



New York Sea Grant (NYSG) is a collaborative program of the State University of New York, Cornell University, and NOAA (National Oceanic and Atmospheric Administration).

With 3,400 miles of coastlines, New York is the only U.S. state bordering both the Great Lakes and the Atlantic Ocean. More than 85% of NY's population lives in a coastal region.



NYSG provides research, education, and extension services enhancing coastal community economic vitality, environmental sustainability, and citizen awareness of NY's marine and Great Lakes resources.

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NYSG Focus Area for this project:

Resilient New York Communities and Economies
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Building Awareness of Microplastic Pollution from Textiles

Equipping the next generation of students, educators, and community members to reduce microplastic pollution helps protect New York's waters.

Textiles are one of the largest sources of microplastic pollution to our environment. Every time we wash clothing, tiny fibers shed into the environment. Many of these fibers are synthetic and include chemical additives that do not biodegrade and persist in local waterways.

In 2025, New York Sea Grant collaborated with seven community organizations, three universities, and one middle school to expand its microplastic pollution education and coursework to engage 258 K-12 students, 48 undergraduates, 93 teachers, and 32 community members in the New York metropolitan area.

While many participants in this expanded outreach had previously heard of "microplastics," few recognized clothing as a major source. Use of microscopes and fluorescent dye made the often-invisible fiber pollutant visible. Participants searched for microplastics in a variety of samples from local waters (including the Atlantic Ocean, Long Island Sound, and Hudson River) and in store-bought seafood, clothing, and everyday kitchen items. Students reported learning how small microplastics really are, what they look like, and where they originate.

At Marist University, undergraduates analyzed fabrics to predict which would shed the most fibers during washing. Their response highlights the value of this New York Sea Grant outreach; all 17 reported a stronger understanding of how clothing affects local waterways, noting that they would consider where wastewater goes, think more critically about clothing purchases, and reduce laundry loads.

Project Partners:

- A. MacArthur Middle School
- Columbia University
- Genspace
- Dominican University New York
- Girls Rock STEAM Rockland
- Marist University
- Hudson River Park
- Randall's Island Park Alliance
- Rocking the Boat Youth Development: South Bronx
- The Rockaway Initiative for Sustainability and Equity
- Wildlife Conservation Society



High school students closely examine microplastics samples at a New York Sea Grant workshop with the Genspace community biology lab in New York City.
Photo: Life Science Cares