

EMERGING SEDIMENT MANAGEMENT EFFORTS ON CAPE COD: A LOCAL APPROACH

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INTRODUCTION

Due to increased rates of erosion, shoreline management and the protection of public beaches and infrastructure have become a priority for Cape communities. Through the development of a county dredge program, local sediment management plans, comprehensive dredge permitting, innovative funding programs, and public/private partnerships, many Cape towns have incorporated active sediment management as an important component of their overall shoreline management efforts.

BACKGROUND

The Barnstable County Dredge Program was established in 1997 to provide the fifteen (15) Cape towns with a cost effective means to undertake regular maintenance dredging of local waterways while providing beneficial reuse of all dredged materials. Over the past ten years, regular maintenance dredging has been conducted on over eighty (80) waterways throughout the Cape towns. During this time period, the focus of these maintenance projects has evolved, along with the planning, permitting and prioritizing processes for these projects.

AN EVOLVING PROCESS

As the County Dredge program successfully improved maintenance of local waterways, over time, recognition of the importance to use dredge material for area beach nourishment and management also began to emerge. In the first ten (10) years of operation, the dredge pumped over 1 million cubic yards of material onto Cape beaches. During this period, towns began to incorporate these dredge projects into more comprehensive efforts to manage both their waterways and adjacent beach areas. To accomplish this efficiently and effectively, towns have addressed a variety of challenges, including complex permitting issues, project planning and prioritization, and funding issues.

Permitting presents one of the greatest challenges to local shoreline management efforts. Traditionally, the small dredge footprints of each project within a community would require an individual permit, often with different expiration dates, time of year (TOY) restrictions and other project specific conditions. To address this issue, local officials have worked with CZM to develop comprehensive dredge permits, covering all waterways within a town. Through this process, towns are able to identify and permit multiple potential dredge material disposal sites that allow coastal managers to nourish different beach areas more effectively, based on current shoreline erosion trends and seasonal needs.

Recognizing the success of this type of approach, a number of towns have incorporated comprehensive permits, and innovative funding programs to pay for annual dredging and beach nourishment into local comprehensive sediment management plans. These plans provide the basis for proactive shoreline management planning, by helping communities prioritize future project needs and costs. These plans are developed to allow the greatest flexibility for coastal managers to proactively maintain and manage both local waterways and area beaches while responding to constantly changing environmental, regulatory and economic conditions.

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