

\$4 Million

in economic benefits to
North Carolina

45

resource managers partnering
with Sea Grant to protect our
coast

36

communities collaborating with
us to plan and adapt for coastal
hazards

340,000

annual users of NC Sea Grant's
online resources and information

Daniel Pullen

What is North Carolina Sea Grant?

Since 1970, North Carolina Sea Grant has provided research, education, and outreach to serve our entire state. We build more resilient communities and economies, support sustainable fisheries and aquaculture, promote healthy coastal ecosystems, enhance environmental education, and foster workforce development.

By forging enduring collaborations that bridge North Carolina's public and private universities with communities across the state, our program fuels real-world solutions.

Strengthening the Economy



Thousands of jobs and billions of dollars in revenue for North Carolina depend on sustainable ocean and coastal resources. North Carolina Sea Grant actively bolsters our blue economy through a vast array of projects and initiatives that support businesses and consumers alike.

- By leading the national StriperHub project, NC Sea Grant is positioning striped bass for increased success in the marketplace. The project builds on our long history of partnerships with finfish growers, as well as groundbreaking research on farming striped bass at a commercial scale.
- In partnership with Carteret Community College, NC Sea Grant co-founded and continues to support the NC Shellfish Farming Academy, which trains prospective oyster farmers who are starting new businesses or joining existing operations.
- We also support a business incubator for the shellfish mariculture industry, providing marketing and economics tools, mentorship for new and current farmers, and online management tools.
- Our research informs bay scallop production, waste management for finfish mariculture, spawning methods for sunray venus clams, and state-of-the-art practices for black sea bass aquaculture — as well as the development of ShellCast, a tool to forecast closures of shellfish harvest areas.

- NC Sea Grant helps strengthen a sustainable sea-to-table chain across the state by helping commercial fishers brand and market products online, developing business resources for seafood producers, and raising consumer awareness through MarinersMenu.org.
- Our team also is spearheading the development of a new device to deter sharks from commercial fishing gear, which, in turn, will save significant expenses from lost catch and damaged equipment.
- Through our Fish Camps, a new generation of commercial fishers receive critical training and resources, such as policy primers and business plans, to thrive in the 21st-century global seafood marketplace.
- Economic research includes our N.C. Seafood Economic Impact Study, Blue Economy information series, a study of the menhaden fishery that illuminated a new management plan, and our initiative to catalog economic and social contexts of our seafood processors.
- For decades, NC Sea Grant projects have promoted the state's tourism industry. Most recently, we co-founded the NC Oyster Trail, and consumers nationwide now use NCoystertrail.org to plan how to enjoy succulent shellfish while visiting NC oyster farms and partnering businesses. Our outreach team also helped expand and promote the Visit NC Farms app, collaborated on the state's first Heritage Dive Site, conducted a study of sustainable tourism for the Outer Banks, and much more.



Next generation leader: NC's Johnna Brooks, a national fellowship winner, began studying stock assessments because her father is a commercial fisher.

Mitigating Flood Impacts and Hazards

North Carolina Sea Grant has catalyzed a wide range of projects to help our state plan, recover, respond, and adapt to coastal and inland hazards, as well as heightening climate urgencies.

- Recent hurricanes have exposed deep vulnerabilities to flooding in our state. NC Sea Grant leads a multidisciplinary team evaluating opportunities, costs, and benefits of using natural infrastructure solutions to mitigate damage from flooding and runoff in the Cape Fear and Neuse River basins, as well as in coastal communities.
- Riverine flooding imperils transportation infrastructure. Our experts partner on major initiatives to evaluate flooding impacts and identify new transportation routes and solutions, as part of North Carolina's advanced warning system.
- Our research informs shoreline management with highly accurate erosion data, identifies drivers of coastal and estuarine flooding, assesses the impacts of saltwater intrusion, and much more.
- Extension specialists actively collaborate with coastal communities on state initiatives to prepare and plan for increased flooding and heightening climate challenges.
- Climate hazards increasingly threaten the effectiveness of wastewater infrastructure. NC Sea Grant spearheaded evaluations of septic systems to directly inform community planning.
- Our partnership on stormwater master plans for 20 schools in the Neuse and Tar River Basin resulted in design and implementation of a new stormwater wetland; while another watershed plan has spurred



projects that address runoff in Raleigh neighborhoods, as well as job training that led young adults to improve a wetland park.

- Sea Grant-funded teams are studying plastic contaminants in small headwater basins of the Southern Appalachians; collaborating with Waccamaw Siouan Communities to assess soil and water contamination; and mitigating issues related to water cycling throughout Mecklenburg County homes, schools, businesses, and neighborhoods.
- Our projects also address other hazards such as emerging contaminants, algal blooms, rip currents, marine debris, invasive plants, shark attacks, structural damage from winds, and more.

36

**NC Sea Grant-supported
graduates joining the
workforce**



Next generation leader: Kayelyn Simmons served as a national Knauss Marine Policy Fellow, and now works for NOAA.

Educational Resources for All of NC

K-12 teachers and students count on our program for relevant lessons that meet state and national standards.

- **Lessons in Mariculture** offers career education and science for in-person and online learning.
- **Coastwatch Classroom** provides online content that compliments stories in our popular magazine.
- Education researchers created an **online water quality curriculum**. Their workshops drew high school teachers from over 30 counties.
- Thanks to a collaboration with PBS NC and other partners, thousands of teachers and students are accessing our award-winning interactive **Watershed Wisdom** series, as well our new **Keeping Water Renewable** lessons.



Students from Asheville City Schools cleaning mountain streams. Courtesy of Jenna Hartley

Our Coast, Our Future: The 2022 North Carolina Coastal Conference



Becky Kirkland/NC State

Business leaders, community experts, teachers, scientists, students, policymakers, and many others came for the North Carolina Coastal Conference hosted by NC Sea Grant. Together, they discussed urgent and emerging issues affecting our coasts, forged new ties, and planned new partnerships.

This two-day hybrid event was available in person and online. Videos of dozens of presentations, as well as photos and resources, are available at go.ncsu.edu/Coast.

“Networking was excellent due to the overall structure and format of the conference.”

— NC Coastal Conference participant

Read North Carolina Sea Grant's new **Strategic Plan**:

go.ncsu.edu/The-Plan



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Numbers represented in this snapshot are from the federal reporting year ending January 31, 2022.