NJDEP 2009 Beachfill
Strathmere, Sea Isle City, North Wildwood, & Stone Harbor, NJ

Bureau of Coastal Engineering
New Jersey Dept. of Environmental Protection
Office of Engineering & Construction
New Jersey’s Shore Protection Program

State of New Jersey
Jon S. Corzine, Governor

Dept. of Environmental Protection
Mark N. Mauriello, Acting Commissioner

Natural & Historic Resources
Amy Cradic, Assistant Commissioner

Office of Engineering & Construction
David Rosenblatt, Administrator
To administer beach nourishment, shore protection and navigational dredging projects throughout the State to:

• Provide for the protection of life and property along the coast

• Preserve our State’s vital coastal resources

• Maintain safe and navigable waterways
Shore Protection Fund
Dedicated for...

“To protect existing development and infrastructure from storm surges, sea-level rise and shoreline migration through dune creation and maintenance, beach nourishment projects, and construction and repair of shore protection structures."

$25 million dedicated annually
Realty Transfer Tax (N.J.S.A. C.13:19-16.1)
Shore Protection Funding
How It’s Divided

Federal Projects - NJDEP - local sponsor in these projects

- Studies
- Storm Damage Reduction/Shore Protection
- Environmental Restoration

State Projects - Municipalities - local sponsor in these projects

- Storm Damage Reduction/Shore Protection

Professional and Technical Services -

- Stevens Institute of Technology
- Richard Stockton College of New Jersey
- Division of Fish and Wildlife
- New Jersey Geological Survey
Shore Protection Construction
Cost Share Structure

Shore Protection Project

FEDERAL

65% Federal

35% State/Local

STATE

75% State

25% Local

New Jersey Dept. Environmental Protection
Bureau of Coastal Engineering
Shore Protection Program
Strathmere
Project Specifics

- **Material**
  - 891,000 Cubic Yards

- **Template**
  - Varying Width Berm
  - +6.75 NAVD88
  - 30:1 Beach Slope

- **Location**
  - State Natural – Polk Ave.
Sea Isle City

Proposed Sea Isle City Beach Nourishment Project
40th to 52nd Streets

Proposed Sea Isle City Beach Nourishment Project
1st Street to 15th Street

Approximate limits of the 40th to 52nd Streets Reach

Approximate limits of the 1st to 15th Streets Reach
Sea Isle City
Project Specifics

• **Material**
  – 394,797 Cubic Yards

• **Template**
  – 100’ Wide Berm
  – +7.00 NAVD88
  – 30:1 Beach Slope

• **Location**
  – 1st Street – 15th Street
  – 40th Street – 52nd Street
North Wildwood
Project Specifics

• **Material**
  - 1,186,400 Cubic Yards

• **Template**
  - 300’ Wide Berm
  - +6.75 NAVD88
  - 25:1 Beach Slope, 12:1 Toe Slope
  - Dune @ elevation +14.75 NAVD88, 25-foot wide crest

• **Location**
  - Terminal Groin @ 2nd Ave – Poplar Ave
Stone Harbor Beach Nourishment

History

103rd Street - 1998
Stone Harbor
Existing Conditions

Project Limits 98th Street – 111th Street

Viewing South @ 98th St.  Viewing North @ 111th St.
Stone Harbor
Existing Conditions

Viewing South @ 101st St.
Figure 4 - The profile at 103rd Street shows a foredune separate from the Federal project dune, developed at fencing put in place in 2003. The berm has retreated 280 feet to the seaward toe of the dunes, leaving them vulnerable to storm erosion.
Stone Harbor
Project Scope

- **Material**
  - 245,000 Cubic Yards

- **Borrow Area**
  - Hereford Inlet – Portions of the USACE approved area
  - Depth: - 26.0 feet NAVD88

- **Template**
  - 150’ Wide Berm
  - +7.25 NAVD88
  - 20:1 Beach Slope, 12:1 Toe Slope

- **Location**
  - 98th Street – 111th Street
What To Expect

• Dredge Pipeline and Heavy Machinery

• Beach Closings: 1,000’ min. sections
  – Public Safety
  – Adequate Staging

• 24 Hour Operation
  – Continuous State Inspection

• Structure Monitoring
  – Adjacent to Structures
Great Lakes Dredge and Dock Company

- Dredge ILLINOIS
- 30 inch discharge diameter
- Capable of pumping 2,500 cubic yards of sand 25,000 feet per hour

*The Illinois at work on Chesapeake Bay.*
Stone Harbor Beach Nourishment
Proposed Project Costs

- **Total Project Costs:** $22,282,401.40
- **Stone Harbor Proposed Costs:** $2,547,750.00
- **Cost Share:**
  - State = $1,910,812.50
  - Municipality = $636,937.50
- Mobilization costs split amongst 4 towns
Stone Harbor Beach Nourishment
Environmental Concerns

• **Piping Plover/Beach Nesting Birds**
  - Current conditions not favorable for habitat within footprint but have historically utilized the region

• **Archaeological Resources**
  - Protective measures within the Borrow Area footprint

• **Munitions/Debris**
  - Screened at Intake
  - Screened at Discharge