



North Carolina

National Estuarine Research Reserve



Location: This reserve is composed of four sites located near Corolla (Currituck Banks), Beaufort (Rachel Carson), and Wilmington (Masonboro Island and Zeke's Island).

Date Designated: 1985

Area Protected: 10,568 acres of coastal and estuarine land and water.

Web Address: deq.nc.gov/about/divisions/coastal-management/nc-coastal-reserve-and-national-estuarine-research-reserve

Management: Daily oversight is provided by the North Carolina Department of Environmental Quality's Division of Coastal Management. NOAA's Office for Coastal Management provides funding, national guidance, and technical assistance. These sites are located in the North Carolina Coastal Reserve, which represents a network of 10 protected areas spanning more than 42,200 acres.

Access and Infrastructure

- The reserve is managed from partner facilities located in Kitty Hawk, Beaufort, and Wilmington.
- Trails and boardwalks can be found in some sites.
- Rachel Carson and Masonboro Island Reserves are only accessible by boat. Seasonal, guided field trips are available to these two sites.

The North Carolina National Estuarine Research Reserve protects sites that make up the third largest estuarine system in the nation, with habitats that support about 90 percent of the commercial seafood species in this state, as well as a number of threatened and endangered species. Located within the Atlantic Flyway, the reserve is a sanctuary for many species of migratory birds, including red knots, piping plovers, black skimmers, and least terns.

The research reserve protects estuaries, monitors environmental conditions, offers educational and training programs, and undertakes the scientific research needed by North Carolina's 20 coastal counties and the nation. Study focus areas include water quality, coastal and estuarine ecosystem protection, and coastal hazards resilience.

NOAA Office for Coastal Management

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Interesting Things to Know

- The reserve's training program has a robust realtor's workshop series focused on living shorelines for erosion control, low impact development for water quality protection, and best practices in barrier island development.
- Annually, over 1,000 students join education staff members for hands-on learning about estuarine ecosystems.
- The three undeveloped islands that make up the Zeke's Island site are considered some of the most important shorebird habitat in southeastern North Carolina.
- On average, 12 research projects are conducted every year.
- Citizen scientists help remove an average of 2,000 pounds of marine debris from the Rachel Carson site each year.
- Ten percent of North Carolina's American oystercatcher population nests at the Masonboro Island site each year.
- The mature maritime deciduous forest at the Currituck Banks site is one of the rarest habitat types on the east coast of North Carolina.

About the Programs

The nation's 30 research reserves represent a tremendous asset, protecting nearly 1.4 million acres and providing habitat where plants and wildlife thrive. Community benefits include recreation, flood protection, and water filtration. Because the following programs are offered at each reserve, the system is able to make an environmental impact at the local level, as well as nationally.

Stewardship. Site protection and enhancement are part of every research reserve. Activities may include managing land and water resources, restoring habitat, controlling invasive species, maintaining biodiversity, and reducing environmental stressors.

Research. Reserve research is focused on how environmental factors—such as nutrient loading, climate change, invasive species, and storms—impact coastal ecosystems. The monitoring program, known as the System-Wide Monitoring Program, or SWMP, provides long-term data on water quality, weather, biological communities, habitat, and land-use and land-cover characteristics. This combination of research and data provides a strong, science-based foundation for addressing coastal management challenges.

Training. To provide the community with the information and skills needed to integrate coastal science into local decision-making and everyday lives, reserves provide specialized courses and information. Reserve training professionals are active in community planning and improvement initiatives.

Education. Local data generated at the reserve provide students with a firsthand experience of local environmental conditions. Educators lead student, teacher, and citizen field trips that are life-changing experiences, as participants see, feel, and smell what makes an estuary one of the most remarkable places in the world.

To learn more, visit coast.noaa.gov/nerrs.

Office for Coastal Management

