

Coastal Erosion in Nova Scotia

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The Geological Services Division has undertaken a pilot project to research issues related to coastal erosion in Nova Scotia. Information on rates of erosion, factors affecting coastal erosion, and an examination of the effectiveness of various erosion prevention structures and their effect on local topography are only some of the many aspects being studied. The Nova Scotia Department of Natural Resources library has an air photograph collection spanning almost 100 years. Using this image data set and various GIS applications, coastline positions can be mapped over historical increments of approximately 10 years. These data, as well as other data measured in the field, are being used to create a 1:10 000 scale map of an area from Seagrove east through Lorneville to the Amherst Shore in northern Nova Scotia along the Northumberland Strait (NTS 11E/13).

Rising sea level, coastal erosion, flooding and destruction of property and infrastructure is assuming an ever-increasing level of importance, both now and in the future. Nova Scotia is almost entirely surrounded by ocean and, as such, mapping and information of this type are very important for the general public, housing development, municipal and provincial governments, as well as other private sector companies. This type of mapping will also allow geoscientists to develop an in-house expertise on issues relating to coastal erosion and how it is affecting Nova Scotia on a regional basis.

The purpose of this pilot project is to investigate the best methods to be used for this type of mapping, determine the specific type of data sets to be collected, and to generate an initial product. Using this information, management and staff will determine the overall usefulness of this project, evaluate the map product, and determine if, how, where and at what scale this project should continue.