



## Your Link to Research and Resources for a Healthier Coast

**\$3,783,370**

activated to build North Carolina's  
communities, economies and ecosystems

**1,200,000 acres**

restored coastal habitat

**40 graduates**

employed in a career related to their degree  
within two years of graduation

**17,080 students**

engaged in Sea Grant-supported education programs

**85 researchers**

involved in Sea Grant-funded projects

**13.8 to 1**

returned on investments in minigrants

**\$7,730,000 economic  
development impact**

generated from research and outreach projects





## Assisting Industry Partners in Implementing New Technologies

Employing aquaculture systems for soft-crab and oyster production in North Carolina has been limited by a lack of information and technology transfer. North Carolina Sea Grant staff assisted with the development of two new soft crab businesses using recirculating aquaculture systems that produced significant yields in 2016. Six new oyster aquaculture businesses employing 23 people also were created with the help of Sea Grant. Learn more about Sea Grant's work in the growing marine aquaculture industry at [go.ncsu.edu/aquaculture](http://go.ncsu.edu/aquaculture).

## Sharing Research Results to Improve Stormwater Management

The Town of Beaufort's Stormwater Advisory Committee involves and unites citizens to develop strategies to address growing stormwater issues. A team of researchers from the University of North Carolina at Chapel Hill's Institute of Marine Sciences who have been studying contaminated stormwater in coastal environments presented their results of sampling in town waters to the committee. The data were used in the development of a new town stormwater management plan. Learn more about how the team samples for contaminants in stormwater at [go.ncsu.edu/stormwater-microbes](http://go.ncsu.edu/stormwater-microbes).



## Helping a Community Plan for Sea-Level Rise and Identify Climate Adaptation Strategies

The Town of Nags Head requested support from North Carolina Sea Grant to integrate coastal hazards planning, including sea-level rise, into their next comprehensive plan. Based on a visioning exercise led by Sea Grant, the town established a Climate Adaptation and Sea Level Rise Committee, which prioritized adaptation actions for inclusion in the Nags Head Comprehensive Plan. If the plan is adopted, Nags Head will be the first municipality in northeastern North Carolina to include sea-level rise in its comprehensive plan. Learn how the visioning exercise led to action by the town at [go.ncsu.edu/nagshead](http://go.ncsu.edu/nagshead).

## Providing Research Support and Training for Graduate Students

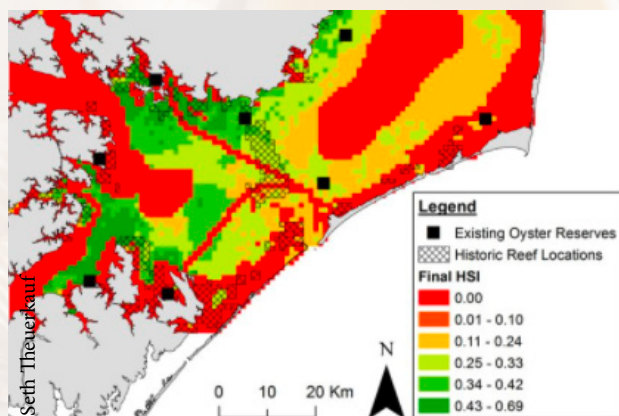
North Carolina Sea Grant supports the development, growth, and education of students through fellowships and student stipends. In 2016-17, Sea Grant supported 70 fellows, including a Knauss fellow and joint opportunities with the N.C. Sentinel Sites Cooperative, N.C. Division of Marine Fisheries, and the N.C. Coastal Reserve. Sea Grant staff also provided graduate fellows with opportunities and training in science communications. Fellows wrote two articles featured in *Coastwatch* magazine and 10 blog posts, which can be accessed at [ncseagrant.ncsu.edu/currents](http://ncseagrant.ncsu.edu/currents).





## Building Capacity for Environmental Education and Increasing Environmental Literacy

Solving complex coastal issues depends on fostering and engaging an environmentally literate citizenry. North Carolina Sea Grant supported the development of curricula and trainings to help middle-school teachers educate students about these issues. Approximately 250 students have participated in activities demonstrating the impacts of invasive species on coastal marsh ecosystems. An additional 500 students learned about climate-related coastal hazards during the 2016-17 school year. Learn how researchers are identifying factors that build environmental literacy in students at [go.ncsu.edu/env-literacy](http://go.ncsu.edu/env-literacy).



## Developing a Model to Guide Oyster Restoration and Shoreline Habitat Protection

Successful habitat restoration can depend on selecting the right site. Researchers at NC State University's Center for Marine Sciences and Technology linked relevant biological, physical and socioeconomic information within a GIS-based framework to guide oyster reef habitat restoration in Pamlico Sound. This North Carolina Sea Grant-funded decision-support tool is adaptable to other systems, and future updates will further incorporate the ecosystem services provided by restored habitats. This project is partially funded through the NC Sea Grant/NC Space Grant joint fellowship program, [go.ncsu.edu/sea-space-2016](http://go.ncsu.edu/sea-space-2016).

## Creating Partnerships to Respond to Flooding Concerns and Costs

Repeated flooding due to storms has destroyed homes and businesses in Hyde County and hurt crop production. North Carolina Sea Grant, Georgia Sea Grant and Stetson University partnered to perform a cost-benefit analysis of elevating structures throughout the county. A video and flood guide were then produced to educate residents and earn insurance rating points during the county's next review. The county is now working with the N.C. Division of Coastal Management to scope a new water management plan. View the video and flood guide at [go.ncsu.edu/floodguide](http://go.ncsu.edu/floodguide).



## Managing the Pilot Crab Pot Removal Project to Reduce Marine Debris

Derelict crab pots are a source of marine debris that can trap fish and shellfish, as well as present a navigation hazard. Crab pots are lost because of storms, water movement and broken buoy strings. In 2016, North Carolina Sea Grant contracted with the North Carolina Coastal Federation to undertake a pilot crab pot removal project funded by the North Carolina General Assembly. Seventy-two commercial fishermen working out of 36 vessels canvassed 1,204,163 acres of inland waters and removed 4,304 derelict crab pots during the pilot project. Read the final report at [go.ncsu.edu/crab-pot-pilot](http://go.ncsu.edu/crab-pot-pilot).





# What Is North Carolina Sea Grant

North Carolina Sea Grant provides research, education and outreach opportunities relating to current issues affecting the North Carolina coast and its communities. Since 1970, North Carolina Sea Grant has prided itself on being a valuable resource for scientists, educators, local officials, government agencies, coastal businesses and the public to find unbiased, scientifically sound information about the state’s coastal ecosystems.

## How We Work

North Carolina Sea Grant facilitates funding for millions of dollars of research, outreach and education programs each year. Our initiatives and projects touch a broad range of topics, including fisheries, seafood science and technology, water quality, aquaculture, community development, law and policy, marine education, coastal hazards, and resilience. As part of the National Sea Grant Network, we receive funding from the National Oceanic and Atmospheric Administration, through the U.S. Department of Commerce.

Through a combination of federal and state dollars, we facilitate university-based research to answer complex questions about the state’s diverse coastal ecosystems and meet the needs of coastal communities. This research fuels outreach and education programs that promote discovery, learning, new research and awareness across the state and the nation. Sea Grant also is committed to advancing coastal and ocean literacy and building a well-trained workforce to address future challenges through informed, science-based decision making. We support more than 110 students, including through 10 state and national fellowships and student stipends.

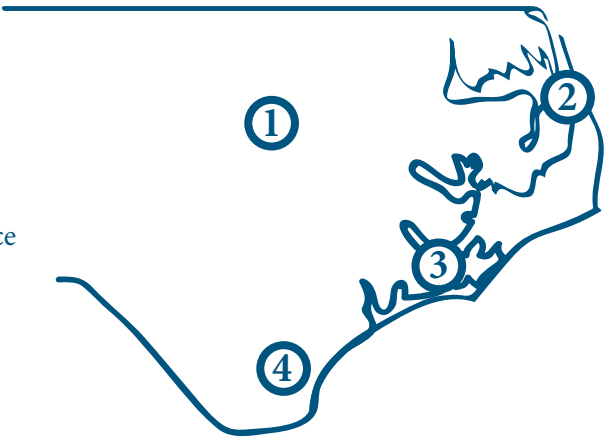
In 2016, Sea Grant completed a statewide effort to identify and prioritize research, extension and outreach needs in North Carolina. Stakeholders provided feedback through seven facilitated focus groups, in-depth discussions with Sea Grant Advisory Board and team members, and an online research-based survey that reached audiences from the mountains to the coast. These findings formed the basis of the 2018-2021 North Carolina Sea Grant Strategic Plan, which is available at [ncseagrant.ncsu.edu/strategicplan](http://ncseagrant.ncsu.edu/strategicplan).

## Where We Work

Sea Grant is a program within the University of North Carolina system. In addition to our headquarters at North Carolina State University, we have coastal offices in Manteo, Morehead City and Wilmington. Our researchers come from public and private universities across the state, often working in collaboration with various agencies and organizations.

### North Carolina Sea Grant Offices

- 1. Raleigh Office  
919-515-2454
- 2. Manteo Office  
252-475-3663
- 3. Morehead City Office  
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- 4. Wilmington Office  
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Numbers represented in this snapshot are from the 2016-2017 reporting period.