

Sea Grant-Marine Debris Special Projects Competition Funded Projects

Developing a Marine Debris Action Plan for Long Island Sound

(Connecticut Sea Grant Program)

The goal of this proposed project is to address an objective under the goal Coordination in the NOAA Marine Debris Program Strategic Plan by developing a co-regional marine debris action plan for Long Island Sound, with assistance from the Northeast and Mid-Atlantic regional coordinators. Through implementation of this bi-state plan, additional objectives will be met under the goals of Removal, Prevention, and Research and Assessment.

Washing with Wisdom: Preventing the Introduction of Microfibers in Delaware's Waters

(Delaware Sea Grant Program)

This educational project is aimed at preventing microplastic introduction to Delaware waterways. The program will create an outreach exhibit comprised of a banner; a take-away magnet that will highlight 1) the occurrence of microfibers in Delaware's tributaries 2) the local species that have been documented with microplastics and 3) tested methods that can minimize the introduction of microfibers into washing machine effluent; and examples of products that can be used to minimize the introduction of micro-fibers into washing machine effluent.

Evaluation of Mechanical Marine Debris Removal on Sandy Beach Macroinvertebrates in Hawai'i

(Hawai'i Sea Grant Program)

This project proposes investigating the effects of mechanized marine debris removal on Hawai'i's upper intertidal macroinvertebrate communities. The study will help to fill a striking and significant knowledge gap in the management and governance of state of Hawai'i beaches as mechanized beach maintenance is presently ongoing and additional beaches are targeted for such treatment in the future. Results will not only apprise stakeholders in the Hawaiian Islands on beach management and marine debris removal actions but also inform governance and maintenance of sandy, intertidal systems on sub-tropical islands in the greater insular Pacific region.

Exploring Alternatives to the Derelict Crab Trap Problem: Combining Fishermen and Management Perspectives with Policy Considerations

(Louisiana Sea Grant Program)

Crab fishermen in LA have expressed interest in changing current practices from trap numbers to changing the derelict removal program. To address the identified needs and or issues of the recreational and commercial blue crab fishery, we propose four objectives:

1. Examine the options for prevention and removal of derelict traps,
2. Determine the preferred options for prevention and removal of lost traps by the fishing industry and management,
3. Assess the legality or feasibility of legislative changes to enable options, and
4. Disseminate research findings through outreach and extension to reduce derelict gear and communicate impact of possible changes.

Engaging Partners to Evaluate Plastics Loading to the Pamlico Sound from Urban and Rural Lands via the Neuse River in North Carolina

(North Carolina Sea Grant Program)

Plastics currently comprise the bulk of marine debris. Over the last decade, researchers have documented the proliferation of plastics (both macro and micro) in aquatic environments around the globe. However, little sampling and quantification of plastics in North Carolina coastal rivers and estuaries has been conducted. Recent research results vary considerably, both spatially and temporally, and sample collection procedures and reporting methods also differ widely. North Carolina Sea Grant in partnership with other university programs and environmental groups proposes to conduct a variety of field sampling protocols for both macro and micro plastics in the Neuse River Basin. Specifically, netting, trawling and/or regular trash removal from gridded sample sites will be implemented over a one year period at 15 US Geological Survey stream gage monitoring sites in the basin. The purpose of this effort is to better understand the concentration and loadings of plastics reaching the lower Neuse River and entering the Pamlico Sound. This work will enable us to determine the relative contributions based on the scale and land-use characteristics of the watersheds and the sampling protocols that best fit North Carolina waterways based on their size, flow and access.

Students Seeking Sources and Solutions: Interrupting the Marine Debris Cycle in Oregon Coastal Communities (Oregon Sea Grant Program)

The goals of this project are to educate participants and empower them to take action to reduce locally sourced marine debris. Through this project:

- Students and teachers will learn about sources of commonly found marine debris objects on the Oregon Coast and the processes leading to how those objects escape to become marine debris.
- Students will explore the benefits and drawbacks of materials that are used in industry.
- Students will engage in NGSS Science and Engineering Practices to develop and share potential solutions to interrupt the escape of certain debris materials into the marine environment.
- Industry representatives will help inform and refine students' proposed solutions to marine debris that originates from their industry.
- Industry partners will demonstrate a willingness to engage in marine debris interruption behaviors.

Plastic Free MKE: Assessment and Education to Support Lake Friendly Schools (Wisconsin Sea Grant Program)

The project aims to inform, educate, and engage Milwaukee's youth on marine debris and plastic pollution in order to reduce the amount of marine debris that is released into Lake Michigan. The project will employ a graduate intern who will focus on local engagement with Milwaukee schools around marine debris with regular scheduled classroom visits, and who will facilitate the development of a waste audit and outreach materials designed to help K-12 students gain awareness and educate their administrators, peers and families on the issue.

Marine Shrink Wrap Recycling Program and Alternative Study (Woods Hole Sea Grant Program)

This project expands on an existing shrink wrap recycling program at WHOI Sea Grant. With this additional funding, WHOI Sea Grant will improve the program by bringing in a part-time assistant to increase our outreach in order to collect more shrink wrap and, importantly, we will conduct a study of alternatives to shrink wrap. The results of the study will allow WHOI Sea Grant to inform boat owners, town managers, marinas and the public about available reusable products that will reasonably replace shrink wrap and reduce waste.