of past sea level. Research in ice sheet modeling, tidal power development, Mi'kmaq habitation patterns, and coastal erosion dynamics requires a better understanding of relative sea level change in the region. To date, few paleoshoreline features have been recognized and those that are known to exist exhibit little continuity making the resolution of isobases for the region problematic. In this study, LiDAR (Light Detection and Ranging) data have been combined with multibeam bathymetric data in order to identify both submerged and exposed paleoshoreline features along the North Mountain from Brier Island to Cape Split.

As paleoshoreline features (beaches, deltas, terraces etc.) have specific geomorphic form, methods that are being employed include using surface profiles to examine the lateral continuity between raised shoreline features, detailed slope analyses, lineament identification, and surface roughness coefficient discrimination. Preliminary results indicate that discrete shoreline features are best developed in association with paleo-drainage corridors. Linear features (beaches and terraces) are most commonly evident where glaciogenic deposits are extensive. At a number of sites multiple terraces indicative of episodic isostatic or eustatic adjustment are evident on LiDAR imagery. Multibeam imagery shows promise in resolving discrete low stand shoreline features and ice sheet dynamics.

Evidence from LiDAR and multibeam data of post-glacial relative sea level change in the Bay of Fundy region, Nova Scotia

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The post-glacial isostatic and eustatic history of the Bay of Fundy region is poorly resolved. Ongoing landscape evolution combined with the macrotidal shoreline environment complicates both the identification and resolution of indcators

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