

USING APPROPRIATE ESTUARINE SHORELINE STABILIZATION METHODS THROUGH POLICY REVISIONS AND EDUCATION IN NORTH CAROLINA

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Estuarine shorelines are dynamic features that experience continued erosion. Land is lost by short-term processes, such as erosion by storms, boat wakes, and tidal currents occurring within the long-term process of rising sea level. As coastal populations encroach on estuarine shorelines, coastal states have begun to formulate new policies and management strategies to deal with estuarine shoreline erosion. These policies and strategies seek to strike a balance between the need to provide property owners with options to protect their investments from coastal hazards and the need to maintain the integrity of the natural system.

To protect coastal property, North Carolina (through its regulatory permitting program) has allowed estuarine waterfront homeowners to armor the waterward boundary of their property with vertical and sloped structures, such as bulkheads and revetments. These methods are effective, but due to the shoreline-type-specific habitats and structure impacts, it is becoming apparent that some stabilization methods are not necessarily appropriate for all shoreline types. The North Carolina Division of Coastal Management (NCDQM) and the Coastal Resources Commission (CRC) concluded that more research and discussion was needed between managers and researchers to effectively address and understand the impact of shoreline stabilization methods on the habitats and productivity of estuarine systems.

The CRC charged the North Carolina Estuarine and Physical Processes Work Group (a science-based panel) with first producing a report with recommendations on appropriate shoreline stabilization methods for different North Carolina estuarine shoreline types. The Work Group did not conduct any research, but merely utilized prior research and best scientific judgment in developing recommendations by the stated goal of maintaining the current shoreline type and continuation of the current ecological functions and values. The report was submitted to an Estuarine Shoreline Stabilization Subcommittee to help guide the development of new estuarine shoreline stabilization rules. As rule changes take place, the NCDQM and CRC are developing strategies to better educate homeowners, realtors, contractors, and developers on appropriate methods of shoreline stabilization. The NCDQM and CRC believe that these rule revisions and educational techniques will lead to better shoreline stabilization choices within the North Carolina estuarine system.

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