



NOAA Beaufort Laboratory



The NOAA Beaufort Laboratory, founded in 1899, is the oldest marine research institution in North Carolina and the second oldest federal fisheries research laboratory in the United States. The Lab is recognized nationally and internationally for its renowned scientists and high-quality research. It has been the catalyst for many North Carolina universities moving to Carteret County to conduct research side-by-side with this premier federal facility.

NOAA owns the 11-acre campus on Pivers Island which houses eight real property buildings and a number of ancillary structures that support NOAA's mission needs. The Lab is operated by NOAA's National Centers for Coastal Ocean Science (NCCOS) and provides lab and office space for several NOAA offices ([NCCOS](#), [Southeast Fisheries Science Center](#), [Southeast Regional Office](#), [Office of Protected Resources](#), [Office of Aquaculture](#), and [Office of Science and Technology](#)), and the [North Carolina Reserve and National Estuarine Research Reserve](#).

Scan the QR code to watch the Lab's 125th anniversary video



NOAA's National Centers for Coastal Ocean Science



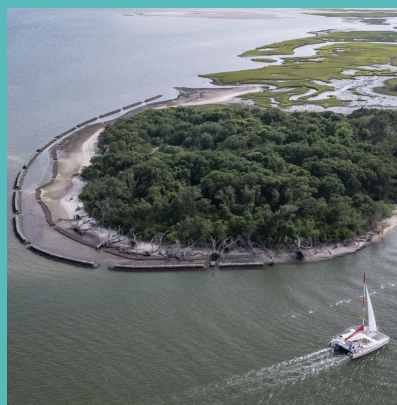
NOAA formed NCCOS in 1999 as a focal point for NOAA's coastal ocean science efforts. NCCOS helps NOAA meet its coastal stewardship and management responsibilities—in North Carolina and nationally—and provides coastal managers with the scientific information necessary to decide how best to protect environmental resources and public health, preserve valued habitats, and improve the way communities interact with coastal ecosystems. Work includes creating a more resilient North Carolina coast, preserving North Carolina National Historic Landmarks, and accelerating applications of uncrewed systems for coastal and shoreline mapping.

NOAA's Southeast Fisheries Science Center

NOAA's Southeast Fisheries Science Center provides independent, objective scientific advice and data needed to effectively manage fisheries and inform conservation of marine resources across the Southeast Region. Scientific pursuits are based in Beaufort and include a focus on the marine resources that reside just off North Carolina's shore. Work includes applied research and monitoring studies of protected species that frequent North Carolina waters, sampling at local fish houses and on fishing vessels for fisheries-dependent data, surveys and life-history studies of the fishery stocks that support the local seafood economy, and development and application of advanced technologies to support these activities.



North Carolina Coastal Reserve and National Estuarine Research Reserve



The North Carolina Coastal Reserve and National Estuarine Research Reserve, a state-NOAA partnership program within North Carolina's Department of Environmental Quality's Division of Coastal Management, protects natural areas for education, research and compatible traditional uses. Since its creation in 1989, the program has preserved more than 44,000 acres of unique coastal environments at 10 sites along the coast, including the Rachel Carson Reserve, located in Carteret County. This Reserve functions as a protective storm barrier for the Town of Beaufort and Pivers Island and is a nature preserve and outdoor laboratory and classroom. The Reserve is a critical component of Carteret County and the Town of Beaufort's ambience and economy, providing and protecting ecological benefits that support health and well-being, water quality, and recreational, commercial, and subsistence fishing.



Example Projects and Programs

NOAA's National Centers for Coastal Ocean Science Local Projects

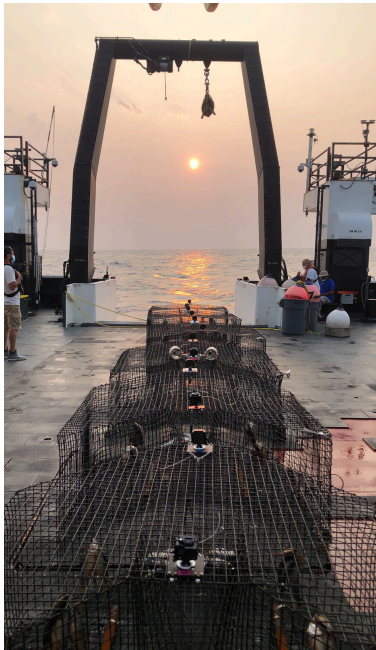
Protecting critical Department of Defense infrastructure | Implemented nature-based approaches to shoreline stabilization at U.S. Marine Corps Base Camp Lejeune to help safeguard the military base from flooding and extreme weather.

Using uncrewed aircraft to monitor oyster reefs | Provides efficient, low-cost access to areas otherwise difficult to access. Informs management decisions for North Carolina's economically and environmentally critical oyster reefs.

Implementing advanced technology to assess offshore habitats | Using uncrewed systems to employ remote sensing coupled with artificial intelligence and machine learning to serve coral restoration, deep sea mining, aquaculture, marine protected area management, and fish habitats off North Carolina's coast.



NOAA's Southeast Fisheries Science Center Local Projects



Informing stock assessments with advanced technology | Processes up to 15,000 ear bones (or otoliths) per year to better understand the age structure and status of important fishery species.

Using cutting edge technology to monitor sea turtles | Boasts world-class expertise in monitoring growth and maturity changes that informs sea turtle population models. Actively testing and integrating Near Infrared Spectroscopy and epigenetic aging—how environmental factors change gene activity—in live sea turtles. Implementing drone-based surveys of near-shore turtles and automated environmental DNA sampling to determine in-water sea turtle presence and distribution during critical periods and life stages.

Implementing latest technologies to detect North Atlantic right whales | Uses passive acoustic monitoring to collect real-time data to detect endangered North Atlantic right whales during the calving season.

Conducting the Southeast Region Headboat Survey since 1972 | Collecting catch and effort data, as well as biological samples from reef fish caught by recreational fishing vessels in the Atlantic to inform U.S. Atlantic stock assessments. This is the longest running saltwater recreational fishing survey in the Southeast Atlantic.

NC Coastal Reserve and National Estuarine Research Reserve Rachel Carson Reserve Programs

Educating thousands of students each year | Tailoring estuarine programs to students' grade's standard course of study. Classes from Carteret, Onslow, and Craven Counties traverse the Rachel Carson Reserve spring, summer, and fall.

Training and engaging hundreds of local real estate agents and agency professionals | Builds and increases knowledge on barrier island development, living shorelines, marine debris, and water management planning.

Providing research opportunities | Local, state, and national researchers and students study estuarine environments to increase the understanding and inform management of North Carolina's coastal habitats and fisheries.

Protecting coastal resources and promoting economic growth | Installed 2,500 linear feet of habitat in 2024 to grow oysters and boost harvestable oyster reefs, attract fish for recreational harvest, intercept waves and sediment to rebuild an eroded shoreline, reduce the need for dredging for navigation, and protect adjacent residential property.

