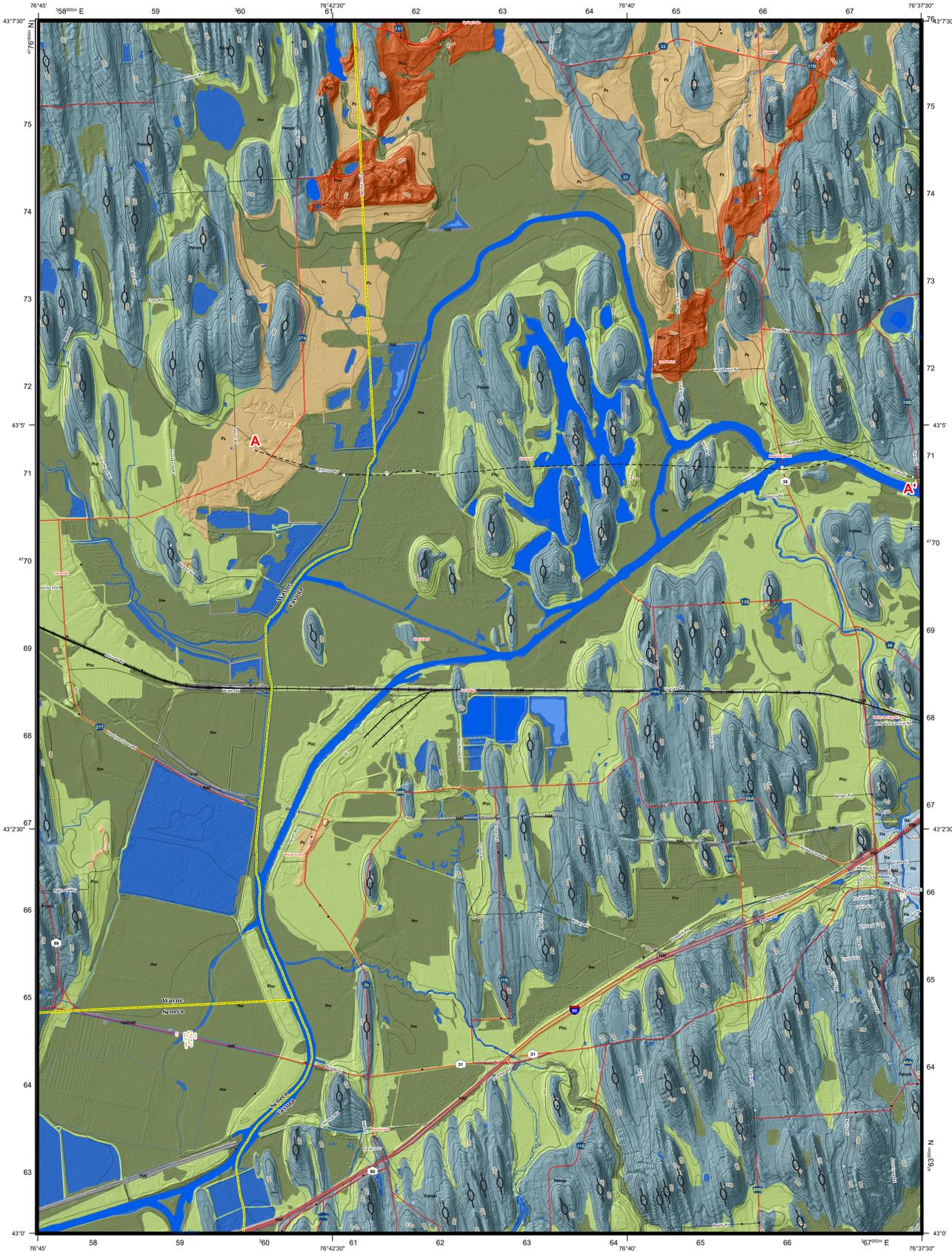


# SURFICIAL GEOLOGY OF THE MONTEZUMA 7.5-MINUTE QUADRANGLE, CAYUGA, SENECA AND WAYNE COUNTIES, NEW YORK

prepared by  
Andrew Kozlowski, Karl Backhaus and Brian Bird

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National Cooperative Geologic Mapping Program (Great Lakes Geologic Mapping Coalition)



## Holocene

- Af** **Artificial Fill (Af)**  
Surficial sediment composed of coarse/fine and or crushed rock anthropogenically transported and used for construction purposes.
- Ha** **Stratified silt, sand and gravel (Ha)**  
Sorted and stratified silt, sand, and gravel, deposited by rivers and streams. May include cobbles and boulders. Inferred as post-glacial alluvium and includes modern channel, over-bank and fan deposits
- Hw** **Wetland Deposit (Hw)**  
Peat, muck, marl, silt, clay or sand deposited in association with wetland environments. Various sediments can be present at transitional boundaries from one facies to another

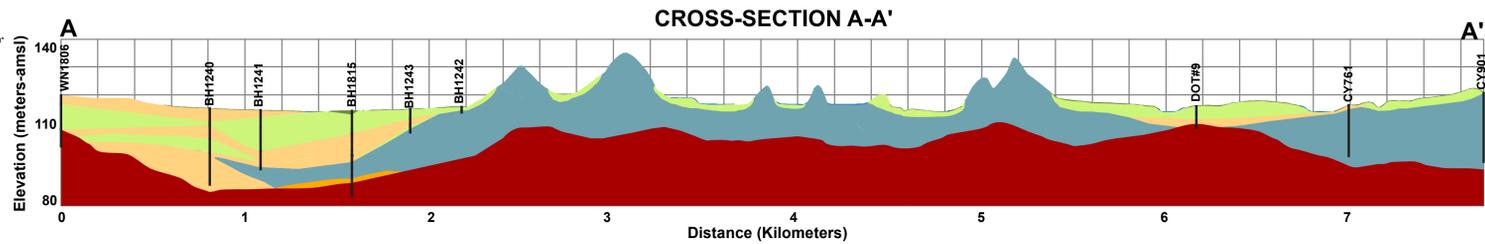
## Pleistocene

- Ps** **Stratified silt, sand gravel (Ps)**  
Well sorted and stratified sand and gravel, deposited by rivers and streams. May include cobbles. Inferred as deposits associated with glacial meltwater flow.
- Plsc** **Silt and Clay (Plsc)**  
Stratified, fine-grained sediment consisting of fine sand, silt and clay size particles. Inferred to be deposited in mid shore to deepwater settings of glacial lakes. May include marl, rythmites, and varves.
- Pics** **Cobbles to Sand (Pics)**  
Stratified ice contacted deposits, variable coarse-grained sediment consisting of boulders to sand size particles. Inferred to be deposited along an ice-margin. May include, interbedded coarse lenses of gravel and clast supported diamictons (flow tills).
- Pdmm** **Diamicton (Pdmm)**  
An admixture of unsorted sediment ranging from clay to boulders. Generally matrix supported, massive and clast-rich.

## Pre-Pleistocene

- Br** **Bedrock (Br)**  
Non-glacially derived, hard rock, pre-pleistocene in age. May be covered up to a meter in diamicton, sand and gravel, or sand and clay in areas marked as Br.

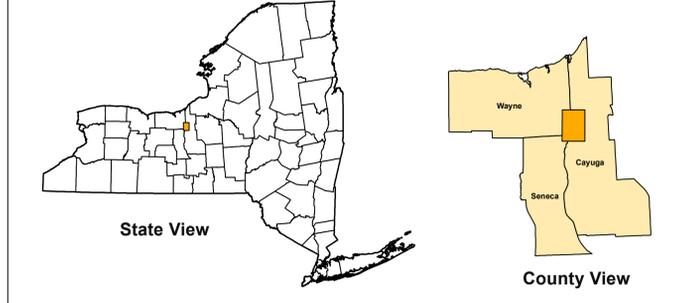
## DESCRIPTION OF MAP UNITS



## SYMBOLS

- |             |                    |                            |
|-------------|--------------------|----------------------------|
| Highways    | Contours           | NYSGS Sample Location      |
| Streets     | Streams            | NYSGS Boring Locations     |
| Railroads   | Water Bodies       | NYSDEC Water Well Location |
| County Line | Cross-Section Line | Drumlins                   |
|             |                    | NYSDOT Boring Locations    |

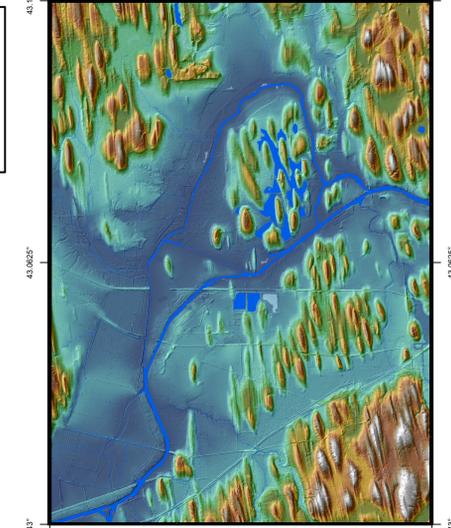
## QUADRANGLE LOCATION



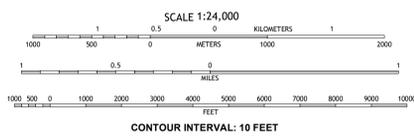
## ADJOINING QUADRANGLES

Watcott	Victory	Cato
Saranah	Montezuma	Walesport
Seneca Falls	Cayuga	Albion

## QUADRANGLE ELEVATION



Universal Transverse Mercator, Zone 18 N  
North American Datum of 1983  
Hydrology and planimetry layers from the New York State DOT raster quadrangle separates for Cayuga, Seneca and Wayne Counties  
[http://nysgis.ny.gov/geodata/separates/member.cfm?OrganizationID=108]  
Geographic data layers from 2018 TIGER/Line shapes for transportation and hydrography [https://www.cayugacounty.gov/geospatial/index.php]  
Shaded relief from Cayuga County 2 m LIDAR [http://www.cayugacounty.gov/portal/03planning/index.php?lidar.html] 10 m DEM and FEMA Seneca Watershed 2012 [http://gis.ny.gov/elevation/index.cfm] for Wayne and Seneca Counties  
Magnetic declination from the NOAA online Declination Calculator: [http://www.ngdc.noaa.gov/geomag-web/declination]



Geologic mapping by A. Kozlowski, K. Backhaus, B. Reber, J. Leone and B. Bird, 2011-2015 and 2018.  
Digital data and cartography by K. Backhaus and B. Bird, 2010 and 2018.  
UTM GRID AND 2011 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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2018

**NOTICE**  
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Feet-amsl  
1:75,000 scale; 2x vertical exaggeration  
Shaded relief generated from 2000 Cayuga County New York LIDAR by NOAA and the 2012 Seneca Watershed LIDAR by FEMA.  
375 675