
Town of Nags Head

Nags Head Estuarine Shoreline Plan

Nags Head, North Carolina



Stakeholder-driven planning guides the implementation of a trail system that enhances local ecology while connecting a campus community to the cultural and natural heritage of the land.

SERVICES

Climate Adaptation
Coastal Resilience
Ecological Restoration
Research & Development

Shoreline erosion is consuming thousands of acres of land each year and reducing the area of salt marsh all along the east coast. In the Town of Nags Head, the shoreline has receded up to 275 feet over recent decades, with acres of marsh converting to open water. Their Estuarine Shoreline Management Plan is a comprehensive effort to address the management of 17 miles of estuarine shoreline in the Town while balancing land use, ecosystem health, public health, and recreational opportunities. This planning effort characterizes the shoreline and its historical changes; identifies shoreline best management practices, uses, and policy; explores the legal and regulatory context of shoreline management and nature-based solutions; and considers the impacts of future hazards such as sea level rise and storm surge.

Biohabitats, with planning and engineering support from Moffatt & Nichol, is developing shoreline management typologies that can be applied along the entire length of the Town of Nags Head shoreline. The current shoreline conditions range from natural marsh to bulkheads, and the planning team is developing options to attenuate wave energy and improve habitat all along the estuary. This process starts by considering historic and current erosion rates, wave energy modeling, and other shoreline design factors. The team is collaborating with the Town to prioritize the assets and amenities to identify sites that offer multiple benefits and a clear pathway toward implementation. The final plan will include concept-level site planning and cost estimates for three selected locations.