



# MARINE DEBRIS

Maryland Sea Grant receives financial support from Congress through the National Sea Grant College Program within the National Oceanic and Atmospheric Administration, as well as, support from the University System of Maryland and other external grants and contracts.

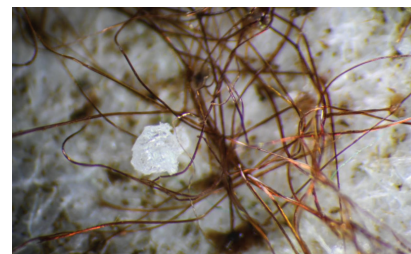
## Combating Marine Debris in Maryland

On November 15, 2021, the bipartisan Infrastructure Investment and Jobs Act was signed into law. This provides funding over 5 years (2022–2026). Congress designated \$50M for marine debris prevention, mitigation, and removal through the National Sea Grant College Program. Maryland Sea Grant (MDSG) supports education and research programs to tackle marine debris issues. K-12 education efforts are engaging teachers and students to improve awareness of global issues of concern like microplastics. Recent research has focused on the degradation of plastics and impacts of microplastics in the waters and sediments of the Chesapeake Bay and its tributaries. For example, MDSG's 2022 Knauss Fellow, Benjamin Frey, is working in the NOAA Office of Marine Debris with a focus on derelict fishing gear.



## K-12 Education on Marine Debris

Maryland and Washington, DC's teachers and their students are participating in hands-on field and classroom work that engages them in the isolation and observation of microplastics from water and biofilms samples in the National Harbor (Oxon Hill, Maryland) and Inner Harbor (Baltimore, Maryland). The development of these successful methods has been a collaborative effort between MDSG staff, the Institute of Marine and Environmental Technology researchers, American University faculty, and teachers and administrators in three school systems.



## In the News



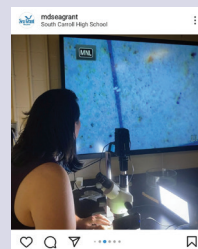
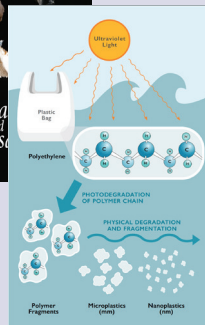
Our microplastics research and education efforts have been highlighted in the Washington City Paper, the *All Swell?* podcast, and on NBC4 Washington, which featured an interview with Assistant Director for Education J. Adam Frederick.

**40** teachers involved in MDSG-led teacher professional development workshops in 2020.

## Public Outreach on Marine Debris

MDSG's communications team dedicated a recent issue of *Chesapeake Quarterly* to "Microplastics and the Chesapeake," which took a comprehensive look at the history of plastics and the challenges of studying their impacts in the region.

The team also regularly shares pieces focused on marine debris issues and related MDSG education efforts on our blogs and through engaging social media posts that showcase unique imagery and highlight related workshops and events.



## Funded Research on Marine Debris

MDSG funds applied research that has the potential to impact the policies and management of the Chesapeake and Maryland Coastal Bays and our coastal communities. Here is an

example of a marine debris project that we have funded recently in addition to the student projects below. For more information on these and other projects please visit our [website](#).

Abundance and Variety of Microplastics in Surface Waters, Sediments, and Oysters: Relationship to Point-Sources and Land Use Practices

Lance Yonkos, *University of Maryland, College Park*

### Program Highlight: Student Research



**Ben Lane, REU\* Fellow**

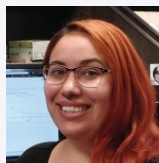
Ben studied factors that influence plastic degradation and microplastic production in coastal environments including erosion, deposition, and tidal influences.



**Katherine Mitchell, REU\* Fellow**

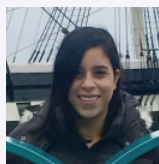
Katherine contributed to the long term study to analyze different sediment samples taken from Baltimore Harbor to determine the type and amount of microplastics present.

\* Research Experiences for Undergraduates



**Alterra Sanchez, Graduate Research Grantee**

Alterra studied the fate and transport of organic pollutants and microplastics in the wastewater treatment process.



**Ana Sosa, Competitive Graduate Research Fellow**

Ana's dissertation focused on the taxonomy and ecological roles of microbial communities forming biofilms on microplastic particles in the Chesapeake Bay.

Maryland Sea Grant is a federal-state partnership program that is part of the University System of Maryland. Our offices are located in College Park, Maryland, and are administered by the University of Maryland Center for Environmental Science. Our Sea Grant Extension faculty are administered by the University of Maryland, College Park and located in offices around the state. The National Sea Grant Program is a network of 34 university-based programs in coastal and Great Lakes states as well as Puerto Rico and Guam.

[www.mdsg.umd.edu](http://www.mdsg.umd.edu)

## Contact Us

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