

Bulkheads raise environmental concerns on N.C. coast

By [Jeff Hampton](#)
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GRANDY, N.C.

Bob and Judy Brace enjoy listening to the lap of the Currituck Sound as they spend evenings in the backyard of their Waterview Shores home.

"We love it here," Bob Brace said.

The property they love is protected by a bulkhead along the shore that keeps their land from washing away and serves as a place to secure their 19-foot pleasure boat and 12-foot skiff, Brace said. The Braces, who moved to Currituck from Goochland, Va., know that without the bulkhead, there might be no evenings by the sound and days on the water to enjoy.

The Braces are among thousands in Currituck and other coastal counties with bulkheads and piers on their waterfront property. But the man-made structures could be affecting aquatic life and causing erosion on neighboring wetlands.

To find out what might be happening along North Carolina's 12,000 miles of estuarine shoreline, the North Carolina Department of Environment and Natural Resources has spent about two years constructing an online map marking the piers, docks and bridges, and miles of bulkheads.

Over the next few years, scientists could use the map to determine whether a cluster of piers and docks coincides with depleted fishery habitats, said Kevin McVerry, a GIS contractor for the state and one of the creators of the map. Many environmental scientists believe man-made structures over the water are blocking sunlight and could be diminishing the growth of sub-aquatic vegetation needed for young fish to thrive.

McVerry plans to calculate the square footage of piers, docks and bridges in all 20 counties and use that to show how much shadow they cast. Currituck's bridges and piers account for more than a million square feet, while in Dare the same structures cover 5.8 million square feet.

In areas with miles of bulkheaded property, permitting agencies may recommend more natural shore protection, such as marsh or piles of rock known as riprap, he said.

Land owners need state permits based on the Coastal Area Management Act before building waterfront structures. Typically the process is routine, but it can get lengthy and complicated depending on the size and scope of the project. The map could add another layer to getting a permit.

"We are not going to use this map as a basis to deny anyone a CAMA permit," said Michele Walker, spokeswoman for the North Carolina Division of Coastal Management. "However, this is a way that DCM can better understand estuarine development trends."

Currituck and Dare are among the counties with the most miles of estuarine shoreline and the most docks and bulkheads. Currituck has 1,092 miles of estuarine shoreline with 1,478 piers - a little more than one per mile. Dare has about three per mile - 3,011 on 1,030 miles of shoreline. Carteret County leads the state with 1,725 miles of shoreline and 5,834 piers.

The map includes bodies of water such as sounds and their tributaries, upstream to where they are 20 feet wide.

An estuary is a body of water fed by freshwater rivers and saltwater inlets and is an excellent habitat for aquatic animals. The Currituck Sound was once considered home of some of the nation's best bass fishing. The Pamlico and Albemarle sounds and the rivers that feed them are renowned for blue crab. The seafood industry in the state's estuarine systems earns millions annually and provides hundreds of jobs.

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