



# Dauphin Island

Located at the mouth of Mobile Bay, Dauphin Island serves as a barrier between Mobile Bay and Mississippi Sound and the Gulf of Mexico. The island marks the point where the brackish waters from the Bay/Sound meet the saltwater of the Gulf. Dauphin Island is subject to the meteorological conditions from both directions as well as the strength of the Gulf waters. The Island was constructed by the constant flow of sand eastward from the Florida Panhandle. The movement of this sand has caused the island to build from east to west and in such a location that its character has been shaped by the impacts of the waters, the winds and weather into what we see today; although as a barrier island, it is constantly changing. A dominant feature of the Island is a ridge of dunes, running east-west. Distribution of plants through deposition of seeds from both winds and by birds has resulted in the formation of different ecological features, from maritime forests to the semi-tropical nature of the coastal plain you will find here.

Within this geography are wetlands, creeks and lakes supporting different species of animal and plant life. Sea turtles also utilize Dauphin Island's sandy beaches for nesting, permitting the preservation of several species. Dauphin Island is the first and last landfall for migrating birds on their long journey across the Gulf of Mexico. The species of marine creatures, from both brackish and saltwater, have provided food and recreation for residents of the Island for centuries. As a barrier island, the nature of Dauphin Island is unique. It was colonized by Native American tribes, explored by many European discoverers, and was instrumental in the Civil War. Now we are the stewards of this colorful heritage and these natural treasures. Preservation of the community's unique nature while sharing all the various aspects of the island with both residents and visitors is the responsibility of all of us who live and visit here. Let's continue to work together to ensure that its distinct character will be maintained for generations to come.



## SAND DUNES OF DAUPHIN ISLAND

### ACKNOWLEDGMENTS

Dauphin Island Planning Commission  
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[www.mobilebaynep.com/videos/the-dunes-of-dauphin-island](http://www.mobilebaynep.com/videos/the-dunes-of-dauphin-island)  
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## SAND DUNES OF DAUPHIN ISLAND

To many people, they're just piles of sand, but to the 1,800 residents of Dauphin Island and our visitors, the dunes are the first line of protection from the damaging winds and waters of coastal storms. With the ever-increasing threat of hurricanes and rising seas, the health of our dune system is more crucial than ever.

### Dune History

For generations, the dunes of Dauphin Island were revered by the small, tight-knit community that lived there for the protection they provided.

*“The dune system on the island is the lifeblood – essentially of the stability of Dauphin Island, and I think the Island natives knew that firsthand. Growing up around here, they protected it to the best of their ability. They wouldn’t let children get on the dunes in most cases and really recognized the critical importance of the dunes for the stability and protection of their properties.”*

Jeff Collier, Mayor, Town of Dauphin Island and Dauphin Island Native

When a bridge was built and building surged in the 1950s, developers did not understand the dynamics of dunes. They subdivided lots up to the landward toe of existing dunes, leaving no buffer between private properties and the dune system. The western part of the Island provides an instructive illustration of how fragile the island would be without a healthy dune system.

### How Dunes are Formed and Their Role

Sand dunes are natural features of the shoreline and critical parts of the beach system, which extends from the landward side of the dunes out hundreds of feet into the Gulf. Dunes don't develop overnight. During long periods of calm weather, usually in summer months, gentle waves and tides push sand onto the beach where it accumulates and dries. Onshore winds blow it landward until it's captured by sea oats, a dune fence, or an existing dune, allowing dunes to build over time.

- Sand Dunes protect the shoreline and structures of the Island’s Gulf-fronting beaches from **coastal erosion**.
- They serve as **areas of groundwater recharge**, retaining freshwater as a buffer to saltwater intrusion.
- Dunes provide **shelter to the maritime forests** and neighborhoods behind them.
- They **protect important habitat** for birds and wildlife, and
- Most importantly, provide a **reservoir of sand** that erodes naturally to replenish adjacent beaches.

The dunes are not static, remaining in one place over time. Instead, they migrate due to the forces of waves, erosion, and wind.

The increasing development and recreational use of the barrier islands can impact the stability of the dune environment.

Dauphin Island will continue to attract visitors in ever-greater numbers for years to come. With this in mind, Dauphin Island passed a Sand Dune Protection and Management Plan as an addition to the Comprehensive Plan including a Dune Protection Overlay District (DPOD) and Guidelines in the Zoning Ordinance to ensure the long-term existence of the dunes. This plan establishes “dune-friendly” practices to be used in all future development in these highly sensitive areas and provides a first step towards strengthening dune protection by adding regulations to make sure new development does not harm existing dunes on private properties.

Protecting dunes helps prevent loss of life and property during storms and safeguards the sand supply that slows shoreline erosion, while preserving and enhancing the beauty of the coast and coastal ecosystems. To succeed, dune improvement and protection efforts must be undertaken by governmental entities. But even more valuable are efforts by those who live on or visit our island coastal dunes.

## DUNE STEWARDSHIP RECOMMENDATIONS



**Stay off the dunes.** By walking or playing on sand dunes, you can unwittingly uproot sea oats or other vegetation holding them in place. Access the beach only on elevated boardwalks or established trails.



**Avoid disturbing dunes, especially with excavators or dozers.** Digging up even a single plant or part of a single dune can irrevocably disrupt and degrade the entire dune system.



**Keep dogs out of the dunes** so they don't dig, disrupt bird nests, or chase wildlife.



**Plant native dune vegetation along your shoreline property,** like sea oats, bitter beachgrass, or morning glories, and install sand fencing to help stabilize dunes and increase wildlife habitat.



**Become an advocate for the dunes.** As all of us do our part, we can protect the Dunes of Dauphin Island for generations to come.