



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)**



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

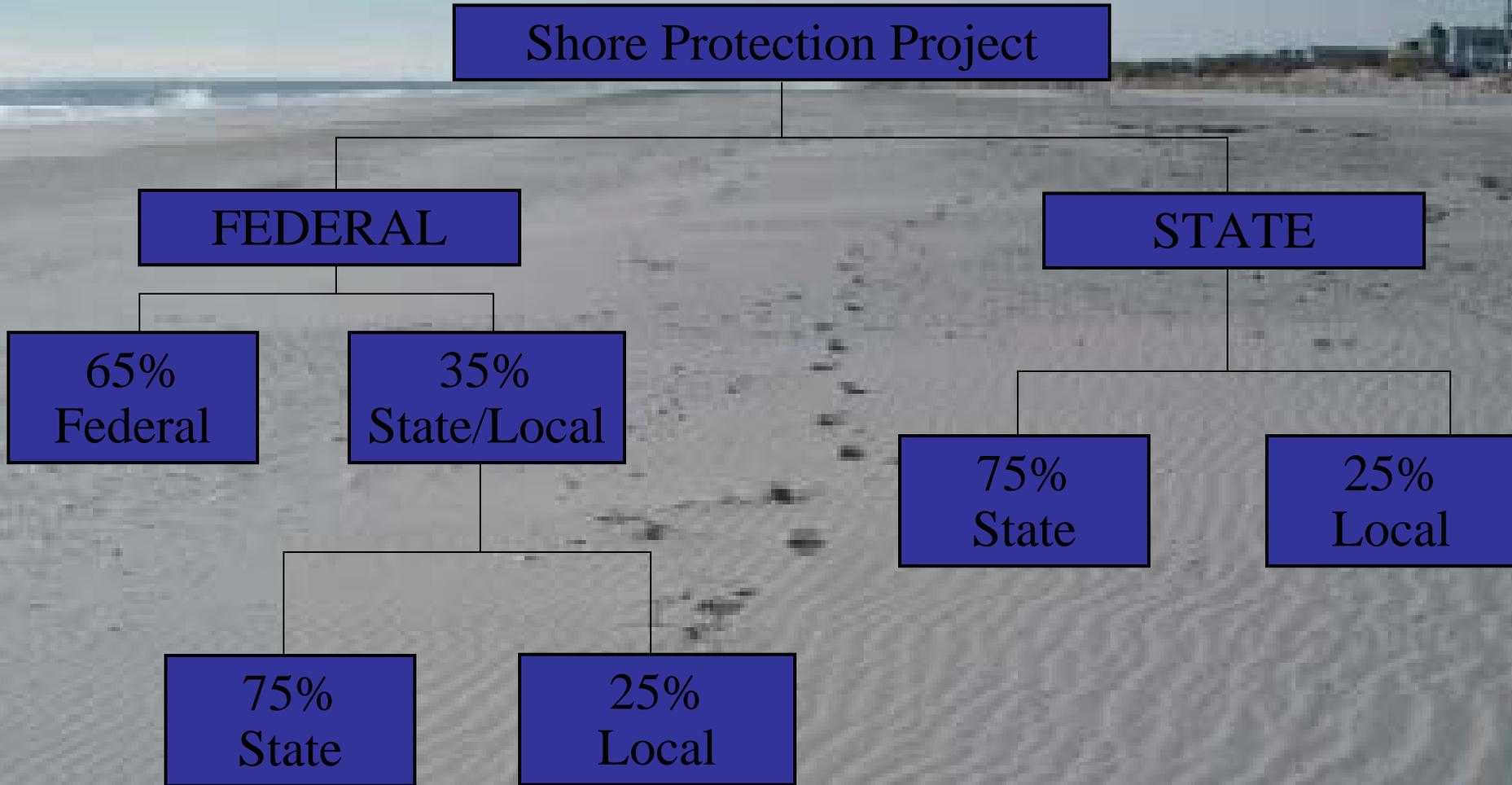
Professional and Technical Services -

- Stevens Institute of Technology
- Richard Stockton College of New Jersey
- Division of Fish and Wildlife
- New Jersey Geological Survey



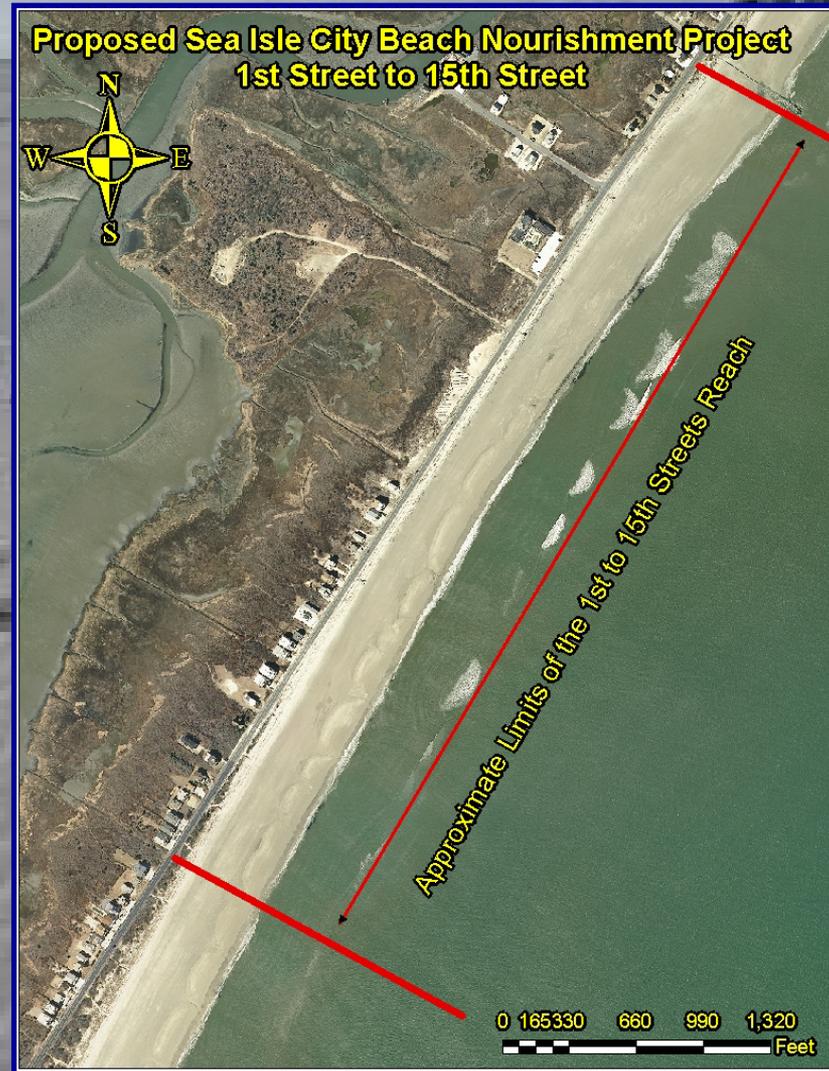
Shore Protection Construction

Cost Share Structure





Sea Isle City





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

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





North Wildwood

Existing Conditions



Project Limits 2nd Ave. – Poplar Ave.



Viewing South @ 2nd Ave.

Viewing North @ 24th Ave.



North Wildwood

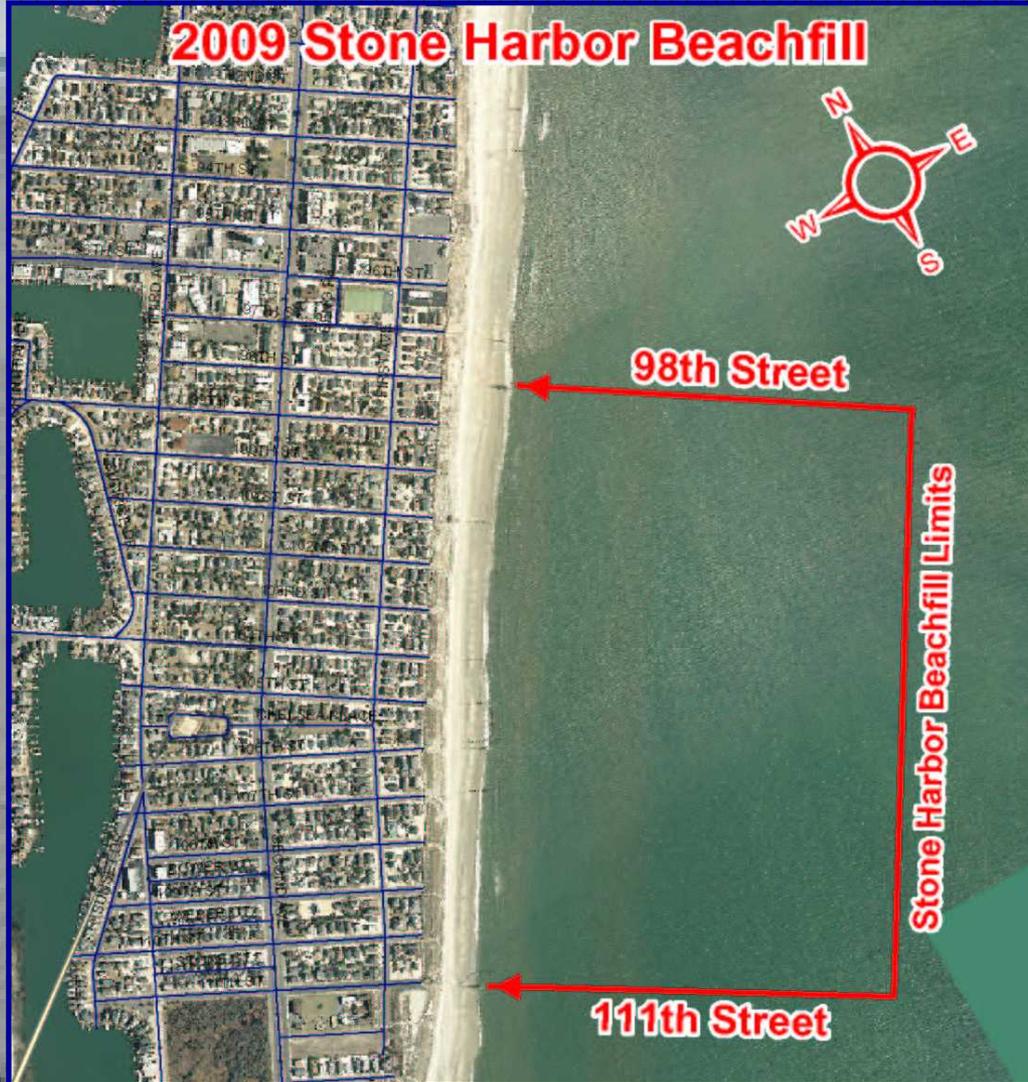
Project Specifics



- **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



Strathmere Beach Nourishment Overview





Strathmere Beach Nourishment

Historical View



North End – Ludlam Island – Circa 1960's



Strathmere Beach Nourishment

Current Conditions



Natural Area – Viewing Northwest



Strathmere Beach Nourishment

Coastal Storm Damage



Natural Area – Viewing Southeast – Oct. 2008



Strathmere Beach Nourishment

Current Conditions



Seaview Ave – Viewing South



Strathmere Beach Nourishment Current Conditions



Tecumseh Ave. – Viewing South



Strathmere Beach Nourishment

Current Conditions



Jasper Ave. – Viewing South



Strathmere Beach Nourishment

Scope of Work



- **Total Sand: 891,000 C.Y.**
 - 203,100 C.Y. : Natural Area
 - 264,300 C.Y. : Seaview Ave. – Williams Ave.
 - 423,600 C.Y. : Webster Ave. – Polk Ave.
- **Borrow Area**
 - Corson's Inlet
 - Varying Depths: -14' – -20' NAVD88'
- **Construction: North to South**
- **Production Potential: 20,000 - 25,000 C.Y.**



Strathmere Beach Nourishment Borrow Area - Corson's Inlet





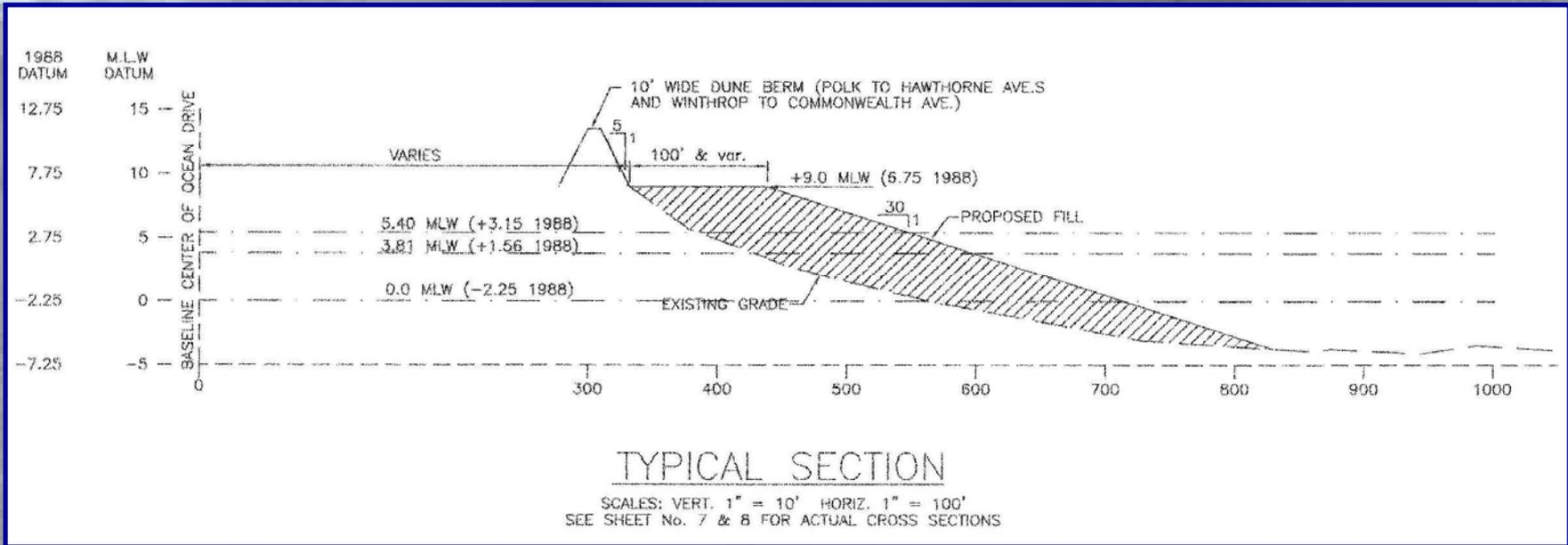
Strathmere Beach Nourishment Borrow Area - Corson's Inlet



Concept View



Strathmere Beach Nourishment Design



- Beach berm at a Fixed elevation of +6.75 feet NAVD88
- Berm width varies with location
- Pumped to a offshore slope of 30:1



Strathmere Beach Nourishment

Approximate Schedule



- **Contract: 180 Days**
- **Mobilization: 2nd Week of July**
- **Construction Start: 3rd Week of July**
- **Strathmere Completion: 1st Week of September**
- **Total Project Construction Completion: Jan. - 2010**



Strathmere 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.

Strathmere Beach Nourishment

Proposed Project Costs

- **Total Project Costs: \$20,554,651.40**
- **Strathmere Proposed Costs: \$6,026,820.33**
- **Cost Share:**
 - **State = \$4,791,761.50**
 - **Natural Area - \$1,086,585.00 – 100% State Funded**
 - **Municipality = \$1,235,058.83**
 - **Consolidation costs savings**
 - **\$1,166,725.50 if Stone Harbor Awarded**



Strathmere Beach Nourishment

Environmental Concerns

- **Piping Plover**
 - Favorable Habitat: Williams Ave – Webster Ave
 - Not utilized since 2005
- **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