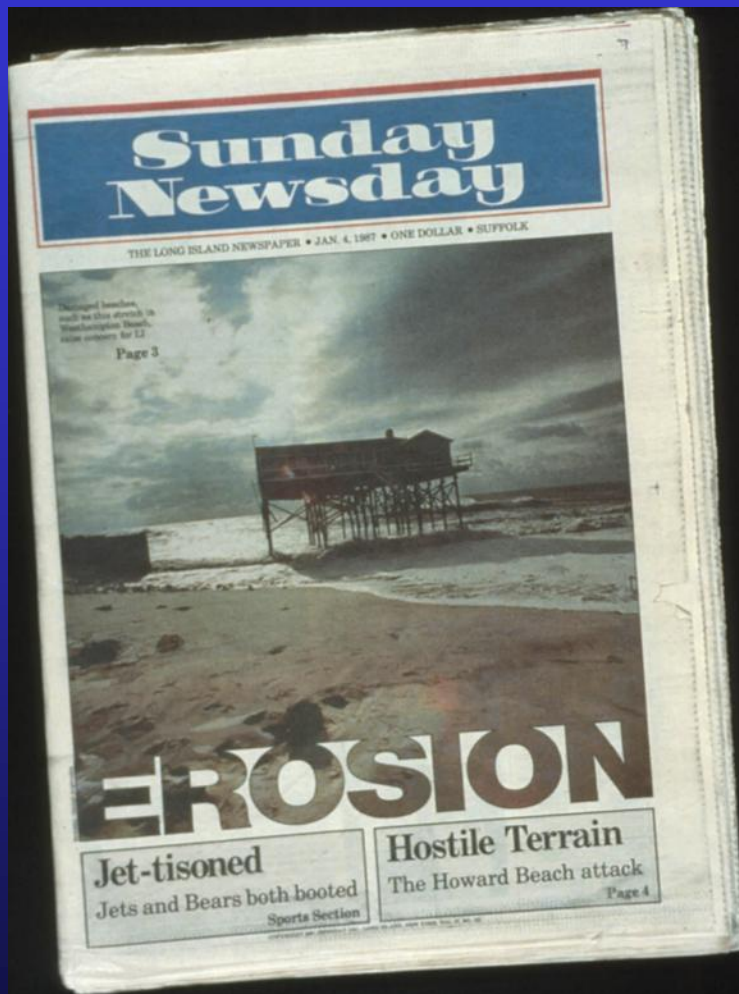


Living Shorelines for Coastal Erosion Protection in a Changing World

Jay Tanski
New York Sea Grant
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New York Sea Grant Workshop
May 15, 2013
Hauppauge, New York





Source: Newsday



Shore Armoring







Potential Impacts Of Shore Armoring

- Loss of Intertidal Habitat/Wetlands
- Segmentation Of Habitat
- Change of Substrate
- Increased Nearshore Water Depth
- Reduced Littoral Access

Protection Options for Upland Property and Structures

Management Techniques

**Coastal Setbacks
Relocation/Retreat**

**Construction/
Zoning Codes**

**Flood Insurance
Regulations**

Non-Structural Techniques

Beach Building

Vegetation

Dune Building

Structural Techniques

Armoring
(Bulkheads, Dikes
Revetments, Seawalls)

Breakwaters

Groins



Image © 2010 New York GIS
© 2010 Google

©2005 Google

Imagery Date: Feb 28, 2007

40°39'06.91" N 73°27'36.27" W elev 1 ft

Eye alt 4156 ft

Protection Options for Upland Property and Structures

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Living Shorelines

Soft Shorelines



Sustainable Shorelines

Green Shores



Soft Engineering



Hybrid Shoreline



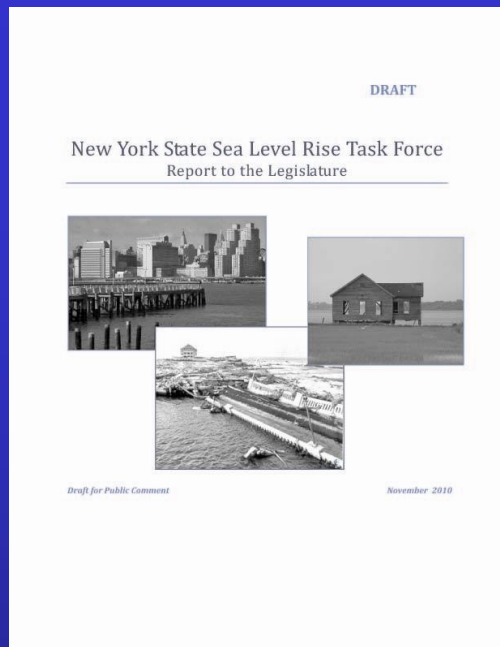
What is a Living Shoreline?

A shoreline management practice that provides erosion control benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural organic materials.

From: NOAA Coastal Glossary

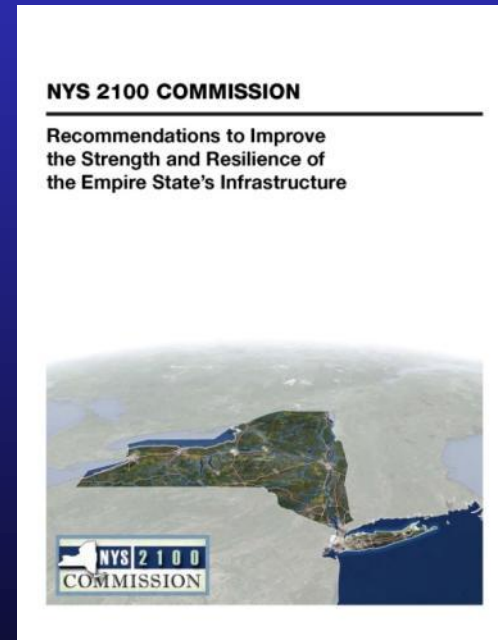
Living Shoreline Treatments address erosion in lower energy situations by providing long-term protection, restoration or enhancement of vegetated shoreline habitats through strategic placement of plants, stone, sand fill and other structural or organic materials. Living Shoreline Treatments do not include structures that sever the natural processes & connections between uplands and aquatic areas.

From: VIMS CCRM Living Shorelines



“feasible soft-engineering techniques [living shorelines] should be evaluated in comparison with other structural and adaptation options to identify the combination of measures that will provide adequate safety for human uses and optimal environmental quality.”

“Develop a comprehensive package of soft infrastructure investments to protect New York Harbor communities, including building living shorelines, new wetlands, oyster reefs, and small island archipelagos in shallow offshore areas and flood zones, where appropriate”.



*Innovative Uses
of Breakwaters in
Coastal Erosion
Control:*

**Integrating Shoreline
Protection and
Estuarine Habitat
Enhancement**

A ONE DAY CONFERENCE

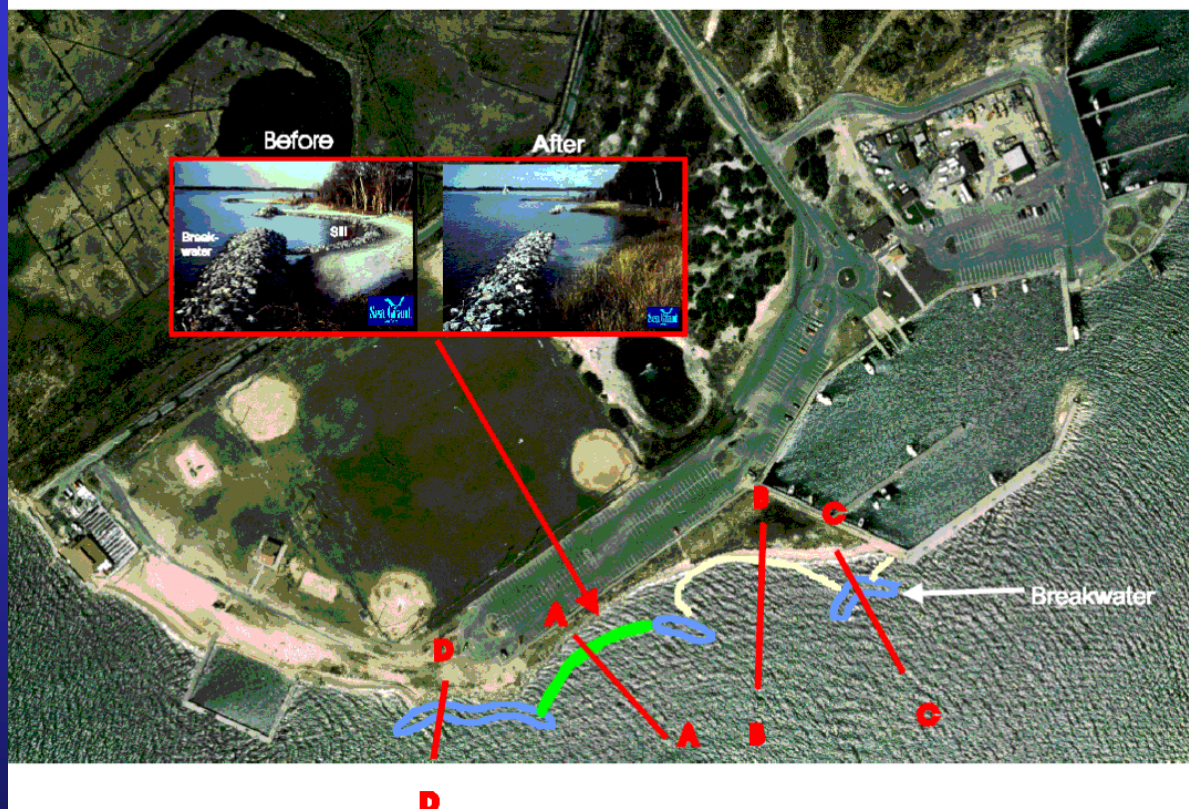
**RONKONKOMA HOLIDAY INN
LONG ISLAND, NEW YORK**

Presented by
**New York
Sea Grant**

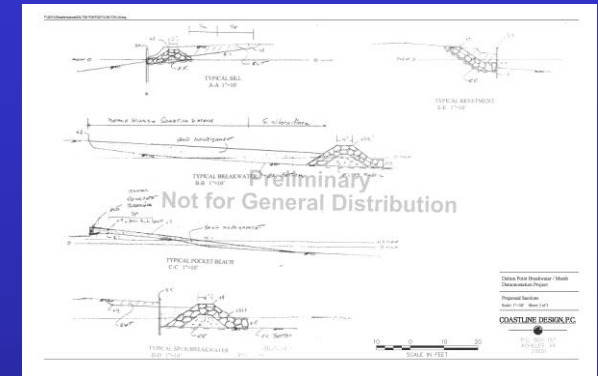
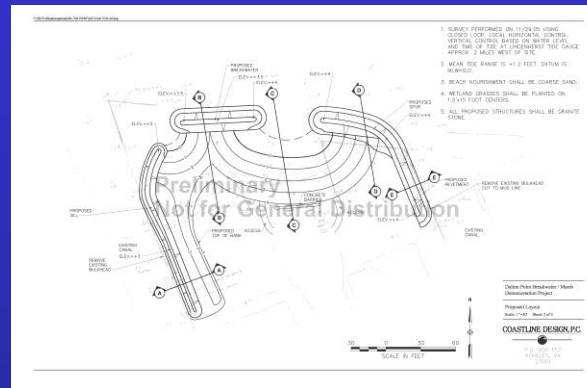
With funding from the:
**South Shore
Estuary Reserve Council***



East Islip Marina Conceptual Plan



Dalton Point Marsh/Breakwater Project



Low Sill Bulkhead/Marsh



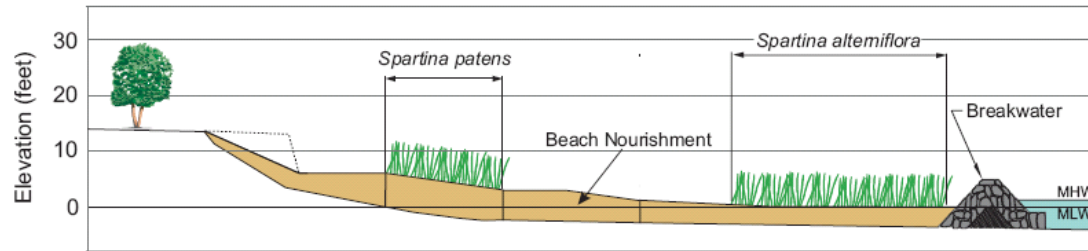


Pre-Sandy

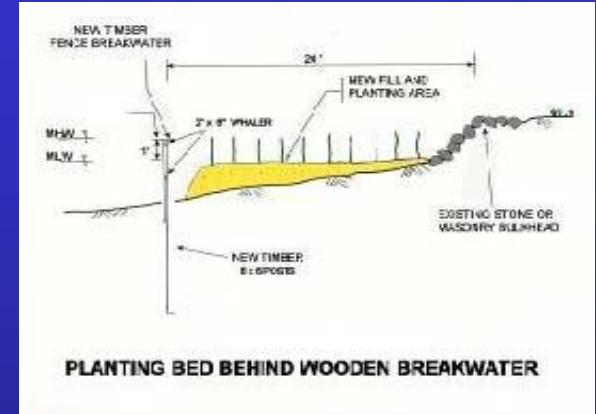


Post Sandy

Virginia



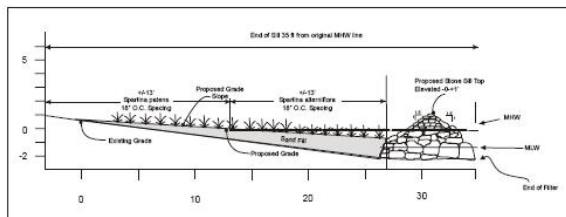
Alabama



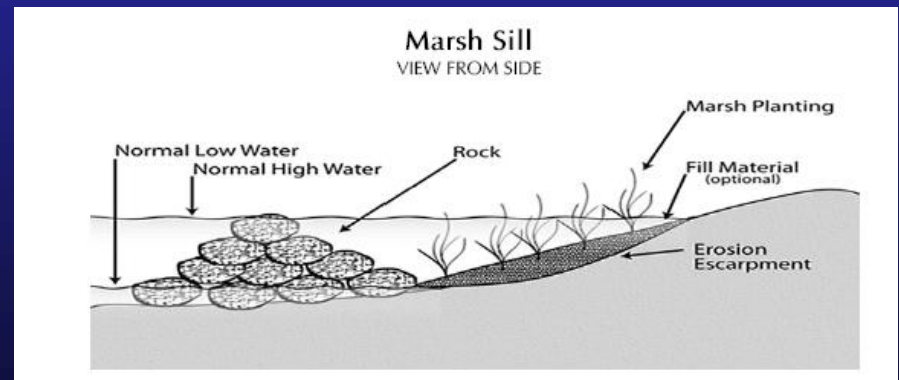
Maryland



Marsh Creation With Sill



North Carolina



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From: NOAA Coastal Glossary

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From: VIMS CCRM Living Shorelines

Organizing Committee

- **USFWLS**
Steve Papa
- **USDA NRCS**
Chris Miller
- **NYS DEC**
Dawn McReynolds
Andrew Walker
Eric Starr
- **NYS DOS**
Terra Sturn
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COPRI Living Shorelines Database

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Project Locations



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