

North Carolina Marine Debris Action Plan: 2021 Accomplishments Report

The [North Carolina Marine Debris Action Plan](#) (Action Plan) provides a strategic framework for prevention and removal of marine debris along the North Carolina coast. In 2021, it inspired strategic coordination, focus and direction for the organizations and communities that address marine debris on many levels.



The reader should keep in mind that these are highlights and major accomplishments captured through work groups of the Action Plan. Action Plan partners and many others conducted an impressive amount of work that is not reflected here.

GOAL 1: LEAD AND COORDINATE



Efforts for applying the Action Plan were led by the N.C. Marine Debris Action Plan Advisory and Implementation Committee.

- The full committee held three meetings and collectively worked to present highlights of ongoing projects during the N.C. Marine Debris Symposium.

Additionally, there are 8 established subcommittees that met in-between the committee meetings, including the Leadership Team that established a schedule and guidelines and met six times.

GOAL 2: PREVENT

N.C. GreenTravel Initiative listed **eight new** certifications and collaborated with N.C. Clean Marinas to develop a **Green Marinas** application for the N.C. GreenTravel Initiative.

Twenty-three businesses were recruited as Ocean Friendly Establishments (OFEs) and partnerships were maintained coastwide.

- OFEs is led by N.C. Aquariums and Plastic Ocean Project with sponsors supporting each chapter, including Coastal Carolina Riverwatch, Ocean Fest and North Carolina Coastal Federation (Coastal Federation).

The K-12 Education subcommittee published an [Education Strategy](#) and [Marine Debris K-12 Educator Resource Guide](#).

- Partner groups educated **6,940 K-12 students** about marine debris, and an additional **797 educators and professionals**.
 - UNCW MarineQuest educated a majority of these K-12 students.
- Duke University Marine Lab (DURL) led training for teachers on their [Marine Debris Curriculum](#).



GOAL 2: PREVENT (continued)



Photo by Keegan-Callender

The 9th annual [N.C. Marine Debris Symposium](#) was held virtually. Local, regional, and global speakers and attendees focused on collaborative and sustainable circular-based solutions to prevent and remove marine debris in N.C.

Through Ocean Conservancy, a total of **1,658 volunteers** including public representatives and government officials removed **24,661 pounds** of marine debris statewide during this year's International Coastal Cleanup season.

"Wilmington Resolution to Promote the Reduction of Plastic Waste in our City and the Commendation and Support of Businesses Participating in the Ocean Friendly Establishments Program" led by [Plastic Ocean Project](#) and Ocean Friendly Establishments passed unanimously in the City of Wilmington.

On July 15th, 2021, the Coastal Federation was joined by researchers, scientists, local legislators, and participants from over 29 countries around the world to learn the latest research on microplastics during the [North Carolina Coastal Microplastics Forum](#).

[GreenToGo](#) is a newly implemented reusable take-out container service that helps to reduce the amount of trash that goes into landfills and improve quality of life for the Durham community.

- Their boxes are durable and long-lasting take-out containers which are 100% reusable. They are washed and sanitized in commercial dishwashers meeting health code standards.

GOAL 3: REMOVE



The Coastal Federation led the seventh year of the Lost Fishing Gear Recovery Project working with **60 commercial watermen and women to remove 3,009 crab pots** from coastal waters with funding from the N.C. Commercial Fishing License Resource Fund.

In partnership with the N.C. Division of Coastal Management, the Coastal Federation contracted with watermen and women to remove **419.41 tons (838,820 pounds)** of large-scale marine debris from coastal waters.

- Over the course of ten cleanup events, volunteers helped remove **1.675 tons (3,350 pounds)** of small-scale debris.

GOAL 3: REMOVE (continued)

Cape Lookout National Seashore led an interactive social media campaign called #MyCleanOcean, to reduce the amount of plastic in the marine environment. The goal is to inspire the public to stop using single-use plastics and move to more environmentally friendly consumer choices when making purchasing decisions.

- These ideas were highlighted in an exhibit of a wire-framed sculpture of a bottle-nosed dolphin that visitors filled with marine debris during beach clean-up events, or even on their own while visiting the beautiful beaches of Cape Lookout National Seashore. The dolphin sculpture was created by artist Steve Zawistowski and is a prominent way to bring visibility and awareness to this ongoing campaign.
- Similar efforts took place with a Sea Turtle Sculpture at Hammocks Beach State Park and a campaign around #hammocksbeachhero led by Coastal Carolina Riverwatch.



Photo by Cape Lookout National Seashore



Photo by Hammocks Beach State Park

Various entities of volunteer groups were involved in marine debris reduction projects.

- The Coastal Federation hosted Conservation Corps groups that included AmeriCorps members. These groups conducted cleanups at Portsmouth Village, Cape Lookout and Carolina Beach State Park and **removed 8,840 pounds total over 10 days.**
- UNC-Wilmington led an After School Kids Mentoring Experience with about a dozen schools in the community where students were involved in cleanups and accompanying programs.

The National Oceanic and Atmospheric Administration's (NOAA) Resource Advisor Training occurred in the Southeast. Resource Advisor's serve as field observers during marine debris removal operations and ensure coastal resources are protected and best management practices are followed during removals.

NOAA's [North Carolina Marine Debris Emergency Response Guide](#) was updated and included as a resource document in planning and response procedures for the Department of Environmental Quality. It is also available through the State Emergency Operations Center.



GOAL 3: REMOVE (continued)



An ArcGIS Online abandoned and derelict vessel inventory map was created by the N.C. Wildlife Resources Commission with input from partners and was refined and officially put into use in 2021 and is available for the public.

- Enforcement officers along the coast who were trained in its use submitted reports of abandoned vessels using an ArcGIS Field Maps application.

GOAL 4: PREVENT AND REMOVE ABANDONED & DERELICT VESSELS

The N.C. Wildlife Resources Commission (NCWRC), Coastal Federation and the Division of Coastal Management oversaw the largest coordinated vessel removal operation in North Carolina history, **removing a total of 115 abandoned and derelict vessels.**

- NCWRC **removed 38 vessels** under funding through the North Carolina General Assembly.
- The Coastal Federation **removed 24 vessels** under funding through Natural Resources Conservation Service, Emergency Watershed Protection program, in partnership with the Division of Coastal Management, **20 vessels** under funding through National Oceanic and Atmospheric Administration Marine Debris Program, and **33 vessels** under funding through the National Fish and Wildlife Foundation.



The current abandoned and derelict vessels (ADV) database is a result of the ongoing reassessment efforts from the Coastal Federation, the Division of Coastal Management, and the N.C. Wildlife Resources Commission.

- N.C. Wildlife Resources Commission will continue to maintain and update this database as vessel removal projects are completed.
- The database will be updated by utilizing the ArcGIS Online Collector application.
- Data management efforts from the Division of Coastal Management and the N.C. Wildlife Resources Commission will hopefully provide an opportunity for partners to contribute vessel data updates, as well as access to the vessel data for ADV removal work.

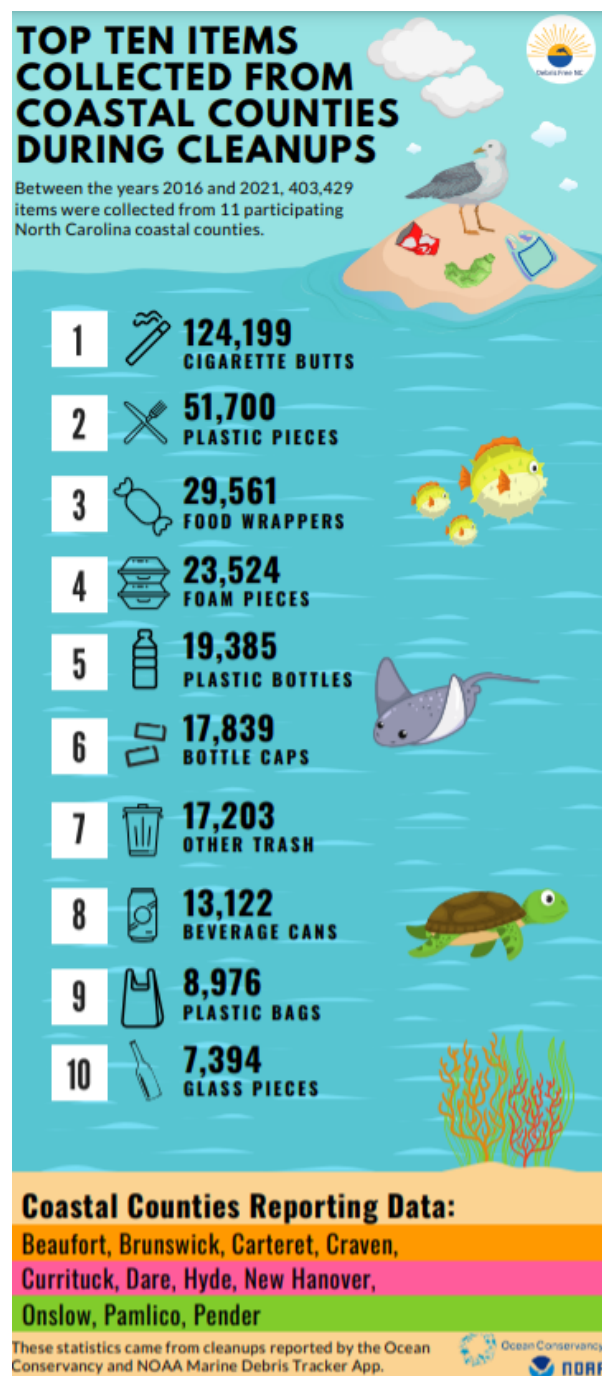
GOAL 5: RESEARCH AND ASSESSMENT

Students from Duke Engage worked with N.C. Sea Grant, the U.S. Fish and Wildlife Service, and Coastal Federation to summarize existing N.C. trash clean-up data from the Marine Debris Tracker app and the Ocean Conservancy.

- Results were shared with others through the N.C. Environmental Educators LunchTime Discovery Series, the NC Debris Free Facebook page, and a [N.C. Sea Grant Currents blog](#).
- Graphics were also produced and are available from the Coastal Federation.



Waterkeepers Carolina with its member organizations launched a [two-year study](#) to collect surface water and sediment samples to better understand the volume of microplastics and macroplastic pollution in North Carolina's streams, rivers, lakes, and bays. Plastic Ocean Project is doing an analysis of these samples.



Graphic designed by DukeEngage students

As part of the Water Quality for Fisheries project, the Coastal Carolina Riverwatch (CCR), with assistance from East Carolina University's Center for Survey Research, surveyed commercial and recreational fishermen to better understand their water quality concern for fisheries.

- Plastic pollution was identified as one of the top five priority topics and CCR compiled information to identify what is being done to address this form of pollution and recommended actions to close gaps. Survey results are available on the [CCR webpage](#).

GOAL 5: RESEARCH AND ASSESSMENT (continued)



N.C. Sea Grant and N.C. State University completed sampling for their [research project](#) aimed at understanding how much macro- and microplastic is being delivered through the Neuse River to the Pamlico Sound.

- Fifteen locations in the Neuse River watershed were sampled for plastics over a one-year period using various methods including fine trawl nets, in-stream and riparian area trash collection, stationary trash collectors, and visual assessments of floating debris. Data continues to be analyzed and results will be shared in 2022.
- Partners include the University of North Carolina Wilmington, Plastic Ocean Project and Sound Rivers.

ADVISORY & IMPLEMENTATION COMMITTEE

These logos represent partners who participated in the Advisory & Implementation Committee in 2021, but does not include all involved in Action Plan Subcommittees. These groups are currently taking the lead, but we can't do it alone, and welcome others to join!

Please email sarajh@nccoast.org if interested.



Stay connected through our Debris Free NC pages on Facebook and Instagram!