

Jupiter Beach Erosion Control Project

A Palm Beach County Shore Protection Project

Project Location

- Just over a ½ mile stretch of beach located south of the Jupiter Inlet and extending to the Jupiter Beach Resort.

The Problem

- The Park's close proximity to the Jupiter Inlet and storm events have resulted in an erosion "hot spot" which extends from the Inlet to the Jupiter Beach Resort.
- Beach erosion threatens the buildings and has caused loss of important sea turtle nesting habitat.

The Solution

- Ongoing efforts to stabilize the shoreline include large scale beach nourishments, dune restoration and maintenance, & bypass dredging events conducted by the Jupiter Inlet District (JID) and Florida Inland Navigational District (FIND).
- Plans are to construct a segmented breakwater to stabilize the beach where it is most critically eroded.

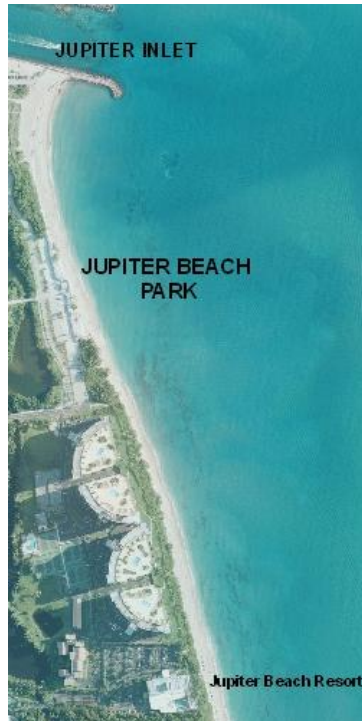
Benefits

- Structures will allow the beach to grow through a natural accretion processes .
- Structures stabilize the beach yet allow natural longshore sand transport.
- A stabilized beach and dune will provide storm protection, recreational opportunities, and turtle nesting habitat.
- Structures will extend the nourishment interval, resulting in a cost savings.

Partners

- Palm Beach County (Tourist Development Council bed tax and Ad valorem funds)
- Florida Department of Environmental Protection
- Town of Jupiter

PROJECT LOCATION



Peanut Island Breakwaters
Palm Beach County, Florida

PROJECT OVERVIEW

- The Feasibility Study for the Jupiter Beach Erosion Control Project was approved by the Board of County Commissioners in October 2007. Study investigations completed include evaluation of historic beach performance and beach behavior as well as collection of new wave and current data in order to develop modeling scenarios.
- As of spring 2009, design of the breakwater structures is still ongoing and both emergent and submerged designs are being examined for this project area.
- A Joint Coastal Permit (JCP) application will be submitted for this project to the FDEP in August 2009.
- Construction is anticipated to begin in summer 2011 (pending permits) and may take one year to complete.

FAQ

- **How much will the project cost?**
Early estimates range from \$10 to \$20 million dollars.
- **What are the breakwaters made of?**
The base and body of each structure will be constructed using limestone boulders.
- **How will the structures be built?**
Each structure will be constructed from the water using a barge and crane.
- **How do the breakwaters work?**
Breakwaters modify the wave energy and reduce the sand transport. The low energy in the lee of the structures allows the sand to fall out of suspension to create beach salients.
- **Have they been used successfully in other locations?**
Yes, they have been extensively used throughout the world since the Roman era. There are several existing breakwater installations in Florida. A local example is the breakwater system at Peanut Island inside the Lake Worth Inlet (photo above).
- **Will the structures have any impact to recreational activities?**
The goal of the project is to stabilize the beach while maintaining current recreational activities such as surfing, fishing, swimming and snorkeling.

Additional project information can be viewed online at :

<http://www.co.palm-beach.fl.us/erm/coastal/shoreline/beach/reports.htm>



Palm Beach County Board of County Commissioners
Department of Environmental Resources Management
2300 North Jog Road - Fourth Floor, West Palm Beach, FL 33411
Phone: 561-233-2400 <http://www.co.palm-beach.fl.us/erm/>

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