

# ST. ANDREWS BAY ENTRANCE – FEASIBILITY & DESIGN STUDY

Client: Florida DEP – Bureau of Beaches & Coastal Systems



St. Andrews Bay Entrance was opened through a barrier island by the Federal government in 1934 and has since been maintained by the U.S. Army Corps of Engineers (USACE) - Mobile District. Coastal Tech performed feasibility, conceptual and preliminary estimates to allow the Florida Parks Division to address erosion along St. Andrews Bay State Park which is located on both sides of the inlet.

The downdrift 17 miles of beaches were nourished in 1998-99 due to the adverse impacts of the inlet and will require renourishment every 7 to 9 years. The inlet interior shoreline has been continually eroding since the opening of the inlet in 1934. An environmentally sensitive fresh water lake located in the St. Andrews Bay State Park is vulnerable to shoreline erosion and the USACE has placed dredge spoil to mitigate the shoreline erosion.

**Navigation - Downdrift Impact Assessment:** Coastal Tech received authorization from the Florida Department of Environmental Protection (FDEP) to prepare an Inlet Management Plan and developed alternatives and an implementation strategy to reduce the beach nourishment volumes and shoreline erosion. The plan included conducting a wave refraction/diffraction analysis (REFDIF) of the entrance and adjacent beaches to refine the downdrift influence of the pass.

**Design and Preliminary Restoration Plan (PRP):** As the FDEP and Park Service Consultant, Coastal Tech finalized the project design consisting of a segmented breakwater with pre-placed beach restoration fill. The Mobile District evaluated the proposed design as a Section 1135 project, prepared a Preliminary Restoration Plan, received approval from USACE Division but, had insufficient funding to implement the recommended design alternative to reduce erosion along the Gator Lake shoreline.

## Key Elements

- Feasibility Study
- Conceptual, Preliminary & Final Design
- Inlet Management Plan
- Navigation Assessment
- Environmental compliance

**Date:** 2004

**Cost:** \$1,500,000

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