



ACE Basin

National Estuarine Research Reserve



Location: 45 minutes south of Charleston, South Carolina

Date Designated: 1992

Area Protected: 121,916 acres

Web Address: dnr.sc.gov/marine/NERR

Access and Infrastructure

- A 4,000 square-foot facility, the Michael D. McKenzie Field Station at Bennett's Point, contains offices, wet and dry labs, a conference room, an outdoor classroom, and a nearby public boat ramp.
- Botany Bay HP/WMA on Edisto Island provides opportunities to explore beaches, marshes, and the rich history of the area.
- The reserve partners with South Carolina State Parks to operate the Edisto Beach State Park Environmental Learning Center, which contains interpretive exhibits, classroom and conference areas, a dock, public boat access, and nature trails.

Management: The South Carolina Department of Natural Resources studies, protects, and manages the reserve. NOAA's Office for Coastal Management provides funding, national guidance for the reserve system, and technical assistance.

The ACE Basin National Estuarine Research Reserve protects the natural beauty, abundant wildlife, and unique cultural heritage of the South Carolina Lowcountry. The ACE Basin is one of the largest undeveloped estuaries on the East Coast and is named for the Ashepoo, Combahee, and Edisto Rivers, which meet at St. Helena Sound. Although the basin is largely undeveloped, it is influenced by growth in the nearby cities of Charleston and Beaufort. The reserve protects cypress swamps, Native American shell rings, historic rice impoundments, oyster reefs, and expansive tidal marshes. In addition to protecting cultural resources, many endangered or threatened species also thrive here, including shortnose sturgeon, wood storks, red knots, and loggerhead sea turtles.

This research reserve protects critical ecosystems, monitors environmental conditions, offers educational and training programs, and undertakes the scientific research needed by South Carolina's coastal counties and the nation. Focus areas include water quality, habitat conservation, public access, and coastal hazards resilience.

NOAA Office for Coastal Management

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Interesting Things to Know

- This reserve contains three types of Native American-made shell structures (middens, mounds, and rings) from as early as 4000 B.C. that are believed to have played significant ceremonial and functional roles.
- This reserve's name is an acronym derived from the three rivers, which were named after Native American tribes, that converge to form the estuary—the Ashepoo, Combahee, and Edisto.
- South Carolina contains more salt marsh acreage than any other Atlantic Coast state. A large portion of this salt marsh acreage lies within this reserve.
- The 10 islands within the reserve provide a range of preserved habitats for residential, migrating, spawning, and nesting species, making the reserve home to wide range of flora and fauna.
- In 1863, Harriet Tubman led 150 African American Union soldiers in the Combahee River Raid to rescue more than 700 enslaved people. The location of that historic military operation is within the bounds of the reserve today.
- One of the nation's first mapping and charting baseline surveys took place here, beginning in 1850. This survey paved the way for the accurate nautical charting needed for marine commerce.

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

