

Base map from U.S. Geological Survey.

Coordinate System: Vermont State Plane, meters, NAD 83.

Digital cartography by George Springston, June21, 2014. Research supported by the Vermont Geological Survey,

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The views and conclusions contained in this document are

necessarily representing the official policies, either expressed

Quadrangle

**AGENCY OF NATURAL RESOURCES** 

**Vermont Geological Survey** 

Location

those of the authors and should not be interpreted as

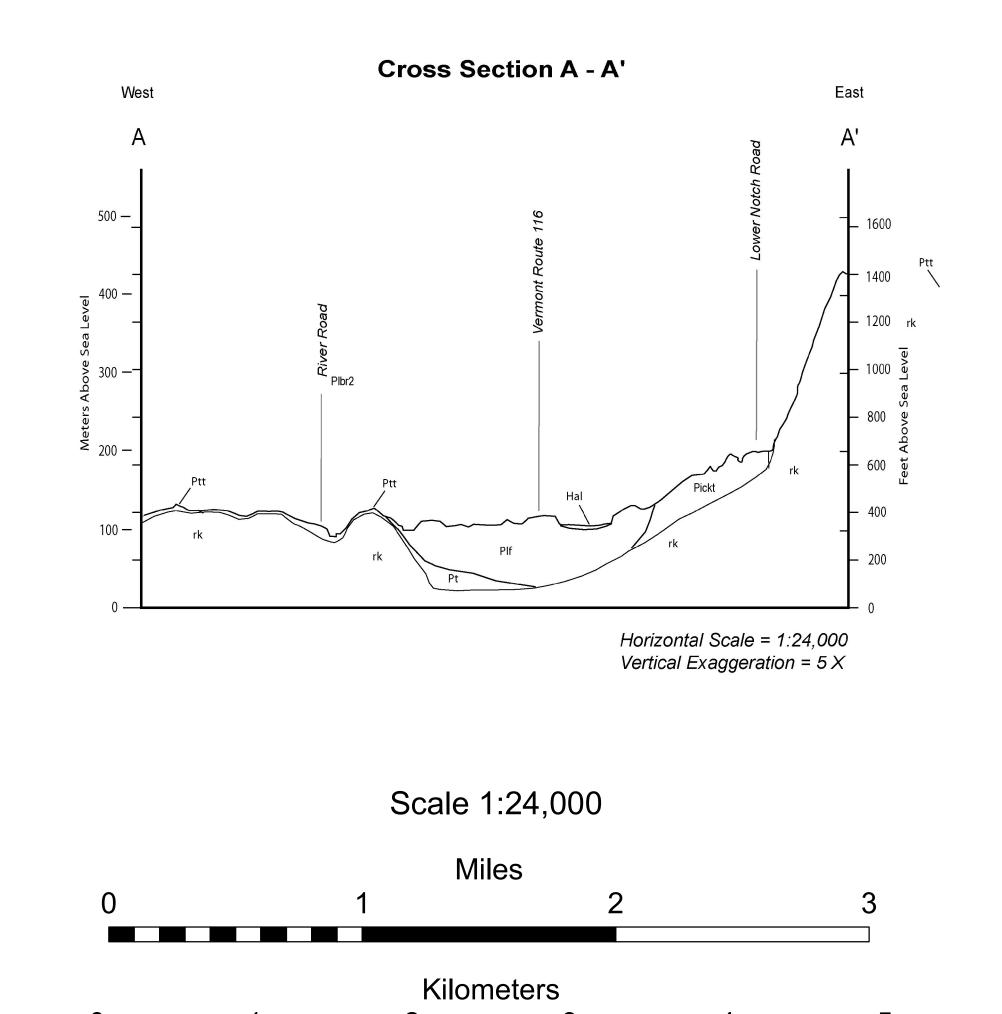
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Cooperative Geologic Mapping Program (Award G13AC00156).

Grid overlay on map is UTM, Zone 18N, NAD83.

Dept. of Environmental Conservation, VT ANR

Geographic coordinates shown at topo corners are in NAD 83.



# Legend

Htal

Plbrd

Plc

#### **Description of Map Units**

### Holocene Deposits

Artificial Fill. Artificially emplaced earth along road beds, embankments, and low-lying

Alluvium. Silt, sand, and gravel deposited by modern streams. Deposits include stream channel and bar deposits and finer-grained floodplain deposits. Minor wetland deposits are common within these areas and are not distinguished. Thickness in the tributaries is typically less than 3 meters, although the depth may be much greater in the valleys of the

larger streams. Wetland Deposits. Accumulations of organic matter and/or clastic sediment. Commonly overlaying lacustrine sediments or till. Thickness of organic horizons (where present) ranges from 0.3 meter to greater than one meter.

Alluvial Fan Deposits. Boulder, pebble, and cobble gravel and pebbly sand deposited at the mouths of tributaries. Commonly less than 5 meters thick.

Stream Terrace Deposits. Silt, sand, pebble, cobble, and boulder gravel deposited on terraces above the modern floodplains of streams. Commonly overlaying lacustrine sediments. They represent former floodplains that have been dissected by younger streams. Generally less than 5 meters thick.

Talus. Fans or aprons of fallen rock at the base of steep slope segments. May contain

colluvial (slope-wash) deposits as well. Of variable thickness.

#### Pleistocene Deposits

Delta Deposits, Coveville Stage of glacial Lake Vermont. Coarse gravels and gravelly Plcod sand deposits, generally well-sorted, deposited at the mouth of the ancestral New Haven River in the northwestern part of the study area and east of Cobble Hill in the southwestern part.

> Delta Deposits, glacial Lake Bristol. Sand and gravel deposited as a meteoric delta into glacial Lake Bristol northwest of West Lincoln in the northeastern of the quadrangle. Lake level at this time was probably controlled by an outlet in the defile between the Hogback Mountains and South Mountain at Bristol Village.

Lake Deposits, Fine-grained. Clay, silt, and very fine to fine sand deposited in deeper waters. Commonly varved. Dropstones are locally common. Deposited in Coveville, Upper Fort Ann, and Lower Fort Ann Stages of glacial Lake Vermont.

Lake Deposits, Coarse-grained. Well-sorted sand and/or gravel deposited in shallow waters or as proximal subaqueous outwash from delta at Bristol Village. Deposited in Coveville or Upper Fort Ann Stages of glacial Lake Vermont.

Lake Deposits, undifferentiated. Coarse- to fine-grained lake deposits. Plu

Kame Terrace Deposits. Poorly- to moderately-sorted, generally weakly bedded, sand, Pickt gravel, and silt deposits. Upper surface commonly contains kettle holes. Thickness variable, generally from 5 to 30 meters.

Ice-contact Deposits. Unsorted to poorly-sorted sand, gravel, and silt deposited in contact with glacial ice. Includes possible kame terrace and esker deposits in the central part of the quadrangle near Notch Road and in the northeastern part of the study area near West Lincoln.

Wave-washed Till. Similar to Pt and Ptt, but with low-relief wave-cut shorelines. Found on Ptw slopes below the Coveville level of glacial Lake Vermont.

Thick Till. Dense to very dense, unsorted to very poorly sorted, sand- to silt-matrix till. Surface boulders are common. Thickness is highly variable, but general from 5 meters to greater than 30 meters. Bedrock outcrops are uncommon.

Till. Dense to very dense, unsorted to very poorly sorted, sand- to silt-matrix till. Surface boulders are common. Thickness is highly variable, from less than 1 meter to greater than 30 meters.

Till, Thin. Descriptions as in preceding unit. Thickness highly variable but generally less than 3 meters and bedrock outcrops are very common. The bedrock outcrops are particularly abundant on the higher ridges of South Mountain the center of the study

Bedrock exposures.

## Map Symbols

- Field Sites
- Bedrock Outcrops
- Crag and Tail Landforms

**Glacial Striations** 

Line of Cross-section

New Haven River 2012

**Abandoned Stream Channels** 

Meltwater Channels

- Pre-CovevilleShorelines

Terrace Edges

—— Till Bench Edges

Kettle Holes

Lower Fort Ann Shoreline of glacial Lake Vermont

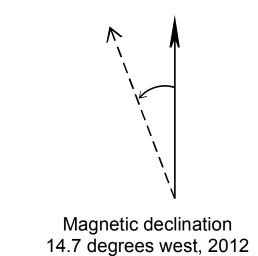
Upper Fort Ann Shoreline of glacial Lake Vermont Coveville Shoreline of glacial Lake Vermont

— Line of Cross Section

# Surficial Geologic Map of the Northern 2/3 of the South Mountain Quadrangle, Vermont

Contour Interval 20 feet





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