

NOAA'S NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM

Coastal communities are home to almost 165 million people, support 70 million jobs, and contribute almost \$9.5 trillion to the U.S. economy, accounting for 57 percent of the nation's economic output. Recognizing the importance of our coasts, Congress created the National Estuarine Research Reserve System to protect and enhance this important resource and coastal communities through research, stewardship, education, and training. This program consists of voluntary partnerships between NOAA and coastal states and territories. The 28 research reserves cover over 1.3 million acres.

In fiscal year 2015, NOAA invested more than \$23 million, allocated through the Coastal Zone Management Act, to implement the program. Federal funding was matched by approximately \$8.7 million from the state and university reserve partners.



FUNDING SUMMARY 2015

Research and Monitoring (\$11 million federal and state)

The research program is focused on local issues. Monitoring programs provide local data focused on short-term variability and long-term changes in water quality, biological systems, and land use.

Facility Operations and Construction (\$3.9 million federal and state)

Investments in green facilities provide a place for education, science, and stewardship activities, as well as a forum for bringing stakeholders together.

Stewardship (\$4.8 million federal and state)

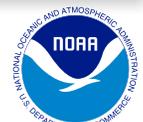
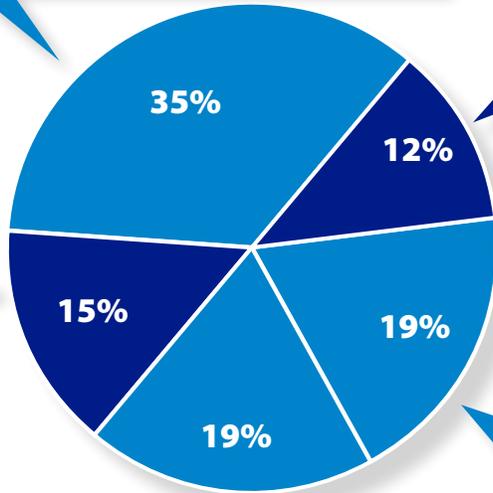
Habitat restoration, land acquisition, and removal of invasive species are just a few of the stewardship activities taking place to protect ecosystem functions and communities.

Management (\$5.9 million)

Reserves take proactive leadership roles in local and national coastal issues and provide the needed information, services, and support for building resilient communities.

Education and Training (\$6.2 million federal and state)

Research reserves provide a living classroom for educators, students, and the public. Community education programs are available for people interested in protecting estuaries, and coastal training programs provide up-to-date scientific information and skill-building opportunities for local decision makers.



National Estuarine Research Reserve System

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Impacts

Research reserves help communities address key coastal issues that often involve water quality, habitat protection, climate change, storm water management, and land use. The reserves provide local data as well as the assistance needed to help communities use these data in the decision-making process. A few examples are provided below.

Rhode Island – Role-Playing Game Effective for Climate Change Planning

To communicate climate change risk information, four research reserves joined with various project partners to use “serious games” as a tool for public education and engagement. The project team, including Massachusetts Institute of Technology scientists and the Narragansett Bay National Estuarine Research Reserve, engaged more than 500 people in role-play adaptation workshops in four municipalities. While people from Cranston, Rhode Island, were engaging in these role-play simulations, the city was also updating its hazard mitigation plan. The simulations were so powerful that many of the concepts and findings were incorporated into Cranston’s hazard mitigation plan.

New Hampshire – Watershed Planning across Boundaries in New Hampshire

Population growth in New Hampshire’s coastal communities is straining municipal stormwater and wastewater infrastructure, placing water quality and public health at risk. Communities are also facing new, more stringent permit requirements for discharges. The Great Bay National Estuarine Research Reserve worked with partners and three communities to create an innovative, integrated planning approach for the entire watershed that satisfied the new permit requirements by reducing existing loads by 60 percent, and cut potential costs by an estimated 50 percent from traditional permitting for the three communities. This project also laid the groundwork for a regional water-quality monitoring effort.

Alabama – Teacher Workshop Inspires New Environmental Policies at a Mobile Bay School

Balloons pose a significant threat to marine animals, which can ingest or become entangled in them. When the Weeks Bay National Estuarine Research Reserve learned that balloon releases at special events were identified as a common source of marine debris in the Gulf of Mexico, the staff decided to increase awareness of the issue during the Teachers on the Estuary workshop. Teachers were given marine debris data from local coastal cleanup events and developed plans to help students design and implement strategies to address the issue in their communities, including the creation of anti-balloon-release policies.

Mississippi – Identifying the Environmental Impacts of Land Use near the Grand Bay

Land development pollution and overtaxed wastewater treatment systems are flowing into the Grand Bay with potentially far-reaching effects on ecosystems, human health, and local economies. The Grand Bay National Estuarine Research Reserve partnered with Dauphin Island Sea Lab to perform a benchmark study defining the impact by looking at the nitrogen content in ancient oyster shell mounds. The study, which analyzed thousands of years of geologic records, is helping researchers see how land use changes impact water quality, historical and modern oyster populations, shifts in nitrogen sources, and pathogen accumulation.

Office for Coastal Management

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