

RESIDENTIAL SHOREFRONT PROTECTION

Chatham, MA

The shoreline at this pre-1978 Chatham residence, once well vegetated, had been experiencing significant erosion and slumping with severe loss of mature trees, shrubs and grasses, due to elevated storm tides post 2007 breach in Nauset Beach. This has resulted in the dwelling being so close to the top of the eroding coastal bank that it was in jeopardy of storm damage.

Coastal Engineering Co. together with Coastal Advisory Services performed a study that ultimately helped permit and construct a mixed fiber roll/rock revetment shorefront protection. Based on the MA DEP Wetlands Map, the site contained Coastal Beach and Coastal Dune. However, based on site visit observations and sediment sampling, a Coastal Dune did not exist on the site anymore. Instead, there existed a Coastal Bank. This distinction is very important in the consideration of any coastal erosion control alternative relative to compliance. Structural armoring of a Coastal Dune is generally not permitted, while structural armoring of a Coastal Bank can be considered if the site meets certain criteria. The final design was determined to be a beneficial solution both to the environment and the protection of dwelling.

SERVICES

- Topographic survey of the property and the affected areas on the coastal bank
- Engineering design of mixed fiber roll/rock revetment system
- Environmental permitting
- Construction administration for coastal construction, nourishment, and vegetation
- Annual monitoring per order of conditions

