

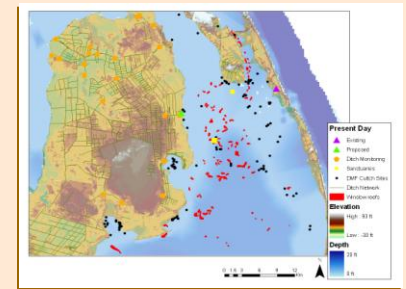
## North Carolina



### Shoreline Oyster Reef Restoration

The Nature Conservancy's Global Climate Change Team and The North Carolina Chapter initiated a long-term project on the Albemarle-Pamlico Peninsula to increase the resilience of natural systems to stresses caused by climate change, particularly sea-level rise. By restoring natural systems on and around the peninsula and reducing anthropogenic threats, we hope to give those systems time to adapt to a future much different than today.

**Constructing oyster reefs** along shorelines is one restoration strategy. We will use limestone marl to build a series of relatively high-relief artificial reefs in shallow waters along the shoreline of the Albemarle-Pamlico Peninsula. We do not intend to create "soft armoring" for the shoreline, rather our intent is to build reefs behind which a small, shallow lagoon-like area will form. Our theory is that the presence of many intact reefs shortens the fetch across which wave energy could build and reduces the amount of energy reaching the shoreline. Under such conditions, the water is less turbulent and clearer, allowing for growth of submerged aquatic vegetation and sediment accretion. Thus, the shore zone is more adept to recover from storm events and less prone to intense erosion.



#### Fast Facts

- Oysters reefs parallel coral reefs in the abundance of life they support.
- Reefs provide refuge and nursery habitat for a wide range of other species, including adult and juvenile fishes.
- Oyster are filter feeders; they control nuisance algal blooms and remove excess nitrogen from the water column.

### Benefits from shoreline oyster reef construction:

- Baffled wave energy and provision of sheltered waters along the shoreline in which new shallow-water habitats can form.
- Increased resilience of shallow-water and shoreline communities to sea-level rise.
- Provision of a reef/shallow-water/shoreline habitat complex for native oysters, as well as many species of adult and juvenile fish, shrimp, crabs and benthic organisms.
- Reduction in the rate of erosion and possibly increased accretion of sediments.



### **Working Together**

With Partners:

- United States Fish and Wildlife Services
- North Carolina Division of Marine Fisheries



*The mission of The Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.*

### **for more information**

Aaron McCall  
Northeast Regional Steward  
The Nature Conservancy,  
North Carolina Chapter  
(252) 441-2525 ext 27  
ajmccall@tnc.org



# NOAA

The National Partnership between the NOAA Community-based Restoration Program and The Nature Conservancy implements innovative conservation activities that benefit marine, estuarine and riparian habitats across the United States. The NOAA Restoration Center has worked with community organizations to support locally-driven projects that provide strong on-the-ground habitat restoration components that offer educational and social benefits for people and their communities, as well as long-term ecological benefits.