

LEGEND

Note: This is the complete legend for Open File Maps ME 2011-002 to 2011-012 (scale 1:25 000). This map is not intended for use as a geological map at 1:100 000 scale (note that many units at this scale are not clearly visible), but as an index map

CENOZOIC

QUATERNARY

HOLOCENE (postglacial)

Anthropogenic (A)

Artificial or geological material that has been disrupted and redistributed by human activity; texture highly variable. Note that many areas of residential communities and till veneer are mapped as the original material because of the sporadic and shallow nature of the modification.

Alluvial (Ap)

Gravel, sand, silt, minor clay and organic deposits. Deposited by active streams and rivers in channels and floodplains. Thickness estimated from 1–10 m.

Marine intertidal flat (Mf)

Sand, silt, clay and organic deposits. Sediment deposited on vegetated and nonvegetated mudflats in the intertidal zone of estuarine environments. Distribution based on aerial photographs (ca. fall 2003). Thickness estimated from 1–5 m.

Marine littoral (Ml)

Boulders, cobbles, sand and organic deposits. Coarser material predominant where drumlins form headlands; finer material forms beaches, barrier bars and spits. Sediments deposited or reworked in the littoral zone (i.e. foreshore and backshore) by wave action, longshore drift and eolian processes. Thickness estimated from 1–5 m.

Lacustrine (L)

Sand, silt, clay and organic deposits. Sediments deposited from suspension in freshwater lakes, ponds and wetlands; includes shoreline material deposited or reworked by wave action. May be underlain by till or glaciolacustrine material (sand, silt and clay with some dropstones). Thickness estimated from 1–5 m.

PLEISTOCENE (last glaciation)

Glacioluvial outwash (Gfp)

Gravel and sand deposits. Sediments deposited by proglacial meltwater forming outwash plains and terraces. Thickness estimated from 1–30 m.

Hummocky till (Th)

Beaver River Till is a diamicton with loose, sandy matrix and locally derived clasts. Surface topography is irregular with small mounds of till deposits. Sediments derived from subglacial erosion and meltout processes. These deposits may represent areas occupied by stagnant ice. Thickness estimated from 1–10 m.

Till blanket (Tb)

Beaver River Till is a diamicton with sandy matrix and locally derived clasts. Sediments deposited by ice and derived from subglacial erosion. Thickness estimated from 5–10 m (thick enough to mask irregularities of the underlying bedrock).

Till veneer (Tv)

Beaver River Till is a diamicton with sandy matrix and locally derived clasts. Sediments deposited by ice and derived from subglacial erosion. Thickness estimated from 0.5–5 m. Some areas include exposed bedrock and thicker till deposits (>5 m) of locally derived till.

Drumlins (Td)

Elongate landforms with long axes parallel to ice flow, composed of up to three tills: a core of Harten Till (observed only at coastal sections), overlain by Lawrencetown Till, and in some areas, overlain by Beaver River Till (described above). Harten Till is a diamicton with dark grey, compacted, clayey silt matrix, and predominantly locally derived and lesser distally derived clasts. Lawrencetown Till is a diamicton with brownish-red, compacted, clayey silt matrix, and predominantly distally derived clasts. Thicknesses of drumlins are affected by the surface relief of the landforms they are sitting on. In some instances depth to bedrock (determined from water well data, cf. Kennedy et al., 2009) exceeds the surface relief, suggesting material filled a preglacial topographic low or paleovalley. These thicknesses may exceed 30 m.

PALEOZOIC

Bedrock (R)

Bedrock exposed at surface or beneath shallow soil. It may include minor fluvial, lacustrine and till deposits. Exposed surface is glacially scoured with ice movement features, such as striae, which are indicated by symbols where identified. Obvious strike ridges seen on the LIDAR hillshade image represent more durable rocks within individual formations.

Symbols

Geological boundary

Map series index

Study area

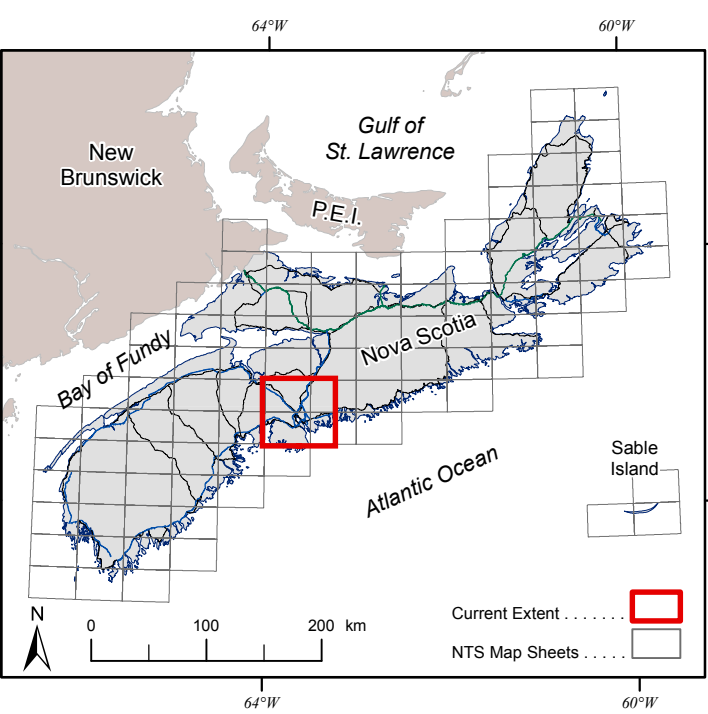
Aerial highway

Trunk highway

Collector highway

County boundary

Lake/ocean



Descriptive Text

This is an overview map showing the locations of the series of 11 surficial geology maps which are at a scale of 1:25 000. This series is based on mapping at a scale of 1:10 000 using a LIDAR derived bare-earth hillshade model. For more detailed information please refer to individual surficial geology maps (Open File Maps ME 2011-002 to -012).

Map Notes

Fieldwork and mapping were conducted from 2008-2010.

GIS databases, cartography and reproduction by Brian Fisher and Angie Elter of the Nova Scotia Department of Natural Resources, Geoscience Information Services Section, 2009-2011. The GIS databases and map were developed using ArcGIS/9.3.

Universal Transverse Mercator Projection (UTM), Zone 20, Central Meridian 63°00' West.

North American Datum (NAD) 1983 Canadian Spatial Reference System (CSRS) 98.

Base and digital data derived from the Nova Scotia Topographic Database (NSTDB). Copyright Her Majesty the Queen in Right of the Province of Nova Scotia. The NSTDB is available from Service Nova Scotia and Municipal Relations (SNSMR), Land Information Services Division (LIS), Nova Scotia Geomatics Centre (NSGC), Amherst, Nova Scotia.

Shaded relief image derived from a 2 m LIDAR bare-earth Digital Elevation Model, collected by PHB Lasermap for Halifax Regional Municipality in April 2007. Azimuth of 315°, sun angle of 45° and a vertical exaggeration of 5.

Nova Scotia Department of Natural Resources
Mineral Resources Branch
Open File Map ME 2011-001

**Overview Map Showing Locations of
Surficial Geology Maps of the
Halifax Metropolitan and Surrounding Areas,
Halifax and Hants Counties, Nova Scotia**

D. J. Utting
Scale 1:100 000

Halifax, Nova Scotia
2011

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Selected Bibliography

Fader, G. B. J. and Miller, R. O. 2008: Surficial geology, Halifax Harbour, Nova Scotia: Geological Survey of Canada, Bulletin 590, 163 p.

Finck, P. W., Graves, R. M. and Boner, F. J. 1992: Glacial geology of the South Mountain Batholith, western Nova Scotia, Nova Scotia Department of Natural Resources, Mines and Energy Branches, Map ME 1992-002, scale 1:250 000.

Kennedy, G. W., Garraway, K. G. and Fisher, B. E. 2009: Enhanced georeferenced version of the Nova Scotia Department of Environment's Nova Scotia well logs database (2008): Nova Scotia Department of Natural Resources, Digital Product ME 430, version 1.

Stea, R. R., Corley, H. and Brown, Y. (compilers) 1992: Surficial geology of the Province of Nova Scotia, Nova Scotia Department of Natural Resources, Mines and Energy Branches, Map ME 1992-003, scale 1:500 000.

Stea, R. R. and Fowler, J. H. 1979: Pleistocene geology map of the Eastern Shore region, Halifax and Guysborough counties, Nova Scotia (Sheet 3 of 3) [11D/14, 11D/15 and 11E/02 and parts of 11D/11 and 11E/03], Nova Scotia Department of Mines, Map ME 1979-014, scale 1:100 000.

Stea, R. R. and Fowler, J. H. 1981: Pleistocene geology and till geochemistry of central Nova Scotia (Sheet 4): Nova Scotia Department of Mines and Energy, Map ME 1981-001, scale 1:100 000.

Disclaimer

The information on this map may have come from a variety of government and nongovernment sources. The Nova Scotia Department of Natural Resources does not assume any liability for errors that may occur. This map is intended for use as an index map only. Not for use as a geological map at 1:100 000 scale.

Acknowledgments

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