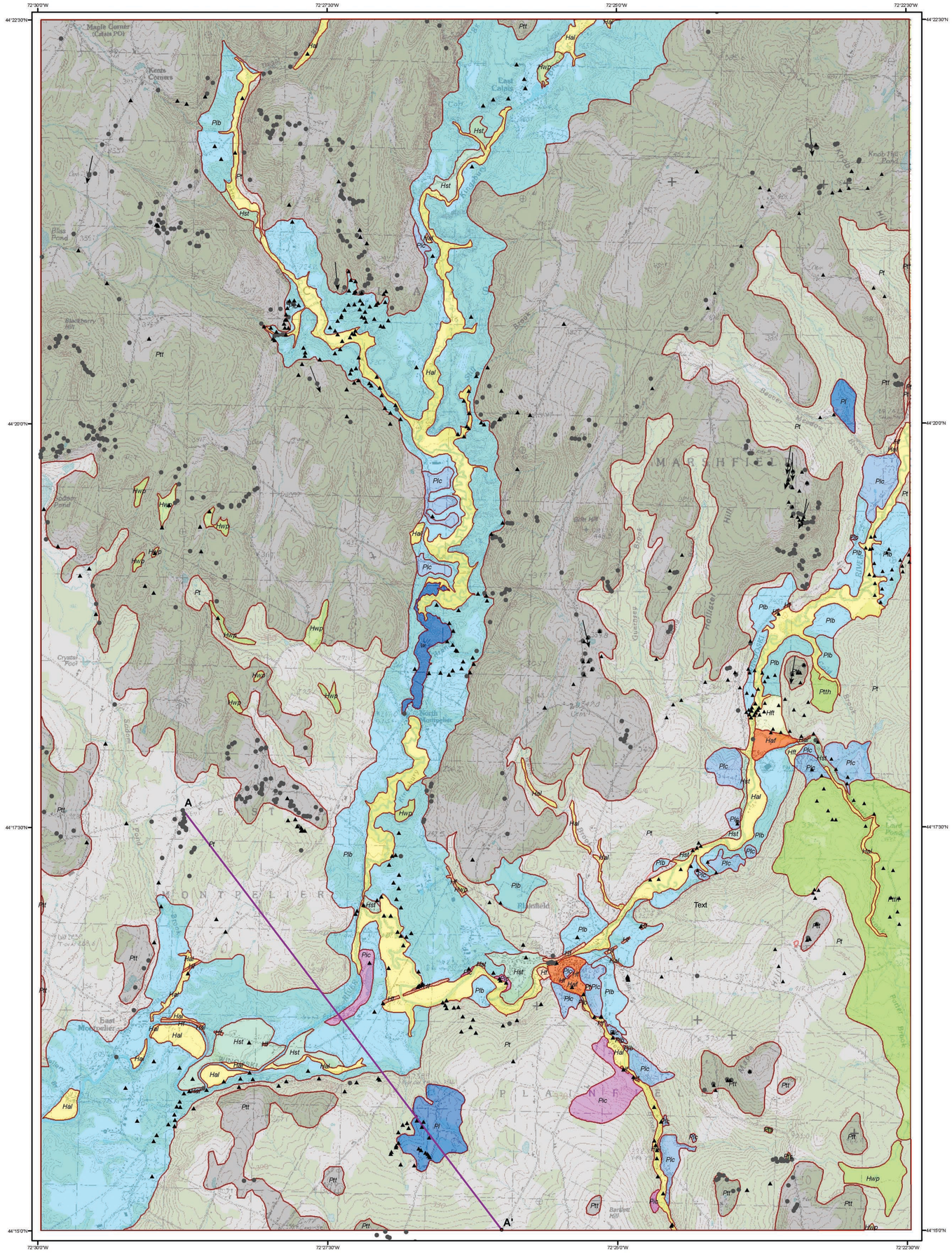


Base map from USGS Topgraphic Quadrangles.
Geographic coordinates are in NAD83.
Contour interval: 6 meters.
This map is not a survey and is for planning purposes only.
Cartography by George Springston.
March 20, 2012.

1:24,000

0 1 2 3 4 5 Kilometers

Magnetic declination
16 degrees west, 1986.

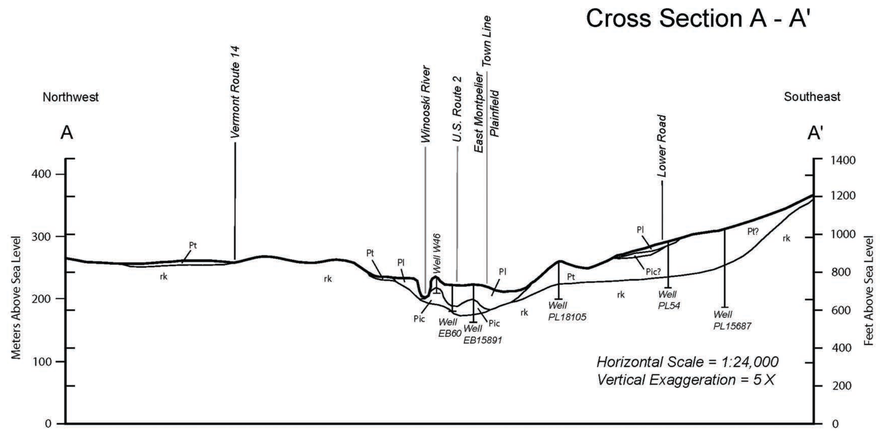
Surficial Geologic Map of the Plainfield Quadrangle, Vermont

by
George Springston
2011

VERMONT
AGENCY OF NATURAL RESOURCES
Vermont Geological Survey

Research supported by the Vermont Geological Survey, Dept. of Environmental Conservation, VT ANR. This geologic map was funded in part by the USGS National Cooperative Mapping Program. 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.

Cross Section A - A'



Vermont Geological Survey Open File Report VG11-4
Surficial Geologic Map of the Plainfield Quadrangle, Vermont

LEGEND

Description of Map Units

Hf — Artificial Fill. Artificially emplaced earth along rail beds, road beds, embankments and in populated areas.

Haf — Holocene Alluvial Fan Deposits. Pebble gravel, cobble gravel, boulder gravel, and pebbly sand deposited at the mouths of tributary streams. Commonly less than 5 meters in thickness.

Hal — Holocene Alluvium. Silt, sand, pebble gravel, cobble gravel, and boulder gravel deposited by modern streams. Deposits include stream channel and and bar deposits and finer-grained floodplain deposits. Minor wetland deposits are common. Thickness is highly variable with the deposits along the smaller streams typically less than 3 meters thick. Thicknesses in the Winooski River floodplain are greater. Permeability usually intermediate to low. Can be good aquifer if sufficiently thick but of limited aerial extent. These areas are typically flooded yearly or every few years.

Hpm — Holocene Peat & Muck. Wetlands with organic sediment at least 0.5 meters thick.

Hft — Holocene Fan-Terrace Deposits. Pebble and cobble gravel and pebbly sand deposited on top of lake bottom deposits of glacial Lake Winooski subsequent to drainage of the lake. The gravel and sand are commonly less than 3 meters thick. Found on terrace tops near the mouths of present day tributaries to the Winooski.

Hst — Holocene Stream Terrace Deposits. Silt, sand, pebble gravel, cobble gravel, and boulder gravel deposited on terraces above the modern floodplains of streams. Generally less than 5 meters thick. Variable permeability but usually intermediate. Fair to good aquifer. The terrace surfaces are rarely flooded, if at all. However, these deposits are highly erodible and are quite susceptible to stream erosion and slope failure.

Pl — Pleistocene Lake Deposits, Undifferentiated. Fine grained varved or thinly laminated deposits of silty fine sand, silt and silty clay and well sorted, laminated very fine to medium sand, accumulated in glacial Lake Winooski. Thickness typically increases from less than a meter on the valley side to 10 or more meters in the valley bottom. Poorly drained and with poor aquifer potential. Prone to stream bank failures and headward erosion of the slopes.

Plb — Pleistocene Lake Deposits, Coarse-grained. Well- to moderately-well sorted, laminated very fine to medium sand deposited in shallow waters or on shorelines of glacial Lake Winooski. Of variable thickness; commonly ranging from less than 1 to greater than 10 meters in thickness. Prone to gullying and stream bank erosion. Found throughout the Winooski and Kingsbury valleys. Generally poor aquifer potential.

Plc — Pleistocene Lake Bottom Deposits. Fine grained varved or thinly laminated deposits of silty fine sand, silt and silty clay accumulated in the deeper portions of glacial Lake Winooski lake basins. Thickness typically increases from less than a meter on the valley side to 10 or more meters in the valley bottom. Poorly drained and with poor aquifer potential. prone to stream bank failures and headward erosion of the slopes.

Pic — Ice-contact Deposits. Poorly- to moderately well-sorted pebbly medium to coarse sand and pebble, cobble, and boulder gravel deposited in contact with glacial ice. In this quadrangle these are largely blanketed with lacustrine deposits. Probably esker deposits and probably somewhat discontinuous. Thickness where present is generally less than 20 meters. Moderate to good aquifer potential.

Pt — Pleistocene Till. Extremely poorly sorted diamict with abundant angular to subangular clasts. Matrix is typically dominated by silt or silty fine sand. Clasts range in size up to large boulders. Surface boulders are commmonly abundant. Deposits are typically unstratified. Thickness generally greater than 3 meters but rock outcrops may be common. Generally low permeability and poor aquifer potential.

Pts — Pleistocene Till, Thin. Similar to till described above, but thickness generally less than 2 to 3 meters with rock outcrops abundant. Surface boulders or erratics are common. Occurs on moderate to steep hill and mountain slopes and summit areas. Generally low to moderate permeability. Generally poor aquifer potential.

Ptt — Pleistocene Till, Sandy. Extremely poorly sorted diamict with abundant angular to subangular clasts. Matrix is typically dominated by fine sand. Clasts range in size up to large boulders. Deposits are typically unstratified, although minor lenses of stratified sand and gravel are found. Thicknesses appear to range from about 3 to 10 meters. Permeability may be low to moderate and these deposits probably have limited aquifer potential.

Ptth — Pleistocene Till, Thick. Similar to the sandy till described above, but of anomalous thickness (exceeding 30 meters in places) and overlying a variety of bedded sands, gravels and silts. Found in the Nasmith Brook valley in the east part of the project area. Generally low to moderate permeability in the till but the stratified deposits below may have higher permeability and may have better aquifer potential.

W — Water Bodies.

Explanation of Symbols

- Bedrock outcrops
- Ice Motion Indicators
- Erratics
- Field Stations
- Line of cross section

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