus - decaying organic matter - which is the basis of the food chain. Many smaller invertebrates utilize detritus as a food source. Larger organisms rely on smaller ones for food and sustenance. In addition, the Coastal Bend is part of the American Central flyway and seagrasses are an important food source for many species of migratory waterfowl.

Nutrient Cycling: Seagrasses are primary producers, using the sun's energy to form organic material. In the process, seagrasses utilize and recycle nutrients both in the water column and the sediments. This serves as a buffer for nonpoint source pollution by filtering contaminants from the water and sediment.

Erosion Protection: Seagrasses, with their extensive root systems, act to stabilize and trap bottom sediments thereby providing protection against erosion.

Economics: The Laguna Madre supports a $225 million fishing, tourism and recreation industry, which may be attributed to the productivity and extent of seagrass habitat.



Coastal Bend Bays & Estuaries Program Project Area

What's Being Done And What YOU Can Do

WHAT'S BEING DONE?

Coastal Bend Bays Plan. The Coastal Bend Bays & Estuaries Program's Coastal Bend Bays Plan (CBBP) includes actions at the regional level that address seagrass habitat preservation, and the impacts caused by recreational activities. Central to this effort is a comprehensive approach to maintain water quality.

Seagrass Conservation Plan for Texas. This statewide plan has been developed to coordinate research, conservation, and management activities on Texas seagrasses. The plan's primary goals are to involve all stakeholders in identifying issues of concern and develop actions to address those issues.

Texas Parks and Wildlife Department (TPWD). On May 1, 2006, TPWD enacted a regulation in Redfish Bay State Scientific Area that prohibits the uprooting of seagrasses. This area includes 32,000 acres of which 14,000 acres are covered by seagrasses. Boater access is allowed throughout the Scientific Area.

Mission-Aransas National Estuary Research Reserve. One of the objectives of the Mission-Aransas National Estuarine Research Reserve (NERR) research program is to improve understanding of short and long-term changes within Texas coastal ecosystems, including seagrass beds. Researchers are working to determine the causes and effects of natural and anthropogenically-induced change in seagrass habitats.

WHAT YOU CAN DO:

Water Quality. Coastal residents can decrease the nonpoint source pollution reaching seagrasses by following directions on lawn garden products. Do not over-use fertilizers, pesticides, or herbicides.

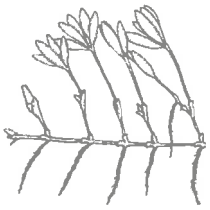
Construction Practices. Rainfall can easily erode bare earth. The sediment is carried to the bay where it may cloud the water or cover seagrasses - reducing photosynthesis. Properly placed and maintained sediment fences will capture the sediment before it reaches the water.

Boating. Know the water depth requirements of your boat's design. If you observe seagrass in the propwash, you are too shallow! Stop the motor and drift or pole into deeper water.

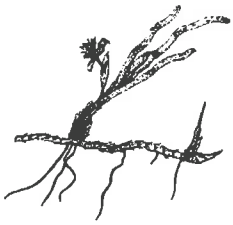
Dredging Activities. Dredging can directly or indirectly impact seagrass habitats. Stay informed about dredging activities in your area and support measures to protect seagrass during these operations.

Keep Off the Grass. Walking through seagrass meadows can damage the root system. Use caution when wading in shallow water and avoid walking through seagrass.

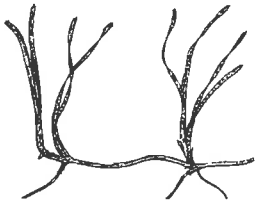
widgeon grass *(Ruppia maritima)*
- Found interspersed in shoalgrass beds
- Provides a major food source for migratory waterfowl
- Has a wide salinity tolerance



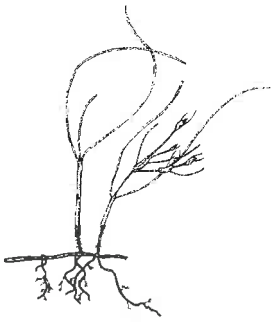
star grass *(Halophila engelmanni)*
- Occurs in higher salinity waters
- Found interspersed in shoalgrass and manatee beds
- Invasive species



turtle grass *(Thalassia testudinum)*
- Occurs in deeper water
- Grazed upon by sea turtles
- Climax species



shoal grass *(Halodule beaudettei)*
- Dominant species in upper Laguna Madre
- Primary food source for redhead ducks
- An early colonizer species of impacted areas



manatee grass *(Cymodocea filiformis)*
- Colonizes deeper waters of high salinities
- Grazed upon by the endangered green sea turtle
- Climax species indicative of low impact areas

CONTACT US:
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