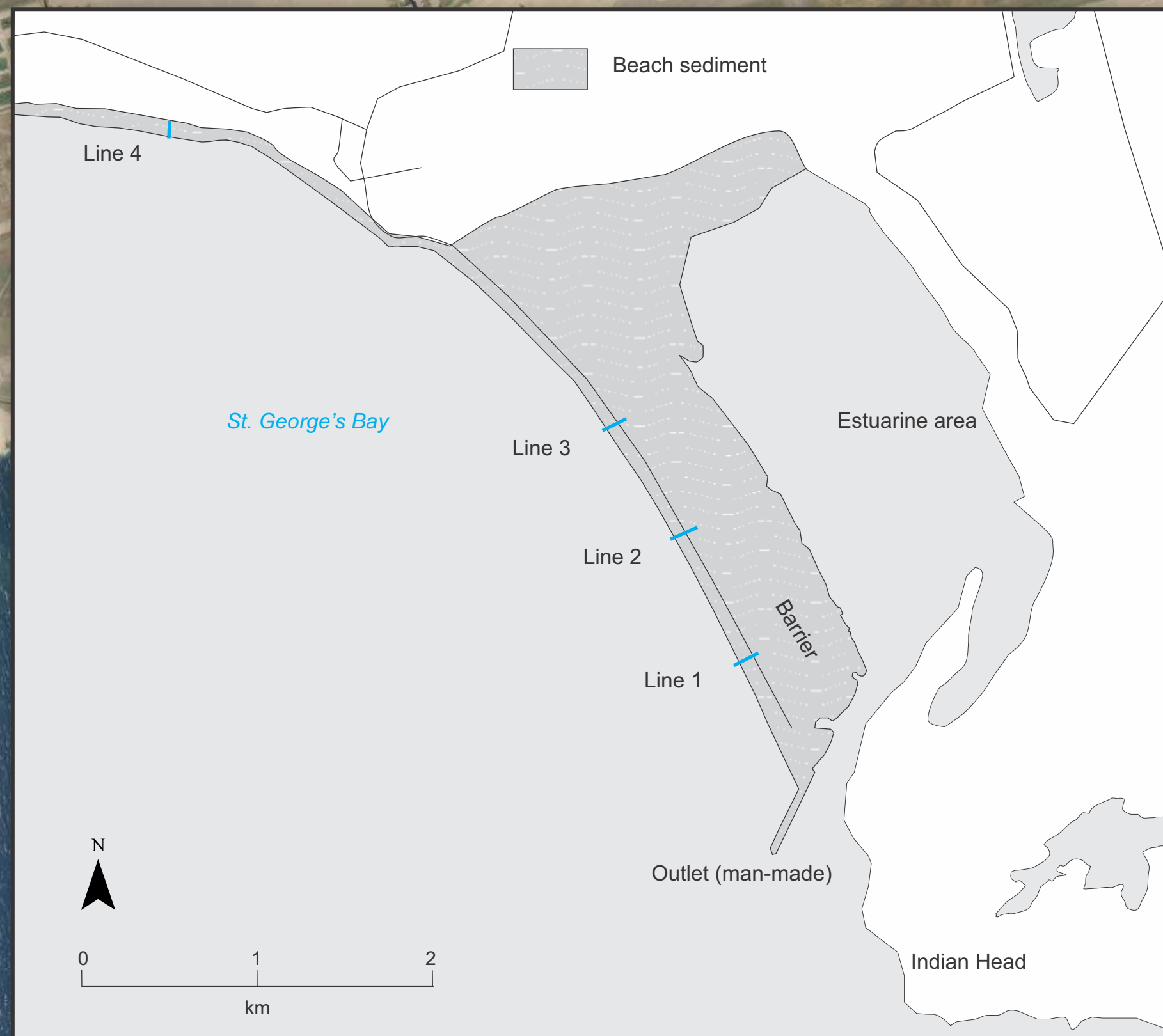


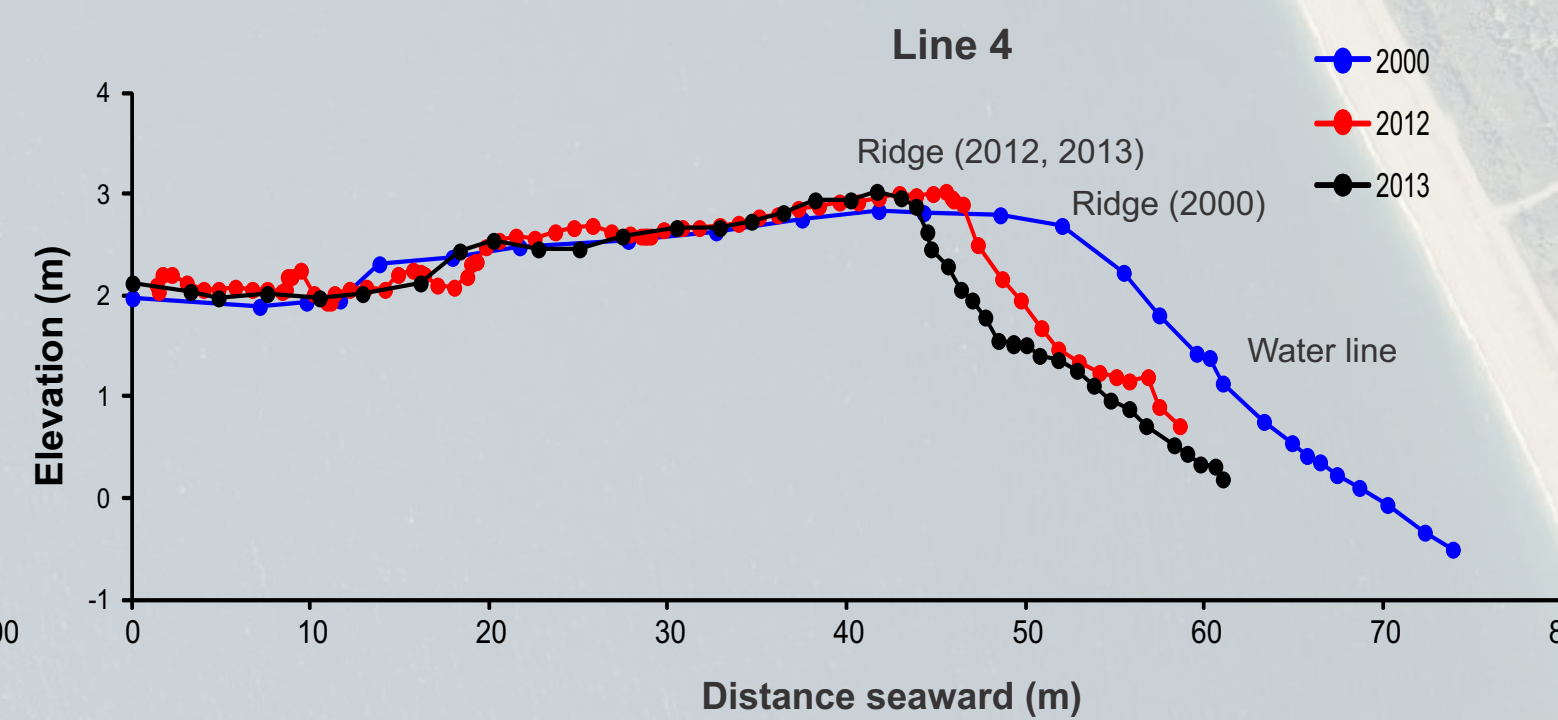
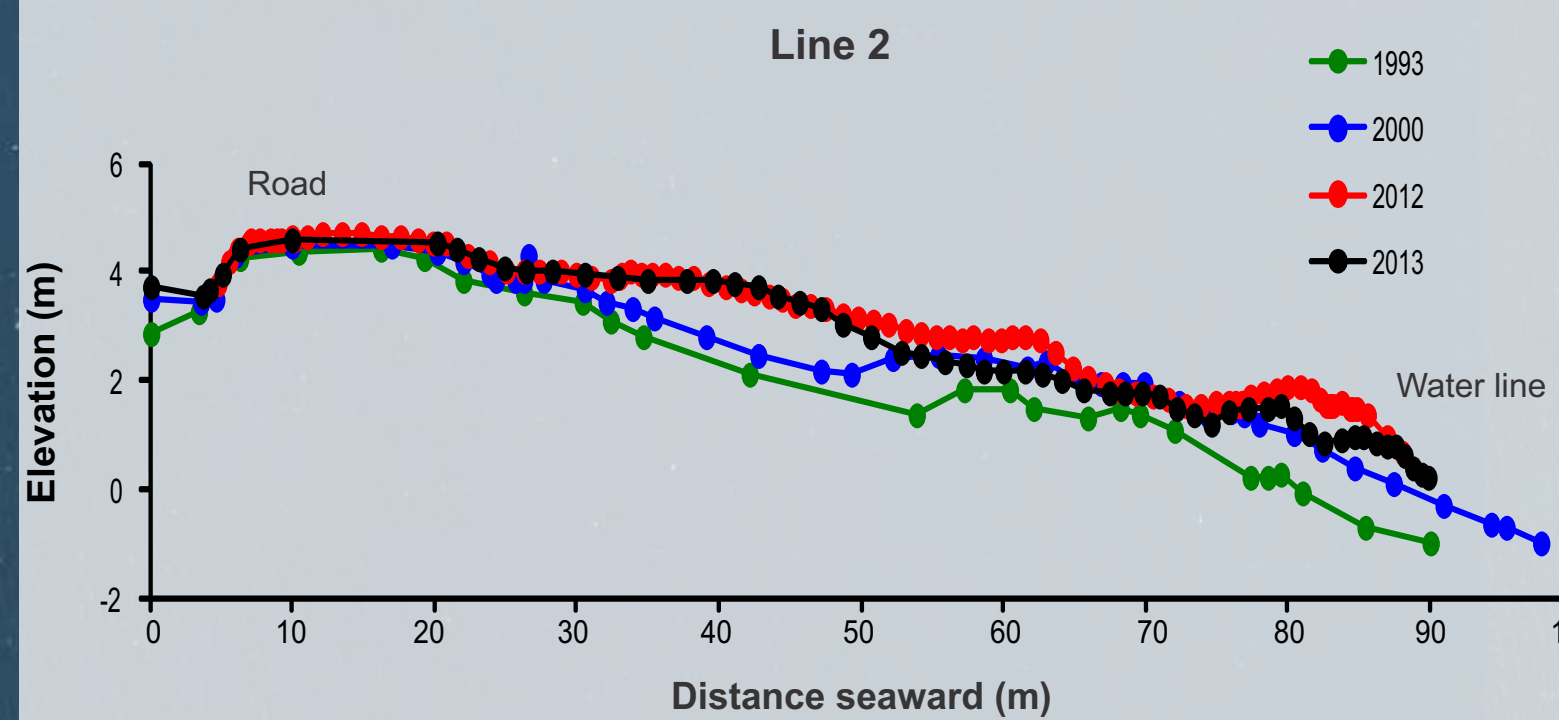
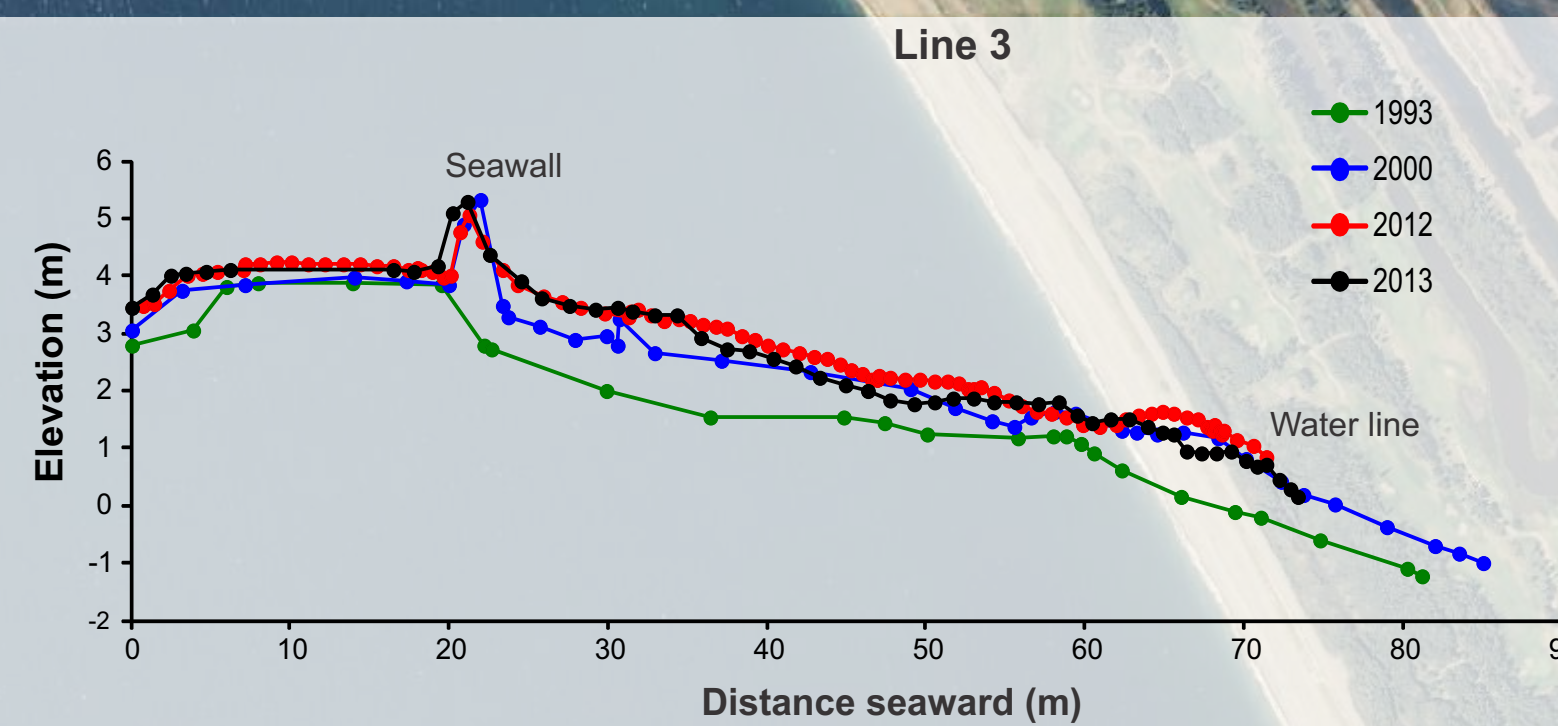
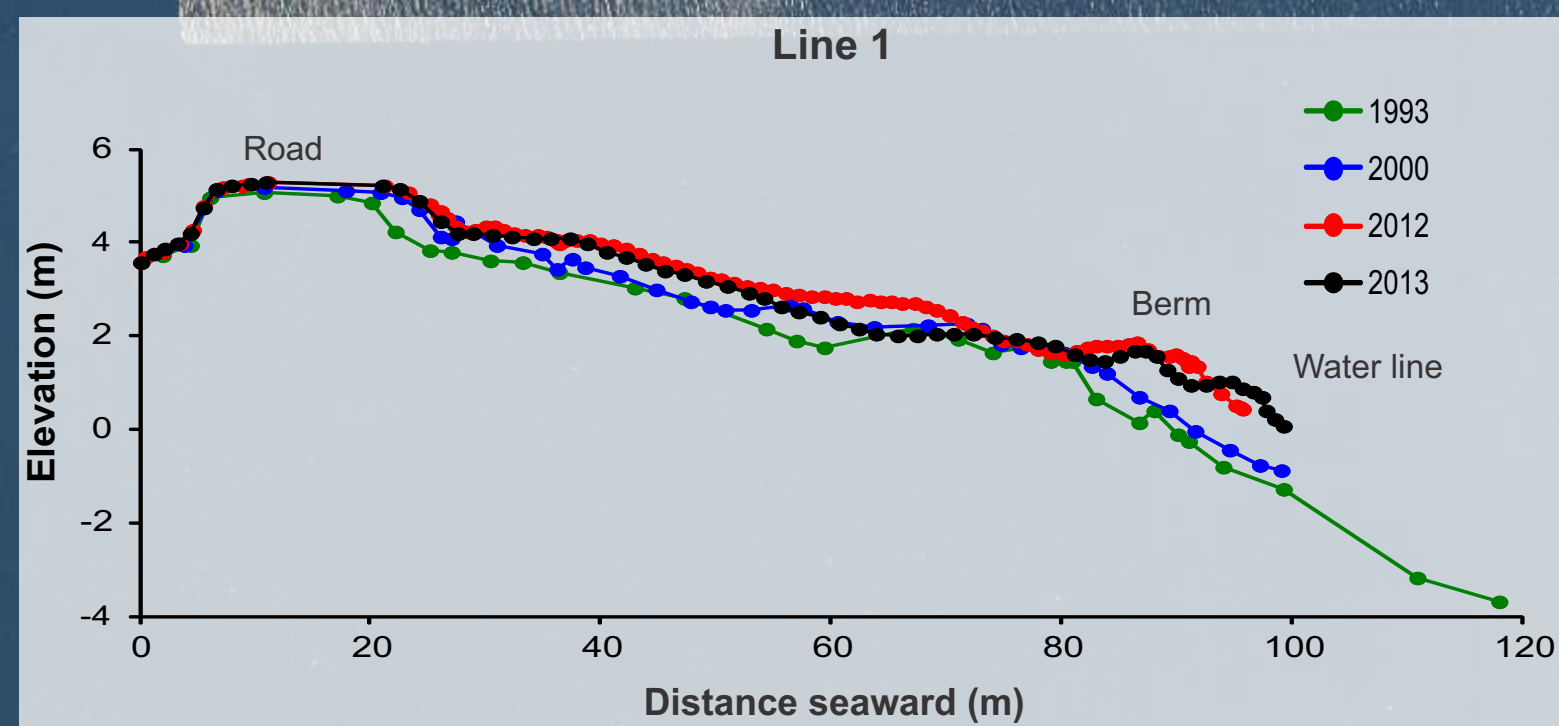
Coastal Monitoring Stephenville Beach

Site

The Stephenville site is on the north shore of St. George's Bay. The beach is approximately 5 km long and 1 km wide, and composed of well-rounded, flat gravel with some sand at the northwestern end. The southern 4 km of the beach consist of the Stephenville barrier, which encloses an estuarine area, in which a man-made channel cuts through the beach. The barrier is 1 km wide, and is composed of a beach ridge complex. Sediment is being supplied by the eroding glaciofluvial bluffs to the west.



Looking southeast towards Indian Head, in 2001 (photo A) and 2012 (photo B). In 2001 there was a more distinctive berm close to the high-tide line.



Northwest section of the Stephenville beach in 2013 looking west towards eroding cliffs (photo C).

Coastal change measurement

Topographic surveying was conducted in 1993, 2000, 2012 and 2013 at four beach transects at the Stephenville beach. Transect locations are shown as blue numbered lines on the map above. Line 1 (upper left graph), shows a small increase in the volume of sediment over time and variations in the location of the beach berms, with a vertical accretion in the lower foreshore in 2012 and 2013 compared to previous years. At Line 2 (lower left graph), the profiles show an increase in the beach volume between the earlier survey (1993) and the later surveys (2000, 2012 and 2013). At Line 3 (upper right graph), there is an overall increase in the volume of sediment between 1993 and the more recent survey years (2000, 2012 and 2013). At Line 4 (lower right graph), the beach ridge is migrating landwards, and the beach face was steeper during the 2012 and 2013 surveys than in 2000.