Increasing Resilience and Reducing Risk through Successful Application of Nature Based Coastal Infrastructure in New England

Eric Roberts Coastal Resilience Specialist The Nature Conservancy



Continued collaboration across New England

Building the case Shaping policy & regulations Promoting wide-spread implementation

Nature-based projects in the coastal zone



- 1. Maintain or restore natural land-water interface to promote continuation of dynamic coastal processes & functions
- 2. Use vegetation, sediment, shellfish & biodegradable materials
- Provide coastal resilience/hazard reduction benefits such as shoreline stabilization & flood reduction
- 4. Create co-benefits such as habitat, recreation space, carbon sequestration, improved water quality, etc.

Beach nourishment (Barnstable Long Beach, MA)



Dune restoration (Duxbury Beach, MA)



Coastal bank stabilization (Orleans, MA)



Salt marsh enhancement (Chatham, MA)



"Living" breakwater (Stratford, CT)

THE REAGENER BARB SALEMAN COLORADOR Photo: Sacred Heart University

Expected regional products (2022)



- Demonstration projects across New England
- Regional, standardized monitoring metrics
- Technical & policy guidance
- Outreach, education, capacity building

Demonstration projects/monitoring sites

Marsh creation/enhancement with toe protection Dune restoration/nourishment

- North Mill Pond, Portsmouth, NH •
- South Mill Pond, Portsmouth, NH
- Cutts Cove, Portsmouth, NH •
- Wagon Hill Farm, Durham, NH •
- Collins Cove, Salem, MA
- Wharton Point, Brunswick, ME
- Maguoit Conservation Lands, Brunswick, ME •

- Duxbury Beach, Duxbury, MA (sand dune nourishment)
- Long Beach, Plymouth, MA (cobble dune nourishment)
- Breakwater Beach, Brewster, MA (sand dune nourishment)

Coastal bank - natural

Lanes Island, Yarmouth, ME

Multi-approach projects

- Stratford Point, Stratford, CT -- living breakwater, marsh & dune restoration
- Rose Larisa Park, East Providence, RI -- intertidal sill, coastal bank with engineered core & marsh creation ٠
- Gray's Beach, Kingston, MA -- marsh creation/enhancement with toe protection & dune nourishment ٠
- Coughlin Park, Winthrop MA -- coastal bank protection & cobble nourishment •

Wharton Point, Brunswick, ME Maquoit, Bay Conservation Lands, Brunswick, ME Lanes Island, Yarmouth, ME

New York

Wagon Hill Farm, Durham, NH North Mill Pond, Portsmouth, NH, Cutts Cove, Portsmouth, NH

South Mill Pond, Portsmouth, NH

Collins Cove, Salem, MA Massachusett, Coughlin Park, Winthrop, MA

Duxbury Beach, Duxbury, MA Gray's Beach, Kingston, MA

Long Beach, Plymouth, MA

Rose Larisa Park, Providence, RI Rhode Island

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Marsh Creation/Enhancement with Toe Protection Dune Restoration/Nourishment Coastal Bank - Natural Multi-Approach Projects

Stratford Point, Stratford, CT-

Connecticut

42°28'47.54" N 70°58'16.08" W elev 51 ft eye alt 330.31 mi 🔘

Google Earth

Wharton Point Brunswick, ME



Rose Larisa Park East Providence, RI



Collins Cove Salem, MA



Examples of monitoring categories, indicators & metrics for marsh creation/enhancement with toe protection



New England partners





Protecting nature. Preserving life."











New Hampshire Coastal Program



University of New Hampshire

School of Marine Science and Ocean Engineering

NROC

Northeast Regional Ocean Counci







Casco Bay Estnary PARTNERSHIP

...and others in each state