

sediment transport, and determinations of sediment budgets, which can in turn be used to study and predict geomorphic changes (Byrnes, 2002).

In order to achieve meaningful results from a comparative analysis, historical data must be translated accurately to a common, contemporary horizontal datum. Further, detailed analyses of the accuracies and uncertainties associated with the vertical data (soundings) must be conducted in order to assess the reliability of the comparative analysis for the calculation of sediment volumes. With uncertainties accounted for, these calculations may be used to quantify the net movement of sediment into and out of a study area and associated long-term net transport rates, to assess changes to sediment volumes, and to evaluate changes in nearshore bathymetry.

Recognizing the importance of the Monomoy Barrier Beach system to the local community and its significance as a coastal resource and habitat, further study of the system (beyond the scope of the current study) that incorporates a detailed and quantified assessment of historical bathymetric data depicted on the H-sheets would be an important contribution to contemporary coastal zone management decisions that will affect the long-term sustainability of areas such as the Monomoy Barrier Beach system.

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