

# Living Shoreline Steering Committee

## 2018 - 2020 Major Accomplishments of Committee Partners

**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 necessary for maintaining water quality, ecosystem services, and habitat values.**



## 2020 MAJOR ACCOMPLISHMENTS

Partners constructed a total of 6,384 linear feet (~ 1.2 miles) of living shoreline.

The North Carolina Coastal Reserve produced Albemarle Pamlico National Estuarine Partnership's and Division of Environmental Quality's series of technical virtual workshops in August.

- One workshop focused on restoration and living shorelines, and aimed to get input on priorities for advancing living shorelines and other strategies to protect and restore wetlands.
- Input from the workshop was used to develop recommended actions in the 2021 Coastal Habitat Protection Plan.



The North Carolina Coastal Reserve, North Carolina Coastal Federation and North Carolina Sea Grant started adapting the Florida two-day living shoreline training course and manual for marine contractors, environmental consultants, engineers and regulatory staff.

The North Carolina Coastal federation participated on a panel on the Environmental and Energy Study Institute's Congressional briefing on "Coastal Resilience in the Southeast: Science, Policies, and Programs Furthering Local Resilience Goals." Dr. Lexia Weaver presented on "Implementing Living Shorelines through Community Engagement, Partnerships, Science, Policies and Funding".



Researchers from Duke and East Carolina Universities compiled a database of 46 peer-reviewed papers on living shorelines. Findings include:

- 91% of living shorelines incorporated structural materials like oyster shell and rock.
- This study suggests that living shorelines research is on the rise, but there is a need for more long-term data, socio-economic research.



NOAA scientists continue to study sea-level rise response of natural marshes and living shorelines. Findings include:

- Significant loss of vegetation and erosion along natural shorelines
- Greater surface accretion rates and reduced erosion at sites with living shorelines (stone sills).
- Vegetation at all sites is resilient to hurricanes.

## 2020 MAJOR ACCOMPLISHMENTS (continued)

Researchers from East Carolina University, UNC-Wilmington, UNC-Institute of Marine Sciences, and Duke secured funds from the National Oceanic and Atmospheric Administration, National Science Foundation, U.S. Army Corps of Engineers, and North Carolina Sea Grant and are working collaboratively to study the effects of wave energy from hurricanes, ambient wind waves, and boat wakes on different living shoreline designs.

- Findings include that living shorelines perform well by providing erosion protection during major storm events (e.g., Category 1 Hurricanes).
- Research is ongoing to determine the impacts of wind waves and boat wakes on the shoreline protection capabilities of living shorelines.

## 2019 MAJOR ACCOMPLISHMENTS

The Education and Outreach, Research, and Implementation/Incentives subcommittees worked all year to showcase benefits of living shorelines and increase their use.

The North Carolina Coastal Federation in partnership with Restoration Systems installed 2,379 feet of living shorelines, and planted a total of 21,987 plugs of salt marsh grasses coastwide.

The North Carolina Coastal Federation was the local host of Restore America's Estuaries' (RAE) Third National Living Shorelines Tech Transfer Workshop that was held in October 2019.

- The workshop was attended by approximately 250 professionals from the U.S. and Canada.
- Committee members played a major role in the development of the workshop agenda and coordinated and led field trips for all attendees.



The Wilmington District of the U.S. Army Corps of Engineers issued the new Regional General Permit for living shorelines in March. The Coastal Resources Commission adopted a General Permit for marsh sills in July.

- The new permits do not require coordination with state and federal agencies as long as permit conditions are met, creating a streamlined general permit process that is consistent with other CAMA general permits.

## 2018 MAJOR ACCOMPLISHMENTS

The Living Shoreline Steering Committee formed in the summer of 2018.

The North Carolina Coastal Federation, in partnership with Restoration Systems, installed 3,098 feet of living shoreline, and planted 16,310 plugs of salt marsh grasses along these and other previously constructed living shorelines. (0.59 miles)

The Nature Conservancy and scientists from National Oceanic Atmospheric Administration's Beaufort Lab developed a Living Shoreline Explorer application (app) for Carteret and Onslow Counties.

- This app assists users with determining where it is suitable to use a living shoreline.
- <https://maps.coastalresilience.org/northcarolina/> [[maps.coastalresilience.org](https://maps.coastalresilience.org)]

The Nature Conservancy's Restoration Explorer app [[coastalresilience.org](https://maps.coastalresilience.org)] was created to help users identify sites for stabilizing shorelines with oyster reefs within Pamlico Sound.

## COMMITTEE PARTNERS

