## RESIDENTIAL SHOREFRONT PROTECTION

Chatham, MA

Due to drastic changes in the Chatham Harbor shoreline, the existing rock revetment on this shorefront property overlooking the harbor had deteriorated to such an extent that the revetment was in imminent danger of collapse — posing a potential threat to the safety of both the boats that use the channel and the existing house at the top of the coastal bank.

To remedy the situation, an immediate request for emergency repairs was filed with and approved by the local Conservation Commission. First, the armor stones on the lower sections of the revetment were stabilized. Next, the top section of the revetment was replaced with a new revetment design using concrete mats and anchors that were installed and "keyed" into the soil. Then, the replaced armor stones from the top section were added to the lower sections to further stabilize the entire revetment.

Once this construction phase of the project was completed, the area above the revetment — from behind the top rock apron to the sloped edge of the coastal bank — was re-vegetated with native grasses and salt-tolerant plantings.

## SERVICES

- Shorefront evaluation and consultation
- · Coastal engineering design and plan preparation
- · Environmental permitting
- · Construction contract administration and oversight
- Construction inspection services.



