

## DEBRIS REMOVAL IN BEAUFORT HARBOR AND THE NC NATIONAL ESTUARINE RESEARCH RESERVE

Applicant: Town of Beaufort, 701 Front Street, Beaufort, North Carolina, 28516

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### PROJECT SUMMARY

The Town of Beaufort, NC, in partnership with the North Carolina National Estuarine Research Reserve (NCNERR), proposes to improve habitats in Beaufort Harbor and the adjacent waters of the Rachel Carson Reserve through the removal of abandoned moorings, derelict vessels, derelict fishing gear and other medium and large debris items. The project is part of a harbor management strategy that is currently being developed by the Town and its stakeholders. The expected amount of debris to be removed is approximately 46,000 lbs, which will restore the footprint of approximately 10,000 ft<sup>2</sup> (.23 ac) of submerged bottom habitat, 2,000 ft<sup>3</sup> of water column habitat, and 1 acre of shoreline marsh habitat. This project will restore and protect coastal habitats, including habitat for protected species with a secondary benefit of enhancing navigation safety and aesthetics. The local community will be engaged through hands-on participatory learning and volunteer opportunities, which will result in about 230 volunteer hours contributed. Education and outreach efforts such as publications, social media posts, and field trips will be conducted by the Town, Reserve, and Boat US Foundation and will target community members, students, teachers, scientists, coastal managers, and boaters both locally and nationwide. Additionally, the Tow Boat US Foundation will produce a video that will document all aspects of the project. An additional documentary video will be produced and distributed to a large audience with the purpose of educating the general public, including the boating community, and Tow Boat US members about estuarine habitats, the issue of marine debris, and importance of the project. The overall one-year project cost is \$171,666.80, with \$103,777.8 of non-federal match and \$67,889 in cash grant funds being requested from the NOAA Marine Debris Program. It has been verified that no coastal development or environmental permits will be required for removal of debris as described in the methods provided in this proposal. However, if site conditions change and any type of excavation of sediment is required to remove one or more debris items, a Coastal Area Management Act Major Permit issued by the NC Division of Coastal Management (DCM) will be required. The DCM is supportive of this project and will work with the Town and Reserve (a program of DCM) to ensure that the project is compliant will all coastal development laws.

The Town of Beaufort (34.7144°N, 76.6588°W) and the nearby Rachel Carson Reserve (34.7104°N, 76.6602°W) are located along North Carolina's central coast in the White Oak River Watershed. The project debris removal area, Beaufort Harbor/Taylor's Creek (34.7126°N, 76.66031°W), are located just south of the town and along the north side of the Rachel Carson Reserve and is a focal point for recreation, tourism, fishing, and boating activities. Beaufort's Harbor and the waters of the Reserve can have as many as about 50 boats anchored or moored (all moorings are illegal) at a time, not including fishing or recreational boaters who anchor for the day. Some of the boats are transient and only stay a few days or weeks; others are "stored" in the harbor; and several people live aboard their vessels throughout the year. The Reserve is protected and managed as an outdoor laboratory and classroom where students and researchers study coastal ecosystems and processes. One of the primary management challenges at the Rachel Carson Reserve and Beaufort waterfront is marine debris originating from the harbor such as improperly secured boats, sunken vessels, abandoned moorings, and derelict fishing gear. At times, unsecured boats, either sunken or floating land on marsh habitats within the Reserve and harbor. These debris items are almost impossible for Town and Reserve staff and volunteers to move and are more likely to cause habitat impacts than smaller pieces of debris.

The Rachel Carson Reserve and the harbor waters within its boundaries are considered NOAA Trust Resources due to their affiliation with the National Estuarine Research Reserve System. Additionally, the Reserve and Beaufort Harbor protects and/or provides habitat for the following NOAA Trust Resources that are anticipated to experience long-term ecological benefit from debris removal activities: commercial and recreational fishery resources (marine fish and shellfish and their habitats); endangered and threatened marine species and their habitats; sea turtles and their habitat; Essential Fish Habitat; and coastal habitats including marshes. Removal of vessels, moorings, and other medium to large items of debris from these and other important coastal habitats will help restore biological function that may have been hindered by plants and animals losing habitat needed for movement, feeding, shelter, and/or settlement and reproduction. Additionally, removal of the debris will reduce entanglement and ingestion risk for wildlife; support healthy habitats that are less susceptible to invasive species; remove toxins from the estuarine environment; and remove snags that collect fishing gear and boat anchors. Federally listed (threatened (T) or endangered (E)) species that will likely benefit from project outcomes and have been documented using Beaufort Harbor and Reserve habitats are: piping plover (T,E), red knot (T), West Indian manatee (E), seabeach amaranth (T), green turtle (T), and loggerhead turtle (T). Atlantic sturgeon (E), leatherback turtle (E), hawksbill turtle (E), and kemp's ridley turtle (E) are known to be in the vicinity, but have not been formally documented in the proposed project area except for a few during strandings.

Letters of support and/or commitment are attached and provided by the NCNERR, NC Division of Coastal Management, and Tow Boat US Foundation. Marine debris removal activities will commence on September 15, 2018. A full timeline and project scope is found, below.

<b>PROJECT TIMELINE AND SCOPE</b>	<b>1st Quarter (Jul-Sep '18)</b>	<b>2nd Quarter (Oct '18-Dec '19)</b>	<b>3rd Quarter (Jan-Mar '19)</b>	<b>4th Quarter (Apr-Jun '19)</b>
<i>Task and Technique</i>				
Town prepare contracts, set-up	X			
Project personnel and Tow Boat US review existing debris sonar maps and conduct pre-removal planning	X	X		
Resolve any outstanding legal and/or ownership issues of debris that has arrived since application submission	X			
Remove medium and large debris items using professional towing company (Tow Boat US, Atlantic Coast Marine Group)		X	X	X
Tow Boat US Foundation collects documentary film footage; edits and produces films; and releases and promotes films	X	X	X	X
Remove general shoreline debris along Shores of the Town and Reserve using volunteers	X	X		X
Provide educational field experiences through new and established Reserve programming	X	X		X
Town, Reserve, and Boat US Foundation educate through presentations, online outlets, and print	X	X	X	X