

# 2021 Living Shoreline Accomplishments

## by the North Carolina Living Shoreline Steering Committee

*The North Carolina Living Shoreline Steering Committee brings together federal and state agencies, non-governmental organizations and universities to communicate and collaborate on education and outreach, research, and implementation of living shorelines.*

*Living shorelines are a suite of options for shoreline erosion control that maintain connections between upland, intertidal, and aquatic areas essential for water quality, ecosystem services, and habitat values.*

## IMPLEMENTATION

A total of **5,091 feet (0.96 miles)** of living shorelines were constructed at 30 different sites using granite rocks, 40,101 recycled oyster shell and marl bags, 1,526 QuickReef™ units, 50 ft. of Biomason units, and oyster castles.

At 20 sites, **137,692 plugs of salt marsh grasses** were planted.



## EDUCATION & OUTREACH

Committee partners adapted Florida's marine contractor living shoreline training for North Carolina marine construction professionals.

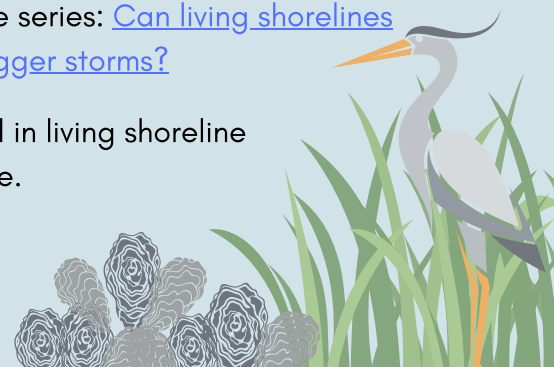
- Thirty-two professionals attended the pilot training, which was offered in three virtual sessions and an in-person field session at Morris Landing Clean Water Preserve.
- The [training](#) information and [manual](#) are available online.

Two virtual real estate agent workshops were held in September for 161 participants.

- The goal of the training was to bring awareness to living shoreline concepts for real estate agents to pass down to clients buying property on estuarine shorelines.

Restoration Systems LLC. and the North Coastal Federation were featured in a PBS, The Science of New State of Change series: [Can living shorelines protect the coast from sea level rise and bigger storms?](#)

Student and volunteer groups were involved in living shoreline plantings and construction events coastwide.



# RESEARCH

Carteret County initiated the Building Adaptive Shorelines for Resilient Coastal Communities project to restore and enhance over 1,500 linear feet of shoreline along the east end of Carrot Island.

New substrates from Biomason Inc. and Restoration Systems' Quickreef were installed in two living shorelines in Bogue Sound, with more sites planned in 2022.

- Multiple research labs are monitoring the performance of alternative substrates post-installation.



- A [study from East Carolina University](#) found that a new biodegradable material was better able to recruit oysters and provided greater protection for salt marshes threatened by high erosion as compared to the more traditional material.
- A [study from UNCW](#) found that living shorelines of varying designs and substrates reduce erosion of fringing marsh edge across a range of fetches and bottom conditions during storm events and over longer timescales.
- Dr. Rachel Gittman (ECU) with colleagues, [led a study investigating](#) how waterfront property owners perceive and select coastal protection approaches in North Carolina.
  - Results suggested that encouraging waterfront-property owners with living shorelines to recommend them to neighbors may increase the adoption of living shorelines.

Partners advocated for and secured language in the 2021 Coastal Habitat Protection Plan update to work for the protection of oyster sills from harvest.

## N.C. LIVING SHORELINE STEERING COMMITTEE

