Guana Tolomato Matanzas

National Estuarine Research Reserve

Location: Along the northeastern coast of Florida in St. Johns and Flagler counties, with St. Augustine in the middle

Date Designated: 1999

Area Protected: 76,760 acres

Web Address: *gtmnerr.org*

Management: Daily oversight is provided by the Florida Department of Environmental Protection. NOAA's Office for Coastal Management provides funding, national guidance, and technical assistance.

Access and Infrastructure

- The reserve stretches from Ponte Vedra to Palm Coast, with historic St. Augustine in the middle. The northern portion is associated with the Guana and Tolomato River estuaries, and the southern component with the Matanzas River.
- The Visitor Center, in Ponte Vedra Beach, serves as the reserve's headquarters, with administrative, educational, research, and stewardship facilities.
- The educational facilities offer natural and cultural history exhibits, classrooms, laboratories, and aquariums. Outside, visitors can enjoy 10 miles of hiking trails, swimming and boating, fishing, and an outdoor amphitheater.
- Within the reserve's boundaries are aquatic preserves, county parks, state parks, state forests, conservation and wildlife management areas, and a national monument.

The Guana Tolomato Matanzas National Estuarine Research Reserve encompasses an area where mangroves transition to salt marsh, and some of Florida's highest dunes, measuring up to 40 feet tall. The reserve is also home to one of the few remaining natural inlets in northeastern Florida, presenting the perfect place to study historical inlets and natural systems.

The reserve is an important economic, ecological, and educational resource. The estuary provides valuable services such as storm surge protection, flood protection, and oyster habitat. Its health is fundamental to the survival of endangered ocean species such as the North Atlantic right whale and sea turtles.

Ongoing research focuses on numerous projects, including salt marsh, sea turtle, oyster, and plankton monitoring. Often partnering with universities and institutions, including the Smithsonian Institution, the reserve's research and monitoring program serves to protect and conserve the area's natural biodiversity and cultural resources.

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Interesting Things to Know

- The reserve site has a long and fascinating history. Historical artifacts found here date from 8000 BC and include evidence of a Spanish mission and remnants of the state's oldest commercial orange groves.
- Multiple projects at the reserve aim to understand the health and sustainability of local oyster populations and discover how to maximize their ability to provide ecosystem services and a sustainable food source.
- The reserve has an active network of volunteers who participate in a wide range of hands-on experiences, including critical research and monitoring activities.
- The reserve provides unique opportunities to monitor climate change given its location along subtropical and temperate climatic zones. The ability to observe changes in movement of these zones' plant and animal species is particularly important.

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 exper iences, 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