



At a Glance

The EPA-ORD laboratory in Narragansett, RI is a recognized leader in scientific knowledge and expertise concerning the ecology of oceans, estuaries, and watersheds, and the effects of human activities on that ecology. The laboratory contributes to the local economy in Narragansett and the surrounding region, and is an active participant in the local community.

**Science:** ORD is a world-class research organization, and the research conducted by scientists in Narragansett has far-reaching significance, including informing decision making at local, regional, and national levels. One example of research conducted at Narragansett is a collaboration with Martha's Vineyard, MA to help prepare the communities for rising sea levels and increased storm frequency. EPA researchers are also testing options for creating "living shorelines", which use plants, sand, and rock to provide natural shoreline protection to reduce coastal erosion.

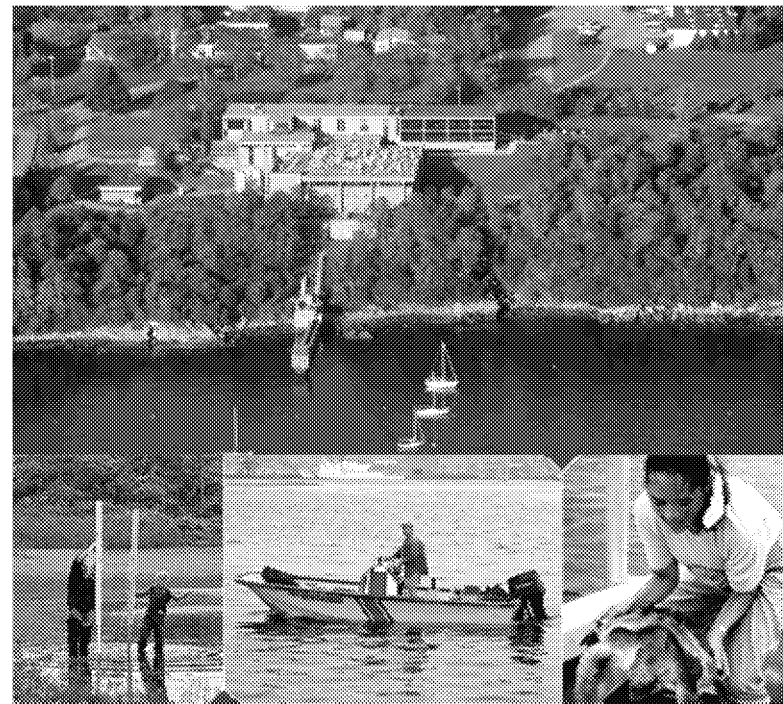
**Community Engagement:** The laboratory hosts multiple education and outreach events – 8 so far in 2017 – involving schools and area residents to improve environmental awareness. Also, laboratory scientists are working with the State of Rhode Island and the City of Newport to address low water clarity and low levels of dissolved oxygen in Rhode Island waterbodies by helping to establish water quality targets to protect drinking water and aquatic life uses.

**Economic Impacts:** The \$8 million in disposable income from federal jobs and over \$5 million in expenditures on contracts, grants, supplies and equipment that are injected into the local economy have broader impacts as that spending supports additional jobs and spending, and as workers buy goods and services in the community using their disposable income.



Did you know?

- In addition to federal scientists, the lab provides 69 on-site jobs to post-doctoral researchers, student contractors, and facility staff.
- The lab also supports 9 student interns and university affiliates, and has strong ties to several area universities.
- Laboratory staff engage actively in education and outreach.
- The laboratory maintains a unique seawater delivery system for holding and testing ocean, estuary, and coastal wetland organisms.



Narragansett Laboratory Impacts by the Numbers

Narragansett (Washington County), RI		
<b>151</b> Total jobs at the laboratory	<b>\$10.7 million</b> Annual payroll, on-site contracts, and grant dollars supported by lab	<b>73</b> Federal jobs on-site
<b>Top 10 Employer<sup>1</sup></b> In Narragansett, RI	<b>36</b> Post-doctoral, student, and visiting researchers on-site	<b>Up to 50%</b> Reduced energy cooling below lab's green roof
<b>6 counties, 2 states</b> Where Narragansett lab employees live		

<sup>1</sup>Town of Narragansett, RI Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2016



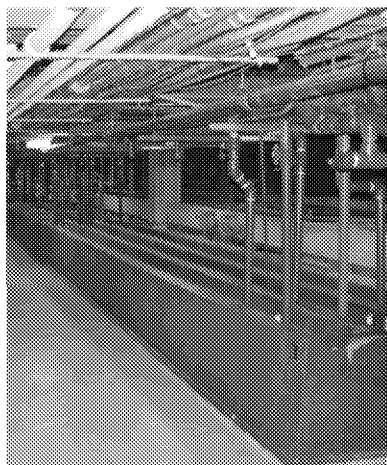
Scientists at the Narragansett laboratory conduct innovative research to assess and forecast the risks of human activities to near coastal waters and their watersheds, to develop tools to support resilient watersheds and water resources, to inform decisions about sustainable management of nutrients, and to link environmental conditions to the health and well-being of people and society. The 100,000 ft<sup>2</sup> facility includes a year-round natural seawater delivery and animal culture system, and instruments for coastal ecology, aquatic toxicology, and analytical chemistry. The Narragansett laboratory provides research support to EPA program and regional offices, state governments, and local communities.



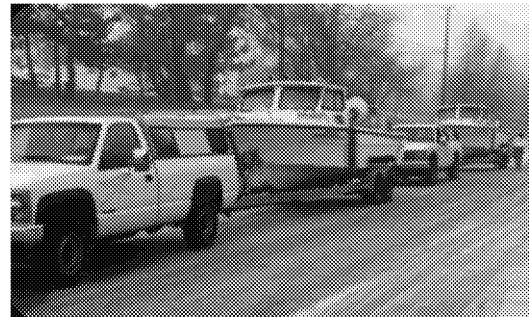
### **Mission and Science Facilities**

The mission of the facility is to develop the theory, methods, and data to improve understanding of human activity on coastal waters and watersheds. Special areas of research include:

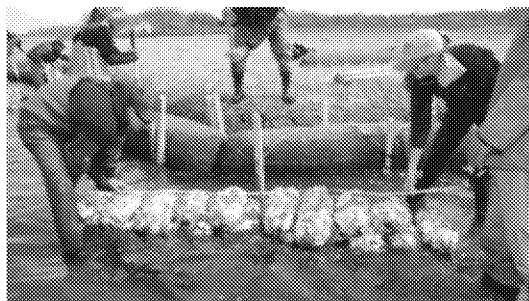
- Methods, models, and tools to evaluate ecosystem services associated with coastal watersheds and how they contribute to human well-being and social welfare. This includes developing quantitative and qualitative economic indicators of ecosystem-derived benefits, and developing methods to quantify tradeoffs among services resulting from management actions.
- Field, laboratory, and modeling studies to quantify the effects of nutrients, sea level rise, and climate-induced changes in weather patterns on coastal watersheds to determine resilience and evaluate restoration approaches and ecosystem recovery.
- Data intensive models to predict and monitor the occurrence of cyanobacterial Harmful Algal Blooms.



Since the early 1980s, the Narragansett laboratory has partnered with the State of Massachusetts and the towns of New Bedford, Fairhaven, and Acushnet to address concerns about possible human health and ecological effects of legacy pollutants. By developing comprehensive monitoring plans, evaluating the effectiveness of various remediation scenarios, assessing food chain contamination, and modeling contaminant transport both in the harbor and in Buzzards Bay, EPA scientists have supported the safe remediation and reuse of sites and their resources.



To promote innovation and the economic vitality of southern New England, Narragansett scientists helped to convene the Southeast New England Program for Coastal Watershed Restoration. They also supported the community of Martha's Vineyard, MA to prepare for rising sea levels and increased storm frequency and intensity by testing options for creating natural bank stabilization techniques called "living shorelines" to mitigate coastal erosion.



Narragansett scientists are also working with RI's Departments of Environmental Management and Health, and the City of Newport, to establish target water quality measures necessary to restore and protect the Newport Water Supply Reservoirs, which currently suffer degraded water quality for drinking water and aquatic life uses.

For more information, please visit: <https://www.epa.gov/aboutepa/about-atlantic-ecology-division-aed-epas-national-health-and-environmental-effects-research>