

# Restoring North Carolina's Coast

NC COASTAL FEDERATION RESTORATION & PROTECTION PROJECT

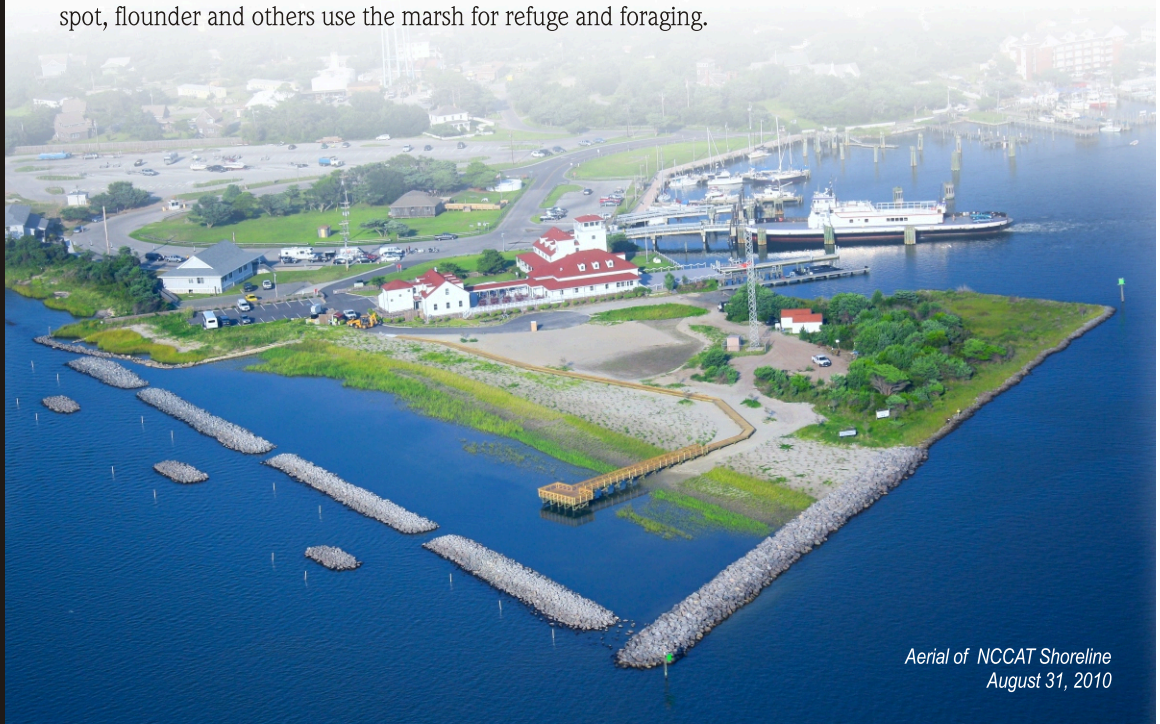
## THE NORTH CAROLINA CENTER FOR THE ADVANCEMENT OF TEACHING



With one campus in Cullowhee and another on Ocracoke Island, the North Carolina Center for the Advancement of Teaching (NCCAT) supports teaching as an art and a profession, from the mountains to the sea, by offering week-long seminars on a variety of topics throughout the year. NCCAT's Ocracoke campus is situated prominently on the shoreline of Pamlico Sound, the second largest estuary in the United States. Once a base for the U.S. Coast Guard, this renovated Ocracoke campus is listed in the National Register of Historic Places.

### Saving a Special Place

NCCAT's shoreline is close to Silver Lake, Ocracoke's harbor, in an area of rapid erosion from large waves and boat wakes. NCCAT partnered with the North Carolina Coastal Federation (NCCF) to stabilize the property with a living shoreline, an innovative design that combines various stabilization methods to control erosion. Living shoreline projects incorporate bio-engineering techniques to avoid a "hardened" shoreline, or bulkhead, which can increase erosion by reflecting wave energy rather than absorbing it. The coastal marsh created in a living shoreline project serves as critical habitat for many recreationally and commercially important finfish, mollusks and crustaceans. Juvenile blue crab, shrimp, croaker, spot, flounder and others use the marsh for refuge and foraging.



*Aerial of NCCAT Shoreline  
August 31, 2010*



## The Project

An offshore sill was constructed of granite along 725 feet of the campus' shoreline. Sand fill was brought in to raise the slope to appropriate elevations for marsh grass plantings. Then volunteers created over an acre of salt marsh by planting three marsh grass species: *Spartina alterniflora*, *Spartina patens* and *Juncus roemarianus*. In addition, upland vegetation was planted to minimize the amount of sand blowing on to the newly created marsh. A boardwalk was constructed through the site to allow for public access and educational opportunities.

## The Seminar: Planet Wetlands

NCCAT conducts five-day interdisciplinary, content specific seminars for the state's veteran public school teachers. NCCF's program focuses on involving students and adults in habitat restoration, such as living shoreline projects. Educational activities are designed to enable participants to take an active role in the stewardship of our coastal habitats. With so many goals in common, the two organizations formed a fruitful partnership.

In April 2010 Federation staff led a seminar called "Planet Wetlands" on the importance of estuaries to the coastal ecosystem. The 20 teachers participated in activities and lessons they'll be able to incorporate into their own classrooms and also contributed 150 hours of volunteer time by planting the native vegetation for the living shoreline. NCCF and NCCAT will partner on future seminars using the living shoreline as an outdoor classroom.

This project also included outreach to the community, and the Ocracoke School participated in classroom lessons through NCCF's Student Wetland Nursery Program. Every one of the 135 students at Ocracoke's School, from pre-K through grade 12, helped plant marsh grasses at the restoration site. Ocracoke residents were also encouraged to join the restoration efforts. During the week of the seminar over 250 volunteers contributed to this project, totaling over 1,000 hours. Grant funding for this project was provided by the National Oceanic and Atmospheric Administration's partnership with Restore America's Estuaries, Dominion Power and the Carlson Family Foundation.



North Carolina Coastal Federation | 3609 Hwy 24 (Ocean) | Newport, NC 28570  
252.393.8185 | Fax: 252.393.7508 | [nccf@nccoast.org](mailto:nccf@nccoast.org) | [www.nccoast.org](http://www.nccoast.org)

**"Citizens Working Together for A Healthy Coast"**

The North Carolina Coastal Federation (NCCF) is the state's only non-profit organization focused exclusively on protecting and restoring the coast of North Carolina through education, advocacy and habitat restoration and preservation. For more information call 252.393.8185 or check out NCCF's website at [www.nccoast.org](http://www.nccoast.org).