

Marine Debris from Land to Sea

Characterization, Reduction and Education Efforts in New Hampshire

*University of New Hampshire • New Hampshire Sea Grant • UNH Cooperative Extension
Blue Ocean Society for Marine Conservation*

The Problem

Derelict fishing gear and other marine debris in the ocean and along the coast has the potential to impact a broad range of the marine ecosystem, from the marine industries that use coastal waterways and beaches to the organisms that reside within.

- Marine debris is a hazard to vessel navigation and poses a threat to life and property when encountered at sea by water-craft of all sizes.
- Some lost or discarded derelict fishing gear continues to function as designed, catching target commercial species without economic benefit, but with economic cost.
- Protected marine species such as whales, dolphins, and sea turtles may interact with derelict fishing gear and other debris, resulting in injury or mortality.

The majority of debris found at beach cleanups in New Hampshire comes from ocean-based sources. This project was begun to both continue valuable cleanup efforts and start assessing and mitigating the ocean-based debris.

The Project

The Marine Debris to Energy project is unique in that it takes a holistic approach to marine debris identification, monitoring and mitigation by tracking marine debris on the shore, underwater, and on the ocean. The objectives of this project are to **better characterize ocean-based debris** (e.g., derelict fishing gear) sources and distribution patterns; **develop protocols to implement a unique underwater cleanup program** to identify and remove both derelict fishing gear where possible and other debris, **continue to investigate the prevalence of land-based debris sources**, and **mitigate the problem** through education and outreach.

Major Project Components

- Commercial and recreational fishermen will be actively involved in removing derelict fishing gear at sea.
- Gear can be placed in a dumpster (donated by Waste Management) at the Yankee Fisherman's Co-op, where it will be taken to a waste-to-energy facility and turned into electricity.
- Fishermen will have ready access to bins to recycle their monofilament fishing line.
- Cleanups along the New Hampshire coastline will expand, involving more volunteers and creating more aesthetically-pleasing, healthier and safer beaches.



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Project components, cont.

- An initial assessment of the volume of underwater marine debris will be done using sonar for the first time in New Hampshire.
- Anyone collecting marine debris will be able to report it online via an easy web interface.
- Members of the public, schools, and scientific researchers will have access to interactive marine debris data and GIS maps.
- Teachers and their students across the world will have access to marine debris data to use in their lessons, and local schools will have the ability to work directly with project investigators and partners in viewing data, participating in cleanups and contributing to the database.
- Project staff and others around the world can use the data and protocols developed in this project to target further pollution prevention and outreach efforts.
- Overall, the quantities of marine debris in the ocean and on the shore, which is potentially harmful to wildlife, people, vessels, and the economy, will diminish over time.



Project Timeline

Spring 2008

Develop and launch web-based system for reporting of marine debris; install dumpster at Fisherman's Co-op for collecting derelict gear; install monofilament recycling bins at several locations from Durham to Seabrook, NH

Summer 2008

Conduct underwater mapping; start collecting data from fishermen and cleanup volunteers via project web site.

Fall 2008

Finalize best management practices (BMP) manual. Hold public workshop about project and training about BMP for dealing with marine debris

Throughout Project

Conduct shoreline cleanups, and conduct outreach with fishermen, the general public and schools.

What Can You Do to Help?

- **If you are a commercial or recreational fisherman**, participate by bringing lost gear found at sea (with the exception of lobster traps) to the Yankee Fisherman's Co-op and deposit it in the waste-to-energy dumpster. Bring your monofilament fishing line to the Co-op or to any monofilament recycling bin. Bins will be placed at most major NH marinas and tackle shops by this summer; locations can be found online at www.nhmarinedebris.org.
- **Participate in a beach cleanup!** Blue Ocean Society schedules community cleanups open to the public each month, or you can adopt a beach.
- **Report marine debris.** If you collect litter while walking on the beach or out boating, report it online at our project web site.
- **Monitor a monofilament bin.** We're looking for volunteers to help monitor and collect fishing line from the bins placed at marinas and tackle shops.
- **Teachers: involve your students!** Classroom presentations and educational materials are available. Schedule a beach cleanup with your class. We will soon have activities that you can do with your students based on our project web site.

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