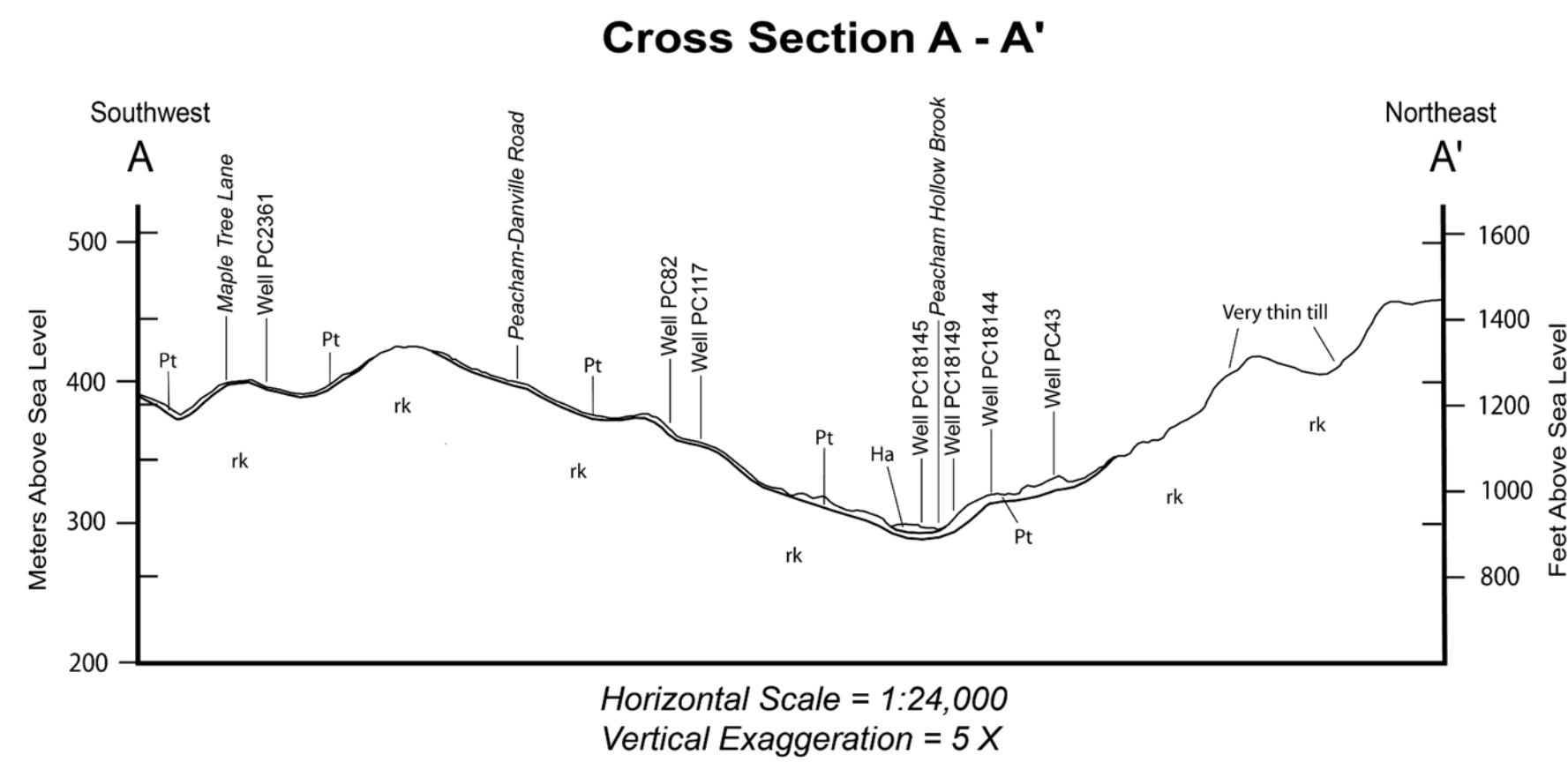


Magnetic declination
14.1 degrees west, 2023



Published by:
Vermont Geological Survey, Dept. of Environmental Conservation
Benjamin DeJong, State Geologist and Director
1 National Life Dr., Montpelier, VT
802-461-5235
<http://dec.vermont.gov/geological-survey>



Surficial Geologic Map of the Peacham 7 1/2 Minute Quadrangle, Vermont

by
George E. Springston
2023

Description of Map Units

Holocene Deposits

- af** Artificial Fill. Artificially-emplaced material along road beds, embankments and in developed areas. Material varies from natural sand, gravel, or till to various artificial waste materials. Thickness varies.
- Ha** Alluvium. Silt, sand, and gravel deposited by modern streams. Includes stream channel, bar, and floodplain deposits. Wetland deposits are common within these areas and are not distinguished. Thickness in tributary valleys is typically less than 3 meters, although the depth may be much greater in the valleys of the larger streams.
- Hat** Alluvial Terrace Deposits. Silt, sand, and gravel deposited on terraces above the modern floodplains of streams. They are composed of a variety of channel, bar, and floodplain deposits. Generally less than 5 meters thick.
- Hta** Talus. Fans or aprons of fallen blocks of angular rock at the bases of bedrock cliffs. May contain colluvial (slope-wash) deposits as well. Of variable thickness.
- Hw** Wetland Deposits. Accumulations of organic matter and/or clastic sediment in low-lying areas. Includes a wide variety of wetland types. Commonly overlying other deposits such as alluvium, lacustrine sediment, or till. Only larger deposits are shown.

Pleistocene Deposits

- Pie** Esker Deposits. Elongate ridge of ice-contact stratified sand and gravel deposited by glacial meltwater streams in tunnels within or beneath the glacial ice. A short esker is located in the hills west of Jewett Brook in the southeast corner of the map.
- Ptm** Moraine Deposits. Composed primarily of till with variable amounts of stratified sand and gravel. Deposited in the vicinity of an ice margin, primarily from the direct melting of glacial ice.
- Pt** Till. Very dense to loose, unsorted to very poorly sorted material deposited directly from glacial ice. Contains a wide range of grain sizes, from clay or silt up to large boulders. The till matrix texture ranges from fine sand to clayey silt. Three till facies are found in the Peacham quadrangle: A loose, tan, fine-sand matrix till with abundant granitic clasts and often abundant large granitic surface boulders; a loose, brown-weathering, fine-sand matrix till with abundant weathered clasts of the Waits River and Gile Mountain Formations; and a dense to very dense, olive to dark gray, silty fine sand-matrix till. Thickness is highly variable, from less than 1 meter to greater than 30 meters. Boulders are common throughout, but are especially abundant in the westernmost portion of the quadrangle in areas south and south-southeast of hills underlain by granitic rocks. Areas at the bases of steep slopes may include colluvium and talus deposits. On the upper slopes of hills the till deposits are commonly very thin (less than one meter).



One of the largest granitic glacial boulders that are abundant in the western part of the quadrangle. Station 1323, southeast of Peacham Pond.



Typical granitic boulder stone wall in the westernmost part of the area. Northwest of Fosters Pond at Station 1741.



Typical rolling landscape of central and eastern parts of area. Looking south towards East Peacham from Station 1259.



Looking north up the western arm of Peacham Bog from Station 100. This extensive wetland complex is underlain by a thick peat deposit.



Tree throw in bouldery fine-sandy till southeast of Levi Pond. Station 1837.



Sandy till at Station 1259, north of East Peacham.

Map Symbols

- Surficial Field Station
- Glacial Boulders
- Bedrock Outcrop
- Shallow Bedrock
- Glacial Striation
- Wells
- Sand and Gravel Pit
- Cross Section Point
- Contacts (All Are Approximate)
- Abandoned Channel
- Moraine
- Crag and Tail Landform
- Meltwater Channel
- Cross Section Line
- Quadrangle
- Town Boundaries
- Summits (feet)
- Roads, Major
- Roads, Minor
- Water Bodies
- Streams
- Index Contours (100 foot)
- Contours (20 foot)

Definitions

Abandoned Channel. A segment of stream channel that is still exposed at the Earth's surface that has been cut off from the remainder of the stream. Includes oxbows and other abandoned channel segments on modern floodplains as well as older features preserved on alluvial terraces.

Crag and Tail Landform. A streamlined hill or ridge, consisting of a knob of resistant bedrock with an elongate body of more erodible bedrock, till, or both, on its lee side.

Meltwater Channel. A channel cut by glacial meltwater flowing under, along, or in front of an ice margin. Lateral ice-marginal channels commonly run across a hillside, beginning and end abruptly, with limited modern-day drainage areas. These channels commonly occur in down-stepping sets on moderate to gentle till slopes and probably formed as the ice-margin retreated progressively down slope.

Coordinate System: Vermont State Plane, FIPS 4400, NAD 83.
Geographic coordinates shown at topo corners are in NAD 83.
Grid overlay on map is UTM, Zone 18N, NAD83.
Base map data from the Vermont Center for Geographic Information (VCGI).
Contours and shaded relief layer derived from 0.7 m lidar DEM, downloaded as a 5.0 m DEM from VCGI.
Digital cartography by George Springston, Norwich University, Dept. Earth and Environmental Sciences, November, 2023.

Additional bedrock outcrops are derived from the Vermont Geological Survey layer "Bedrock Outcrops" hosted by VCGI.

This map and explanatory information is submitted for publication with the understanding that the United States Government is authorized to reproduce and distribute reprints for governmental use.

Research supported by the U. S. Geological Survey, National Cooperative Geologic Mapping Program, under USGS award number G22AC00312-00. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U. S. Government.