



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

Bureau of Coastal Engineering

Purpose...

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)**



New Jersey Dept. Environmental Protection
Bureau of Coastal Engineering

Shore Protection Program

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

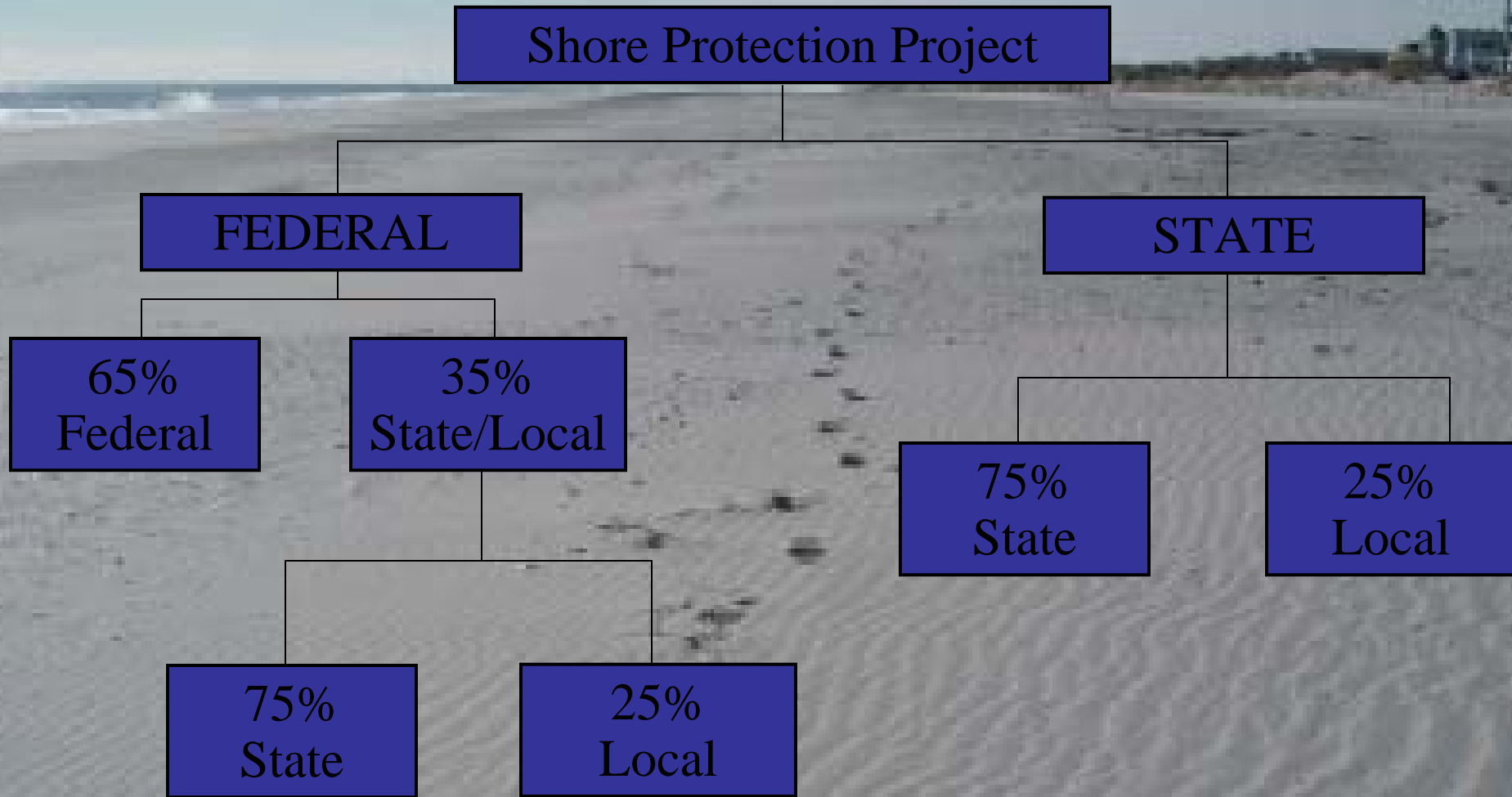


New Jersey Dept. Environmental Protection
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Shore Protection Program

Shore Protection Construction

Cost Share Structure





Strathmere





Strathmere

Existing Conditions



Project Overview Natural Area – Williams Ave.



Natural Area – Viewing Northwest



Seaview Ave – Viewing South



Strathmere

Existing Conditions



Project Overview Webster Ave. – Polk Ave.



Tecumseh Ave. – Viewing South

Jasper Ave. – Viewing South



Strathmere

Project Specifics



- **Material**
 - 891,000 Cubic Yards
- **Template**
 - Varying Width Berm
 - +6.75 NAVD88
 - 30:1 Beach Slope
- **Location**
 - State Natural – Polk Ave.



North Wildwood





North Wildwood

Existing Conditions



Project Limits 2nd Ave. – Poplar Ave.



Viewing South @ 2nd Ave.



Viewing North @ 24th Ave.



North Wildwood

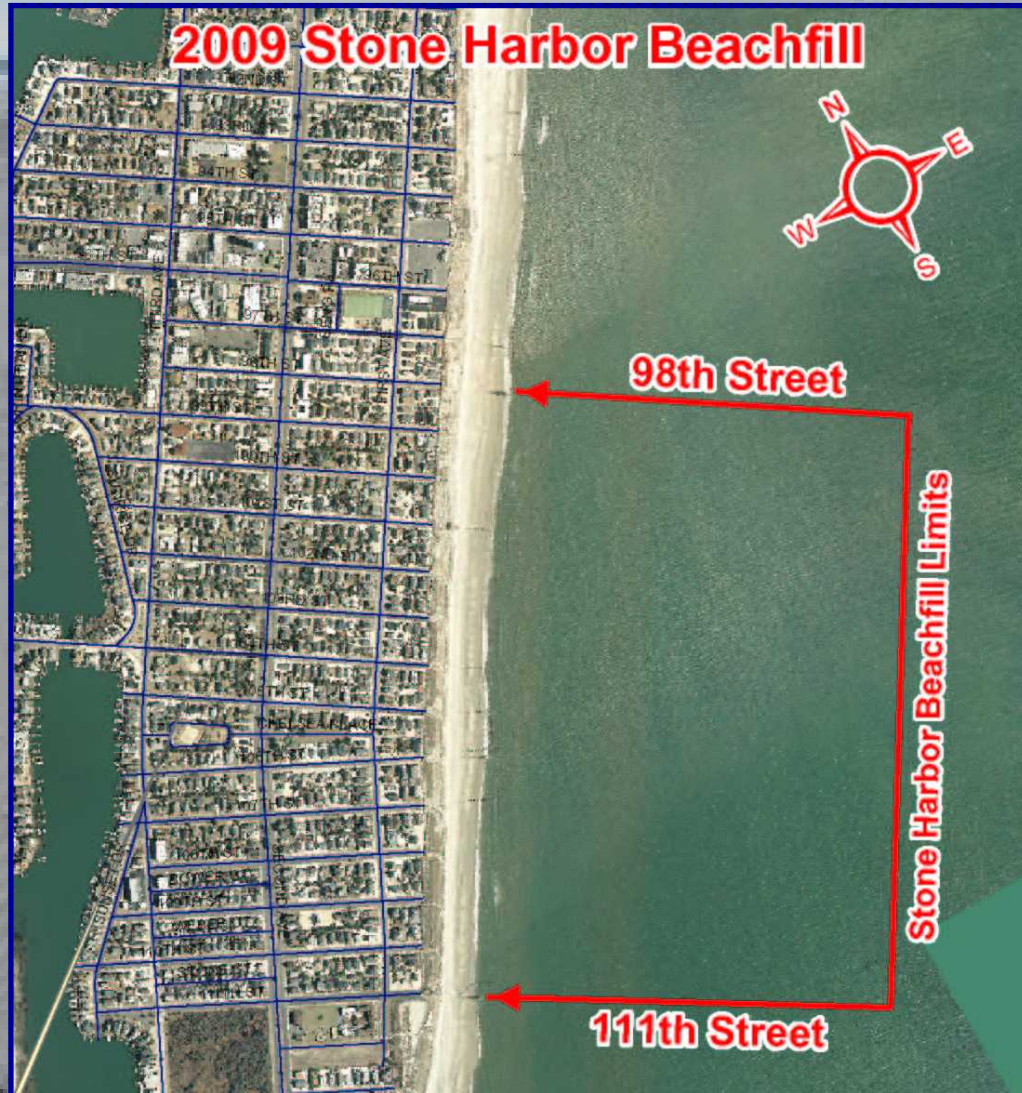
Project Specifics



- Material
 - 1,186,400 Cubic Yards
- Template
 - 300' Wide Berm
 - +6.50 NAVD88
 - 25:1 Beach Slope, 12:1 Toe Slope
- Location
 - Terminal Groin @ 2nd Ave – Poplar Ave



Stone Harbor





Stone Harbor

Existing Conditions



Project Limits 98th Street – 111th Street



Viewing South @ 98th St.



Viewing North @ 111th St.



Stone Harbor

Project Specifics



- **Material**
 - 245,000 Cubic Yards
- **Template**
 - 150' Wide Berm
 - +7.25 NAVD88
 - 20:1 Beach Slope, 12:1 Toe Slope
- **Location**
 - 98th Street – 111th Street



Sea Isle City Beach Nourishment Overview



Sea Isle City Beach Nourishment History

Whale Beach – Circa 1980



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Sea Isle City Beach Nourishment

History – February 4 - 5, 1998 - Northeaster

February 6, 1998



March 30, 1998



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Sea Isle City

Existing Conditions



Whale Beach – 1st Street – 15th Street



Viewing North @ 5th St.



Viewing South @ 5th St.



Sea Isle City

Existing Conditions



40th Street – 52nd Street



Viewing North @ 45th St.



Viewing South @ 45th St.



Sea Isle City Beach Nourishment

Scope of Work



- **Total Sand: 394,797 C.Y.**
 - 216,630 C.Y. : 1st St. – 15th St. (Whale Beach)
 - 178,167 C.Y. : 40th St. – 52nd St.
- **Borrow Area**
 - Corson's Inlet
 - Varying Depths: -14' – -20' NAVD88'
- **Construction: North to South**
- **Production Potential: 20,000 - 25,000 C.Y.**



Sea Isle City Beach Nourishment Borrow Area - Corson's Inlet





Sea Isle City Beach Nourishment Borrow Area - Corson's Inlet

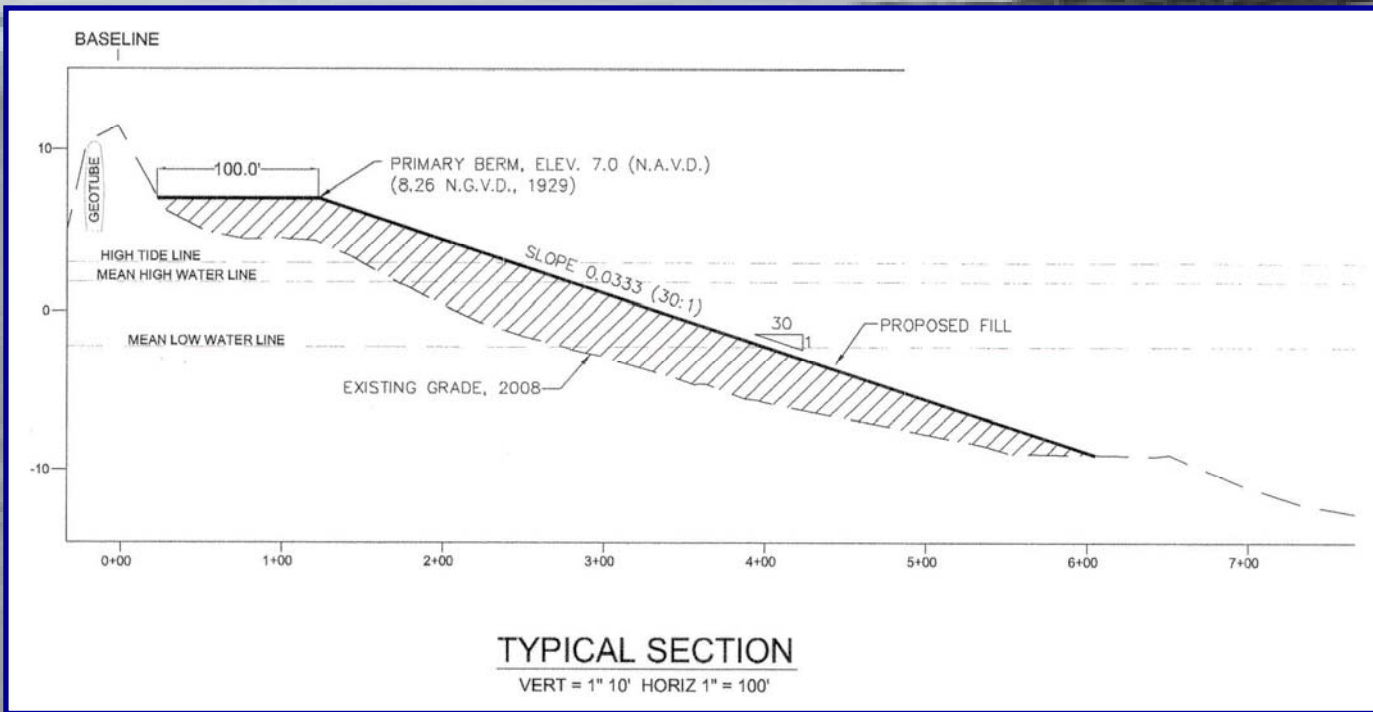


Concept View



Sea Isle City Beach Nourishment

Design – 1st St. – 15th St.

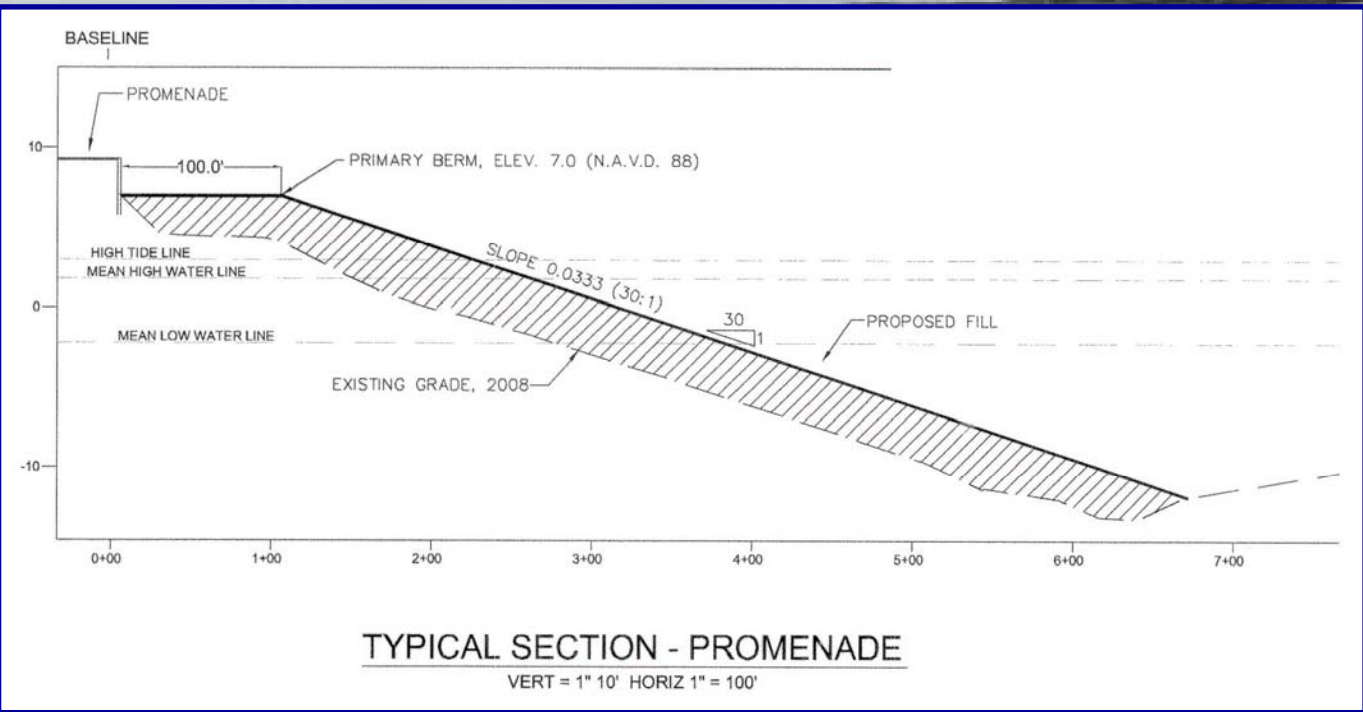


- Beach berm Fixed elevation: +7.00 feet NAVD88
- Berm width: 100'
- Offshore slope: 30:1
- 216,630 C.Y.



Sea Isle City Beach Nourishment

Design – 40th St. – 52nd St.



- Beach berm Fixed elevation: +7.00 feet NAVD88
- Berm width: 100'
- Offshore slope: 30:1
- 178,167 C.Y.



Sea Isle City Beach Nourishment

Approximate Schedule



- **Contract: 180 Days**
- **Mobilization: 2nd Week of July**
- **Construction Start: 1st Week of September**
- **Sea Isle Completion: Last Week of September**
- **Total Project Construction Completion: Jan. - 2010**



Sea Isle City Beach Nourishment

What To Expect



- Dredge Pipeline
- 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.

Sea Isle City Beach Nourishment

Proposed Project Costs

- Total Project Costs: \$20,554,651.40
- Sea Isle City Proposed Costs: \$3,613,971.73
- Cost Share:
 - State = \$2,505,478.80
 - Municipality = \$903,492.93
 - Consolidation costs savings
 - \$835,159.60 if Stone Harbor Awarded



Sea Isle City Beach Nourishment

Environmental Concerns

- **Piping Plover**
 - Current conditions not favorable for plover habitat but have historically utilized the area
- **Archaeological Resources**
 - Outside of project footprint
 - Protective measures within the project footprint
- **Munitions/Debris**
 - Screened at Intake
 - Screened at Discharge



New Jersey Department of Environmental Protection ***Shore Protection Program***



www.nj.gov/dep/shoreprotection