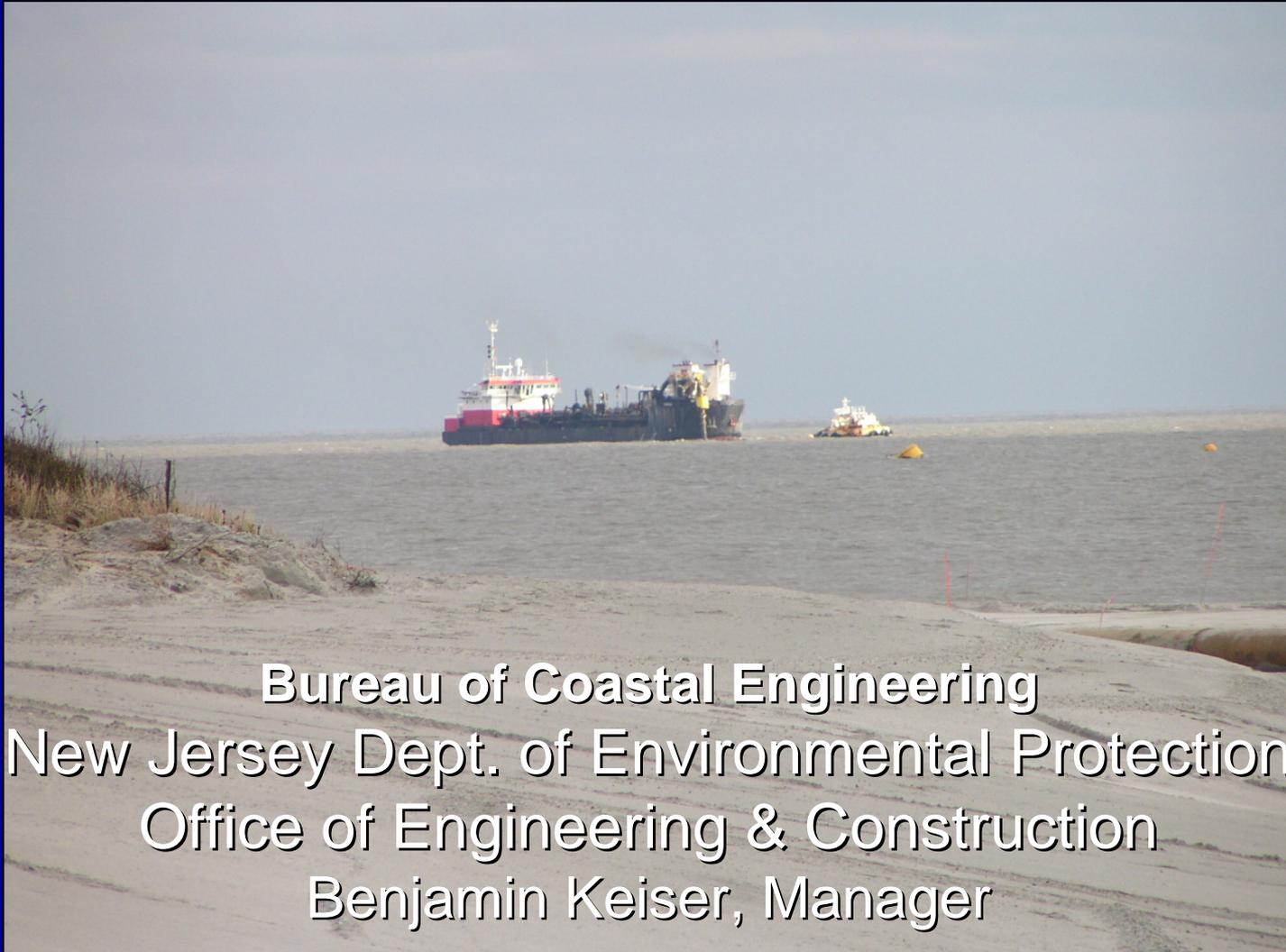




Barnegat Inlet to Little Egg Inlet Long Beach Island – Harvey Cedars Storm Damage Reduction Project



Bureau of Coastal Engineering
New Jersey Dept. of Environmental Protection
Office of Engineering & Construction
Benjamin Keiser, Manager



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

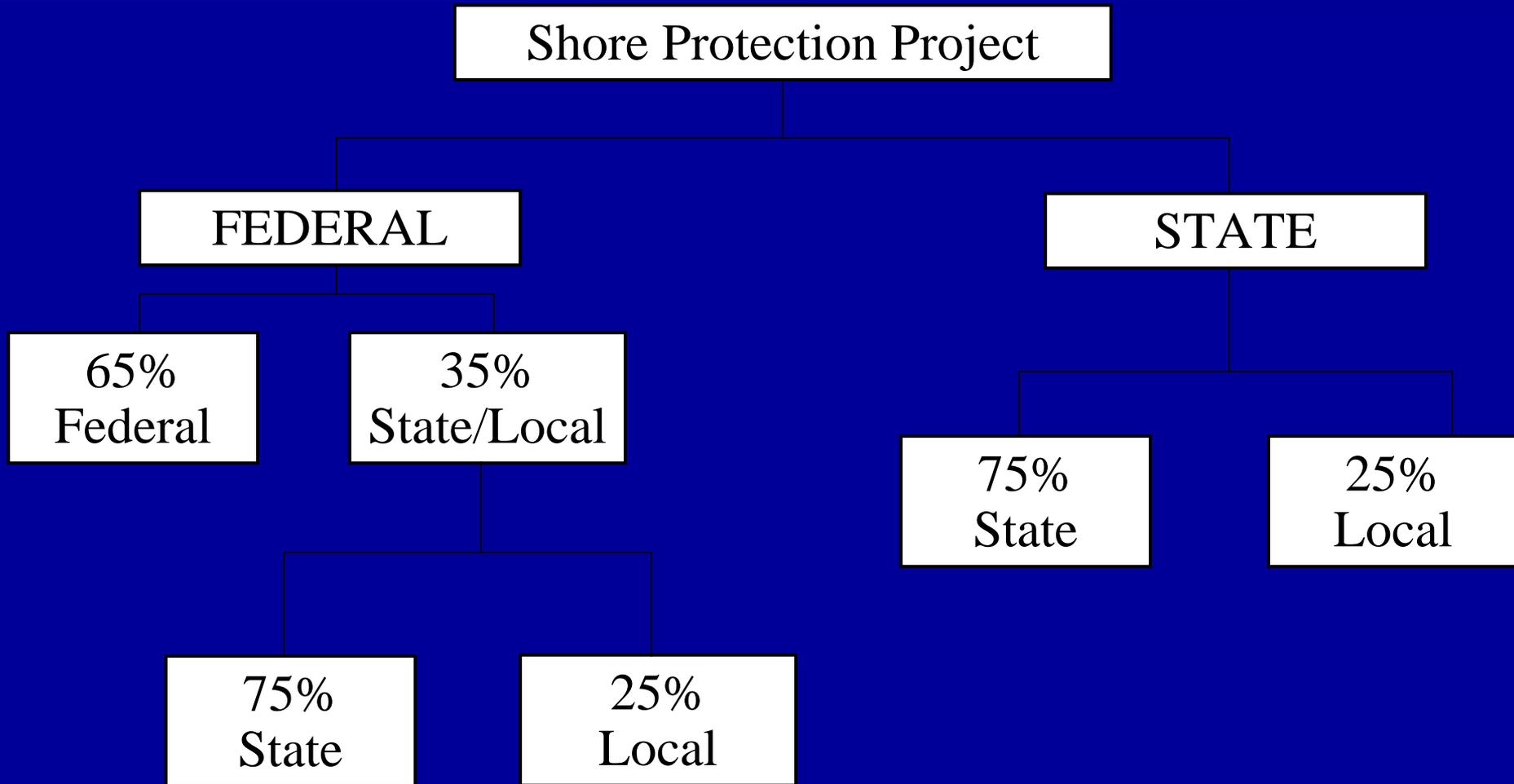
Professional and Technical Services -

- 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





Existing Conditions

October 2009



Bergen Ave.

Mercer Ave.





Barnegat Inlet to Little Egg Inlet

Long Beach Island – Overall Scope





History – 1962

Atlantic Ave.





History – 1962

Atlantic Ave.



History – 1992/93

Atlantic Ave.





History – 2006/08

Atlantic Ave.

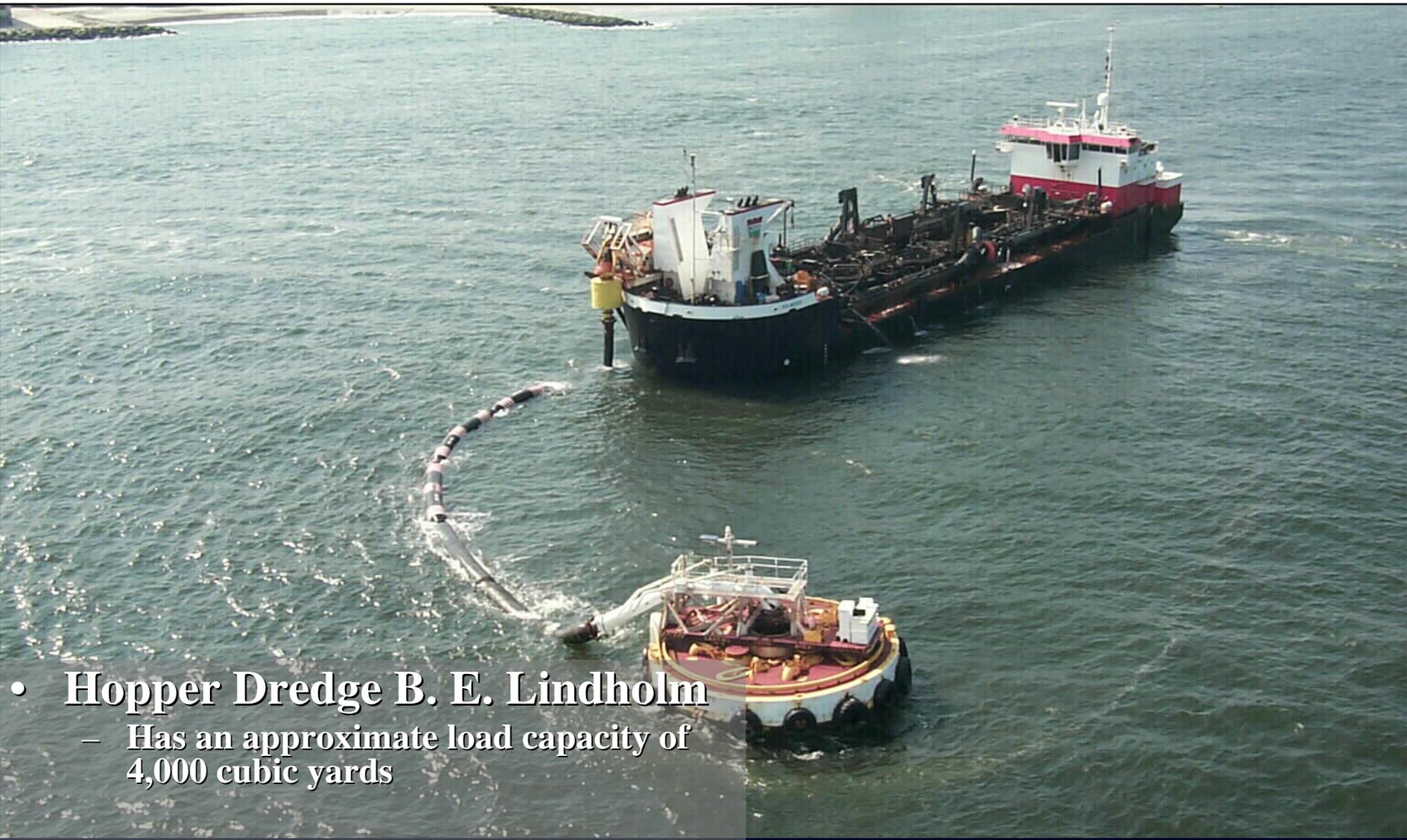




2009 Harvey Cedars Beach Nourishment Facts



- **Bid Opening: August 25, 2009**
- **Award: September 9, 2009**
- **Notice to Proceed: September 23, 2009**
- **Pre-Construction Meeting: October 1, 2009**
- **Surveying/Site Prep: October 15, 2009**
- **Construction: November 2009 – Filling**
- **Timeframe of Sand Pumping – 150 days**
- **Contact Completion Date – March 23, 2009**
- **Award was to Weeks Marine, Inc. in the base bid amount of \$19,307,250**



- **Hopper Dredge B. E. Lindholm**
 - Has an approximate load capacity of 4,000 cubic yards

Schedule



- **Mobilization – October 2009**
- **Begin pumping – November 2009**
- **End pumping - March 2010**
- **Demobilize –March 2010**





Location



- **Base Bid - 86th St. - Bergen Ave.**
 - **Option Fill - Bergen Ave. – Southern Municipal Border**
- **Construction Access Points**
 - **Bergen Ave., Hudson Ave., Middlesex Ave., 83rd St.**
- **Pipeline landing - TBD**
- **Sand Placement – North to south**
- **Offshore borrow area approximately 2 ½ miles east of Harvey Cedars**



Barnegat Inlet to Little Egg Inlet

Long Beach Island –

Harvey Cedars Scope



- **Dune with a top elevation 22 feet NAVD88**
 - **30-foot wide crest, with 5 to 1 slopes to the beach berm and into the existing backdune**
- **125 foot wide berm, at elevation 8 feet NAVD88**
 - **Width Dependant upon the condition of the beach at location**
 - **Post-construction berm – 250-400 foot wide**
- **Approximately 2 million cubic yards of sand**
- **Approximately 9,700 linear feet of beach**
- **Potential to pump nearly 15,000 cubic yards of sand per day**



Financial



- **Total Cost: \$25,000,000.00**
- **Cost Share: 65%/35% – Federal/State**
 - **35% Non-federal total - \$8,750,000.00**
 - **75% State = \$6,562,500.00**
 - **25% Municipality = \$2,187,500.00**
- **Possibility of Awarding More Options**
 - **Dependent upon funding and conditions of existing beach**

What To Expect



- **Dredge Pipeline and Heavy Machinery**
- **Beach Closings: 1,000' min. sections**
 - Public Safety
 - Adequate Staging
- **24/7 Operation**
 - Continuous Inspection
- **Structure Monitoring**
 - Adjacent to Structures



Debris/Munitions Screening



- Intake and discharge screened
- ¾ inch discharge screen openings
- Collects debris and possible munitions
- Continuously inspected



Environmental Concerns



- **Beach Nesting Birds/Sea Beach Amaranth**
 - Current conditions not favorable for habitat within footprint
- **Archaeological Resources**
 - Protective measures adjacent to the Borrow Area footprint
- **Munitions/Debris**
 - Screened at Intake
 - Screened at Discharge

New Jersey Department of Environmental Protection *Shore Protection Program*



www.nj.gov/dep/shoreprotection