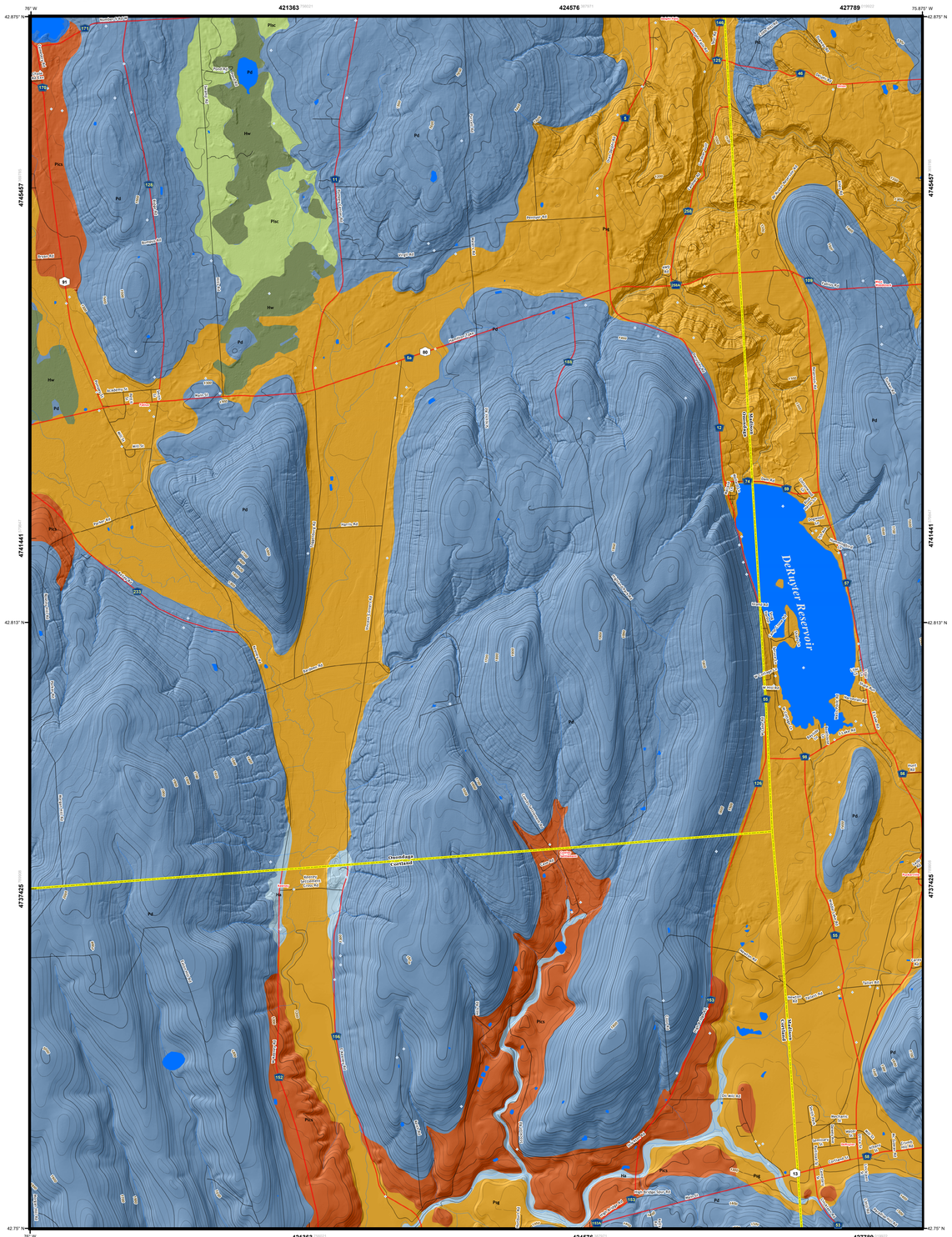
New York State Museum
Mark Schaming, Director

New York State Geological Survey



Universal Transverse Mercator, Zone 18 N
North American Datum of 1983

Hygrology, and planimetry layers from the New York State DOT Raster Quadrangle separates for Cortland, Madison and Onondaga Counties (https://gis.ny.gov/gisdata/inventories/member.cfm?OrganizationID=108). Geographic data layers from 2020 TIGER/Line shapes for transportation and hydrograpghy (https://www.census.gov/cgi-bin/geo/shapefiles/index.php)

Shaded relief from 2003 Onondaga County 3m, 2015 Madison and Otsego County 1m and NYS 10m DEM (http://gis.ny.gov/elevation/index.cfm)

Magnetic declination from the NOAA online Declination Calculator: http://www.ngdc.noaa.gov/geomag-web/#declination

SCALE 1:24,000

KILOMETERS

METERS

MILES

FEET

CONTOUR INTERVAL: 10 FEET

Geologic mapping by D. Pair, 2004
Digital data and cartography, K. Schoenenberger, J. Manchester and K. Backhaus, 2010 & 2021

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SURFICIAL GEOLOGY OF THE DE RUYTER 7.5-MINUTE QUADRANGLE, CORTLAND, MADISON AND ONONDAGA COUNTIES, NEW YORK

Donald L. Pair
2010

SURFICIAL GEOLOGY OF THE DE RUYTER 7.5-MINUTE QUADRANGLE, CORTLAND, MADISON AND ONONDAGA COUNTIES, NEW YORK

prepared by
Donald L. Pair, Karl J. Backhaus and Janet Manchester

Supported in part by the U.S Geological Survey Cooperative Agreement Number 03HQAG0072
National Cooperative Geologic Mapping Program (STATEMAP)

DESCRIPTION OF MAP UNITS

Holocene

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

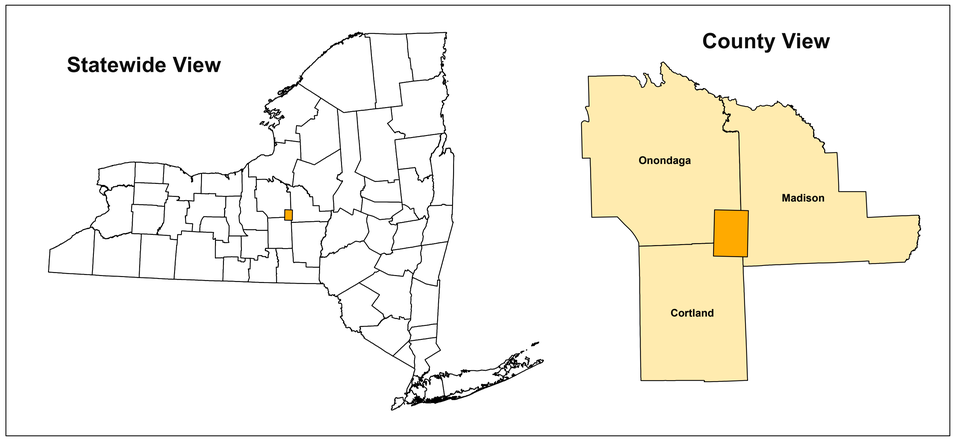
Plsc — **Silt and Clay (Psc)**
Stratified, fine-grained sediment consisting of fine sand, silt and clay size particles. Inferred to be deposited in mid shore to deepwater settings of glacial lakes. May include marl, rythmites, and varves.

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).

Psg — **Stratified sand and gravel (Psg)**
Well-sorted and stratified sand and gravel. May include cobbles and boulders. Inferred to be delta, fan or lag deposits in glacial channels or near former ice margins.

Pd — **Diamicton (Pd)**
An admixture of unsorted sediment ranging from clay to boulders. Generally matrix supported, massive and clast-rich.

QUADRANGLE LOCATION



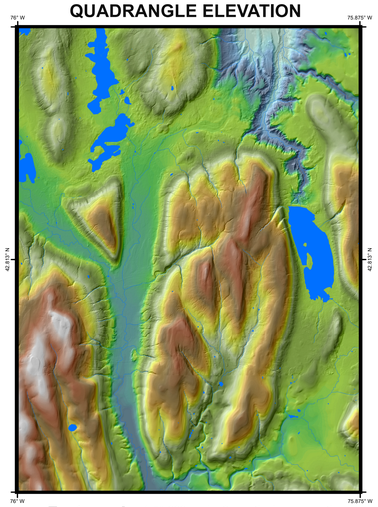
SYMBOLS

- Streets
- Highways
- County Line
- Water Bodies
- Streams
- Contour
- NYSDEC Water Well Location
- NYSDOT Boring Location

ADJOINING QUADRANGLES

Jamesville	Oran	Cazenovia
Tully	DeRuyter	Erieville
Truxton	Cuyler	South Otselic

QUADRANGLE ELEVATION



Feet-amsl
920 2065

1:75,000 scale; 2x vertical exaggeration

Shaded relief generated from 2003 Onondaga County 3m, 2015 Madison and Otsego County 3m and NYS 10m lidar data sets.

NOTICE

*This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program STATEMAP award number **03HQAG0072** in the year 2003.*

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New York State Museum Map & Chart No. 54
ISSN:0097-3793 ; ISBN:978-1-55557-254-5