ACE Basin
National Estuarine Research Reserve

Location: 45 minutes south of Charleston, South Carolina
Date Designated: 1992
Area Protected: 99,308 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, and an outdoor classroom.
- 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: Daily oversight is provided by the South Carolina Department of Natural Resources. 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, historic plantation homes, old rice fields, oyster reefs, and expansive tidal marshes, while providing a variety of outdoor recreational opportunities. In addition to protecting cultural resources, many endangered or threatened species also thrive here, including shortnose sturgeon, wood storks, and loggerhead sea turtles.

This research reserve protects estuaries, 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, coastal and estuarine ecosystem protection, and coastal hazards resilience.

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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.

• A number of movies were filmed here, two of the more notable being The Patriot and Forrest Gump.

• 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 Environmental Learning Center receives over 380,000 visitors a year.

• 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.

• In 2014, National Geographic featured the ACE Basin as its cover story, and The Nature Conservancy called the area “one of the last great places.”

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