

# STAGE HARBOR DREDGING AND HARDING'S BEACH NOURISHMENT

Town of Chatham, MA

Stage Harbor located on the southern tip of Chatham is home to the Chatham Harbormaster and Trap Dock, numerous marinas, public landings, yacht clubs and beaches, making it a heavily trafficked harbor both commercially and recreationally. The harbor inlet connects directly to the Nantucket sound. Located along the Northwest side of the inlet is Harding's Beach, a public beach in Chatham which has been experiencing erosion. Over the recent years, breaks through the barrier beach's southern extent, South Beach Island, have formed. These breaks have allowed the tidal waters which normally flow around Monomoy, to flow between Morris Island and Monomoy Island and across the Stage Harbor channel, depositing sand within the channel and creating a navigational hazard. To maintain its marine infrastructure and keep it safe and operable, the Town of Chatham dredged Stage Harbor channel and the repurposed the dredged sand by placing it on the nearby Harding's Beach as nourishment to protect from erosion. Coastal Engineering Company (CEC) was hired to conduct hydrographic survey of Stage Harbor channel and topographic survey of Harding's Beach before and after the maintenance activities. CEC has also designed the proposed dredge and beach nourishment areas and calculated the proposed dredge and beach nourishment volumes based on the existing bathymetry and topography. The post-dredge and post-nourishment hydrographic and topographic survey data was processed and used to calculate the actual volumes of sand dredged from the harbor's channel and placed on Harding's Beach.

## SERVICES

- Pre- and post-dredge hydrographic surveys
- Pre- and post-nourishment topographic surveys
- Marine engineering design for channel dredging and beach nourishment
- Volumetric calculations for dredging and beach nourishment
- Construction contract administration

