South Palm Beach / Lantana Beach Erosion Control Project

A Palm Beach County Shore Protection Project

Project Location

- Encompasses .8 miles of shoreline extending from the north boundary of the Town of South Palm Beach (SPB) to the Ritz Carlton Hotel located in Manalapan.

The Problem

- Continued erosion along the project area threatens upland structures & important sea turtle nesting habitat.

The Solution

- PBC has completed six (6) dune restoration projects along the shoreline. The constructed dune serves as a buffer against the intense 2004 & 2005 hurricane seasons and numerous tropical and nor'easter storms.
- Construct a series of nearshore segmented breakwaters designed to stabilize the beach where it is most critically eroded.

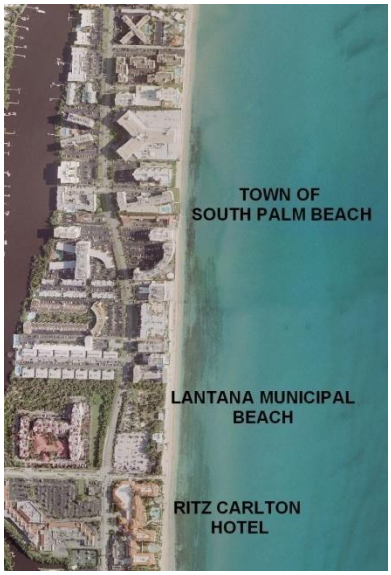
Benefits

- Structures will allow the beach to grow through a natural accretion process.
- 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.

Partners

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

PROJECT LOCATION



Peanut Island Breakwaters,Palm Beach County, Florida

PROJECT OVERVIEW

- The South Palm Beach/Lantana Erosion Control Study examined several long term erosion control alternatives (no action, beach nourishment, groins & breakwaters) for the project area. PBC & SPB determined that constructing breakwaters would be the most appropriate protection response to the ongoing erosion. Since that time, PBC has continued to work on the engineering & design of the breakwater system.
- The ACOE (Army Corps of Engineers) is requiring completion of an Environmental Impact Statement (EIS) which is a requirement under the National Environmental Policy Act (NEPA). The EIS will further evaluate project alternatives.
- In summer 2009, PBC will submit a Joint Coastal Permit (JCP) application to the FDEP and ACOE for this work.
- Breakwater construction is anticipated to begin in late 2010(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 structures 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

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Published June 2009