Restoring the Shore: Implementing a Living Shoreline in New Jersey

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...promotes the study and conservation of marine life and habitat, protects the coast from harm, and empowers others to do the same.

• Advocacy
• Conservation
• Restoration
• Education
• Fish tagging
Superstorm (Hurricane) Sandy

• Post Tropical Cyclone - Landfall in NJ on October 29, 2012
• Hurricane force winds, heavy rainfall, and record storm surge
  • Damages in excess of $37 billion

• The public and government officials recognized the need for improved coastal resiliency in the state.
NJ Resilient Coastlines Initiative

• Funded through a NOAA Coastal Resiliency Grant awarded to The Nature Conservancy.

• The NJ Resilient Coastlines Initiative was a coalition of non-profit organizations, academic institutions, and the NJ Department of Environmental Protection that had the goal of identifying coastal restoration and enhancement projects statewide.
  • Measures and Monitoring Framework
  • Restoration Explorer (RE) Tool
    • [http://maps.coastalresilience.org/newjersey/](http://maps.coastalresilience.org/newjersey/)
  • Community outreach and project identification
Measures and Monitoring Framework

• Guide for developing a monitoring plan for a coastal wetland restoration or living shoreline project
  • User selects monitoring metrics based on project design and project goals
  • Framework recommends data collection methods that take into account user expertise and budget

• Encourages the use of standardized metrics, common data collection methods, and sharing of data and lessons learned from projects

• https://coast.noaa.gov/digitalcoast/training/monitoring-framework.html
RE Explorer

- Combines data on environmental conditions at coastal sites with the engineering requirements for different types of living shorelines to identify applicable living shoreline techniques at different areas.

7 parameters:
1. Tidal Range
2. Shoreline Change
3. Ice Cover
4. Wave Height
5. Shoreline Slope
6. Nearshore Slope
7. Salinity
RE Explorer
Community Outreach

• Contacted 27 municipalities within Monmouth County
  • Meetings with 10
• Lunch n’ Learn
  • Forum to discuss topics with public
Community Outreach – What Did We Learn?

• Municipalities varied in their understanding of living shorelines and nature based solutions

• Almost every municipality was open to living shorelines, but many lacked resources, and almost all lacked funding for a project

• Some municipalities expressed feelings of abandonment
Fair Haven

- DeNormandie Ave - 0.56 acre property located along the Navesink River in Fair Haven, NJ
- Beach and coastal bluff are eroding (episodic)
Fair Haven

• Worked with Stevens Institute of Technology to develop conceptual Design

• Restore beach – 30,000 cubic feet of sand
• Create small dune system riverward of bluff
• Regrade and plant bluff

• Current status: Municipality has submitted grant application to fund project construction as well as other open space acquisition in the borough.
More Lessons Learned

Importance of Partnerships
• Data and knowledge sharing
• Technical support
• Cost-sharing

Importance of Early Outreach and Education
• Multiple meetings and site visits with municipal representatives
• Early state/regulatory contact
  • Site visit
  • Pre-application meeting
Wreck Pond

• 73-acre coastal pond located on the boarder of Spring Lake and Sea Girt, NJ
• History of environmental issues: poor water quality, loss of species abundance, and flooding
Restoring Wreck Pond

• The main project:
  - Construction and installation of a 5.5’ x 8’ x 600’ concrete box culvert

• Project Funding:

  - US Fish and Wildlife Service - $1.7M
    Secondary Box Culvert/Fish Passage/Monitoring

  - HUD/DCA Flood Resiliency - $3.85M
    Dredging/Culvert/6,000 LF Living Shoreline/Monitoring

  - Borough of Spring Lake - $915K
    Funding support for entire project

  - NJ DEP CBT - $608K
    Funding support for entire project
    + $130K Living Shoreline Pilot Project
Wreck Pond – Living Shorelines
Issues

• Residents don’t want living shoreline –
  • Loss of view, attract too many people, mosquitos, mice and rats, fox attacks

• Municipality (grantee) hesitant in pursuing project

• Project may be getting pared down to flood control berm with minimal planting
Even More Lessons Learned

Lack of education and outreach to all stakeholders resulted in a lack of buy-in

How do we fix this?
• Engage all stakeholders
  • Lunch n’ Learn or other outreach events
  • Monthly public meetings
  • Facebook/Social Media/Blog
  • Personal meetings
• Comprehensive messaging
• Community Involvement
  • School lessons
  • Field trips
  • Volunteer events
Thank You

For More Info
www.LittoralSociety.org

Other Project Websites
www.RestoreNJBayshore.org
www.WreckPond.org

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Interested in learning more about us?
Check out our “Hidden Coast” series
Wednesday 1:30-3:00 Newberry Room (3rd floor)
Or stop by Booth #700