NC COASTAL FEDERATION RESTORATION PROJECT:

# ERET COMMUNITY COLLEGE

Carteret Community College (CCC), founded in 1963, is one of 59 institutions comprising the N.C. Community College System. Located in Morehead City, the college lies on the shores of Bogue Sound, which is currently classified as Outstanding Resource Waters and High Quality Waters by the N.C. Division of Water Quality.

## **The Threat**

During 1985-1994, Bogue Sound was second only to Core Sound in harvest of bay scallops. Bogue Sound also provides important habitat for many other commercially and recreationally valuable fisheries, including oysters, blue crabs, shrimp, flounder, sheepshead, spot and croaker, as well as a myriad of species that support the estuarine food chain, such as mud snails, worms, and amphipods. Although Bogue Sound is classified as high quality waters and provides important habitat, the waters and habitat have suffered declines from stormwater runoff from nearby roads and parking areas. Stormwater runoff carries bacteria, chemicals, and other trash into adjacent

creeks, rivers, and sounds. This polluted runoff can create health risks for those who eat shellfish and other fish from affected waters and also for those who swim, boat or fish in those waters.

# The Plan

RESTORATION

**PROJECT** 

Since 2004, the North Carolina Coastal Federation has worked with numerous partners, including Carteret Community College (CCC), the North Carolina Clean Water Management Trust Fund (CWMTF), the National Oceanic and Atmospheric Administration (NOAA), the National Fish and Wildlife Foundation (NFWF), and Restore America's Estuaries (RAE), to complete the habitat restoration and shoreline demonstration project along Bogue Sound, adjacent to the campus of CCC and North Carolina State University's Center for Marine Science and Technology (CMAST). The comprehensive project includes:

- The restoration of wetland and intertidal habitat along  $\sim 1,000$  linear feet of shoreline;
- Construction of offshore gapped breakwaters and stone sills for erosion control;
- Planting of submerged aquatic vegetation;











- Construction of a created wetland to help treat stormwater runoff from adjacent parking areas and roads; and
- The placement of concrete oyster reef domes and oyster cultch bags as experimental sills.

In addition to providing a demonstration of various alternative erosion control methods, the project serves as a living laboratory for experiments conducted by researchers from CCC, Duke University, UNC-Chapel Hill, N.C. State University, and NOAA.



### **The Benefits**

By pre-treating stormwater runoff from the adjacent campus and roads, the restoration project helps to decrease pollution entering Bogue Sound. Improved water quality provides benefits for human health and protects numerous species of aquatic and estuarine plants and animals. The project also stabilizes and restores an eroding shoreline, providing wetland nursery areas in coastal marsh and intertidal sandy beaches. Education is also an important goal of this project. By learning about environmentally sound methods to help control erosion, restore lost or degraded habitat, and treat polluted stormwater runoff, students and citizens become better stewards of this fragile coastal environment.



#### **Volunteer Involvement**

Thanks to over 200 students from area schools, members of community organizations, and concerned citizens, the project at Carteret Community College is considered to be a success. Volunteer involvement is still encouraged for site clean-up events, oyster restoration activities, shoreline and BMP planting, and site monitoring. For information on how you can help, contact NCCF at 252-393-8185.



#### **PHOTO LEGEND**

- 1. Boys & Girls Club members plant trees in the stormwater wetland area.
- 2. Volunteers lay shell bags to create an oyster sill.
- **3.** 4-H Club members plant salt meadow hay.
- **4.** Volunteers organize plants by species before planting.
- 5. Concrete domes provide a perfect substract for oyster larvae to attach.
- **6.** Staff go over plans before beginning construction.
- **7.** High school volunteers create oyster shell bags for the sill.
- 8. A CCC student helps monitor the site for plant growth and percent cover.



# "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 preservation and restoration. There are many exciting opportunities to get involved in restoration projects and help preserve our coastal environment. If you would like to support our efforts, please consider becoming a NCCF member. You also can learn about volunteer opportunities and other programs by checking out NCCF's website at <a href="https://www.nccoast.org">www.nccoast.org</a>, calling 252-393-8185, or coming by NCCF headquarters at 3609 Hwy 24 in Ocean, located between Morehead City and Swansboro.



