Hudson River

National Estuarine Research Reserve

Location: Situated along 100 miles of New York's Hudson River

Date Designated: 1982

Area Protected: 4,838 acres

Web Address: *hrnerr.org*

Management: The New York State Department of Environmental Conservation is the lead state agency. NOAA's Office for Coastal Management provides funding, national guidance, and technical assistance.

Access and Infrastructure

- Headquarters at Norrie Point Environmental Center includes meeting facilities, research labs, classroom spaces, on-site river access, and an adjacent public marina.
- The Piermont Marsh site can be viewed from the mile-long Piermont Pier. Trails in Tallman Mountain State Park are accessed by canoe or kayak.
- Trails and canoe launches provide access to the reserve's Stockport Flats and Tivoli Bays.
- The Iona Island site, within Bear Mountain State Park, can be viewed by road, trails, and marsh overlook, or visited on a reserve canoe program.

The **Hudson River National Estuarine Research Reserve** includes four sites that span 100 miles of the 152-mile-long estuary: Stockport Flats, Tivoli Bays, Iona Island, and Piermont Marsh.

A variety of natural communities are found here, including rare freshwater tidal wetlands. (The entire Hudson estuary experiences 3- to 5-foot ocean tides.) Habitat is provided for more than 200 species of fish and other river-dependent wildlife, especially birds.

Research conducted through this reserve focuses on the natural and built environment, with an emphasis on wetlands restoration, nature-based shoreline protection, water quality, and habitat function. Environmental conditions are monitored using a tide gauge and three weather stations. Thousands of students and adults and the community as a whole benefit from these efforts through the strong education, citizen science, and training programs offered by the Hudson River Research Reserve. In fact, many of the programs have been replicated in other states.

NOAA Office for Coastal Management

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Interesting Things to Know

- The Hudson River Estuary extends over 150 miles from New York City to the head of tide in Troy, New York. The reserve's sites include a range of salinities from freshwater tidal to brackish, and border diverse geographies from natural areas to developed communities.
- The only national water-level gauge on the Hudson north of New York City is here. Data are used to understand storm impacts, fine-tune commercial shipping schedules, inform sea level rise assessments, and support NOAA's sentinel site network.
- The Hudson River Sustainable Shorelines project helps communities and designers create effective, nature-based shoreline protection and provides a model for other coastal areas.
- This reserve was one of the early adopters of the sentinel site program, an effort to evaluate the impacts of water level changes on marsh habitat. These data are being used to document sea level rise impacts on local and national levels.

About the Programs

The nation's 29 research reserves represent a tremendous asset, protecting over 1.3 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.

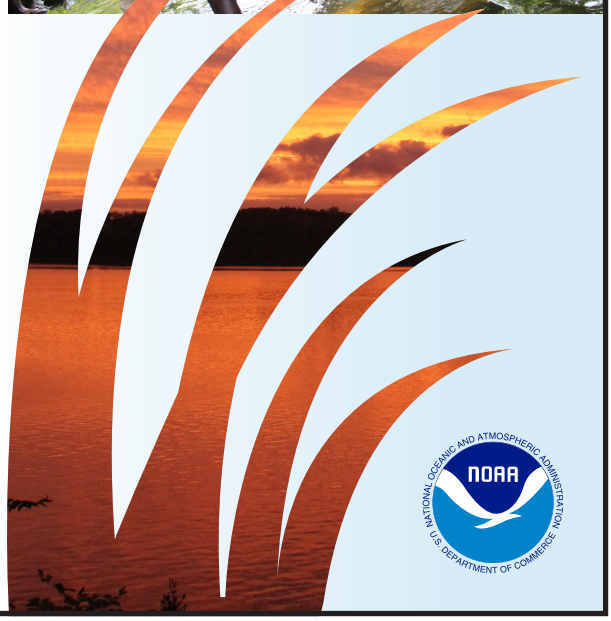
Stewardship. Site protection and enhancement are part of every research reserve. Activities may include managing land and water resources, restoring habitat, controlling invasive species, maintaining biodiversity, and reducing environmental stressors.

Research. Reserve research is focused on how environmental factors—such as nutrient loading, climate change, invasive species, and storms—impact coastal ecosystems. The 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.



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