

SURFICIAL GEOLOGY OF THE WHITE PLAINS 7.5-MINUTE QUADRANGLE, WESTCHESTER COUNTY, NEW YORK

prepared by
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National Cooperative Geologic Mapping Program (STATEMAP)

DESCRIPTION OF MAP UNITS

Holocene

Af	Artificial fill (Af) This unit is generally comprised of coarse-to-fine materials, such as large cement mounds and/or crushed rock, which have been 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.
Hdc	Diamict colluvium (Hdc) Unsorted and unstratified deposit of gravel, sand, silt, and clay, with boulders/cobbles possible. Described as a mass-wasting deposit at the base of steep hillslopes and cliffs that was formed as part of a slump or hillslope failure.

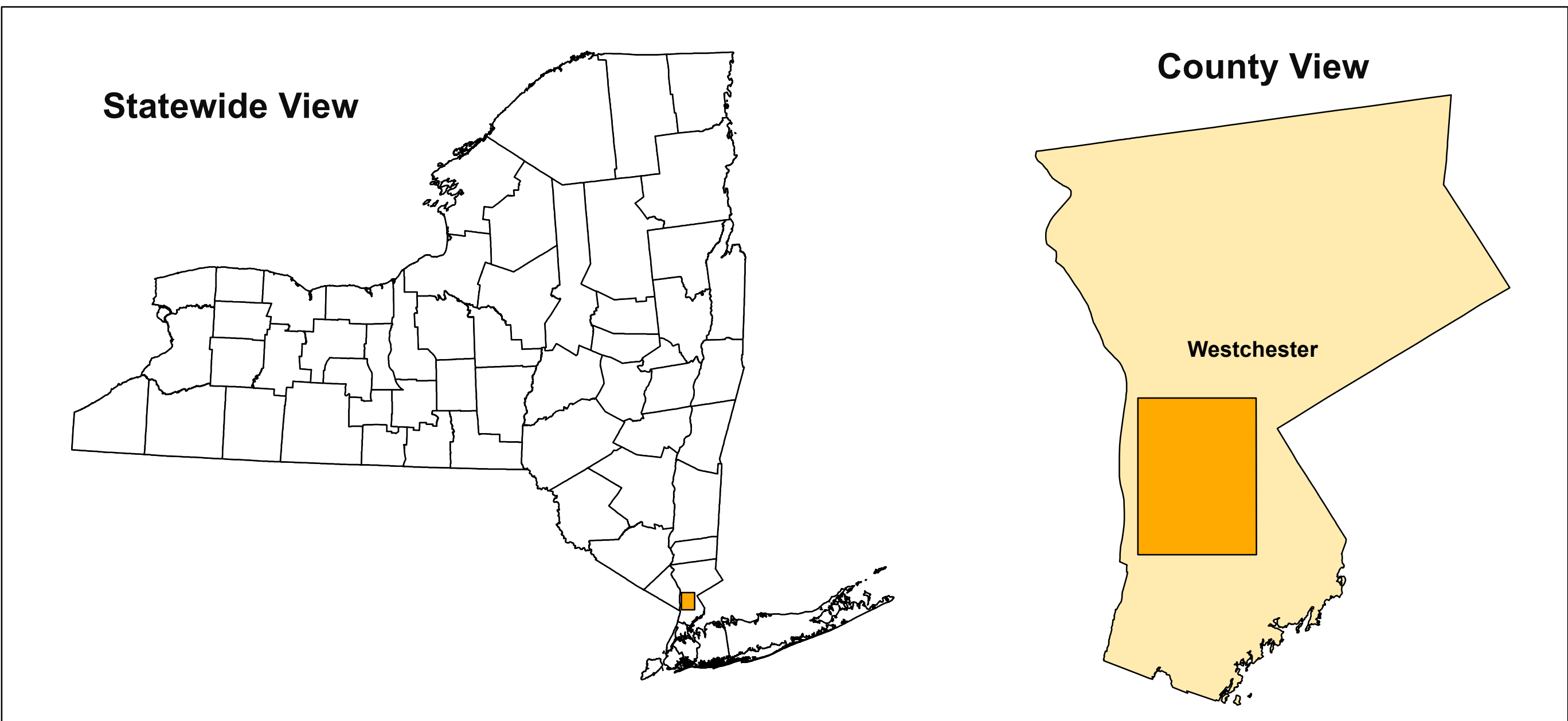
Pleistocene

Plsc	Silt and clay (Plsc) Stratified, fine-grained sediment consisting of fine sand, silt, and clay-size particles. Inferred to have been deposited in mid-shore to deep water settings of glacial lakes. May include marl, rhythmites, and varves.
Ps	Stratified sand (Ps) Well-sorted and -stratified sand deposited by fluvial, lacustrine, or eolian processes. Inferred to be deposits associated with distal glacial environments.
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.
Pics	Cobbles to sand (Pics) Stratified ice contact deposits; variable coarse-grained sediment consisting of boulders to sand-size particles. Inferred to have been deposited along an ice margin. May include interbedded coarse lenses of gravel and clast-supported diamict (flow till).
Pd	Matrix-supported diamict (Pd) An admixture of unsorted sediment ranging from clay to boulders. Generally matrix-supported, massive and clast-rich.
Pdcs	Clast-supported diamict (Pdcs) An admixture of unsorted sediment ranging from clay to boulders. Generally clast-supported, massive and clast-rich.
Pdor	Thin diamict over rock (Pdor) Predominantly matrix- or clast-supported diamict that is less than 2 to 3 meters thick overlying bedrock. In some areas there may be bedrock outcrops but they are very small and localized and are otherwise surrounded by diamict.

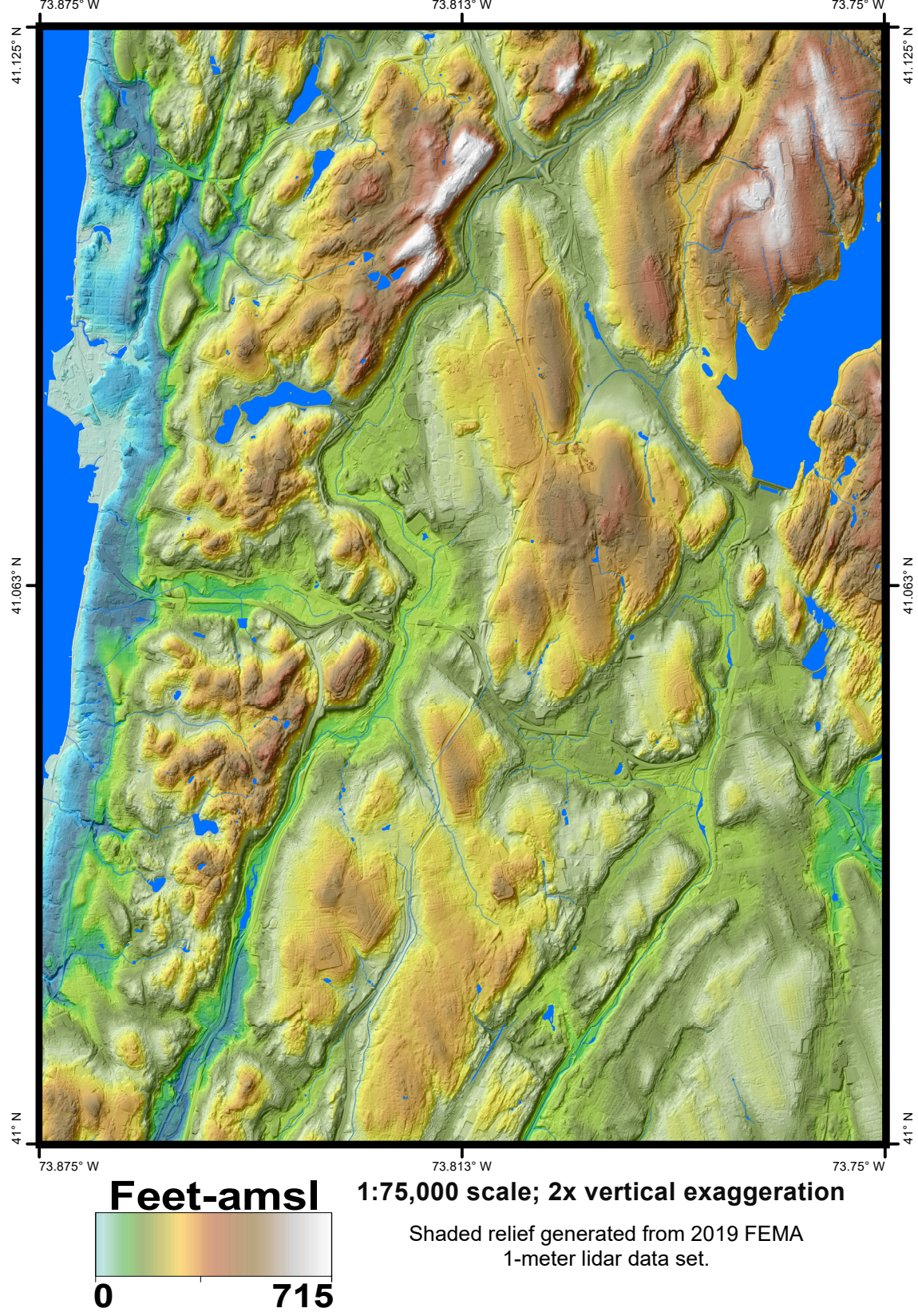
Pre-Pleistocene

Br	Bedrock (Br) Non-glacially derived hard rock, pre-Pleistocene in age. May be covered by up to a meter with diamict, sand and gravel, or sand and clay in areas marked as Br.
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QUADRANGLE LOCATION



QUADRANGLE ELEVATION



ADJOINING QUADRANGLES

Haverstraw	Ossining	Mount Kisco
Yonkers	White Plains	Glenville
Yonkers	Mount Vernon	Mamaroneck

SYMBOLS

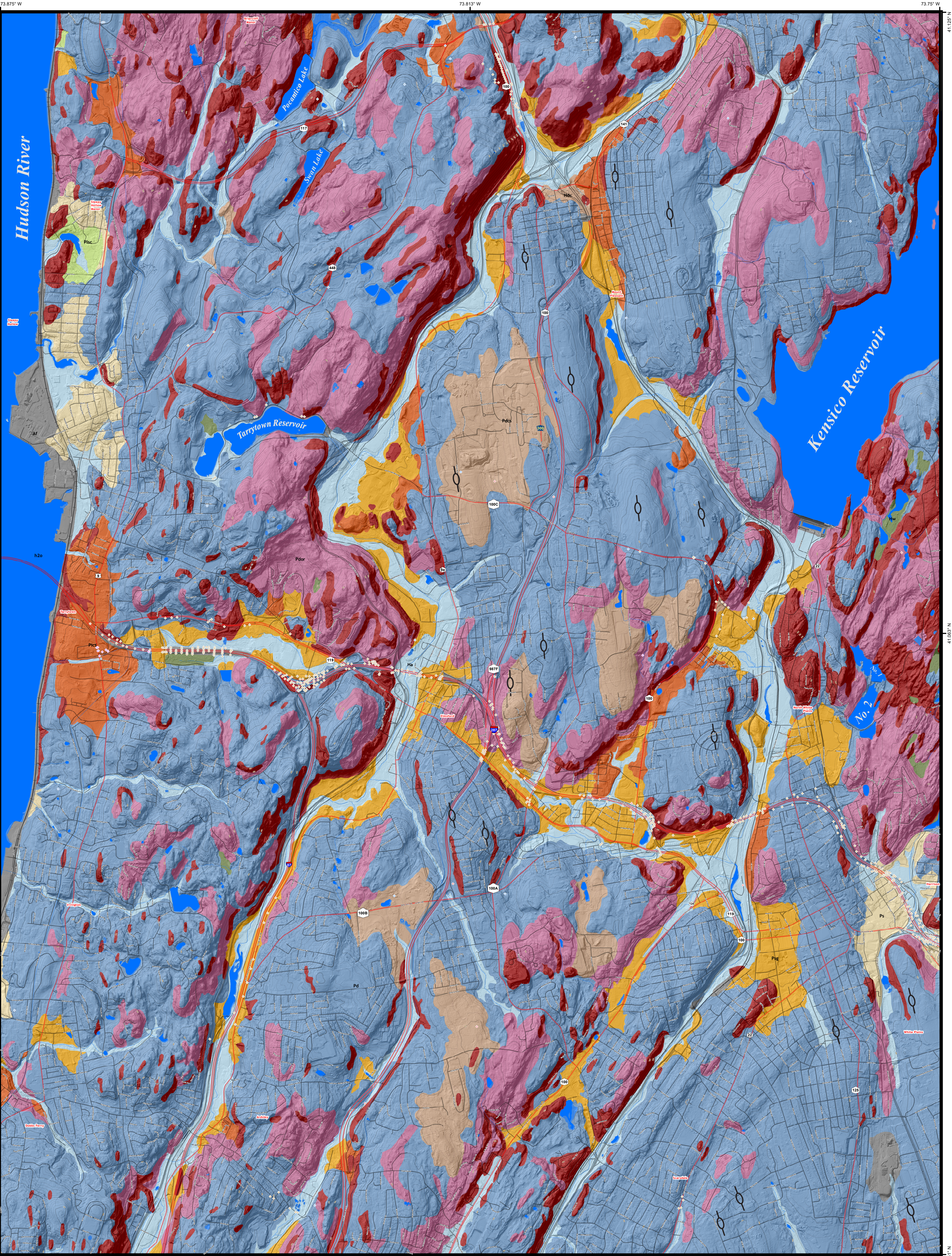
Street	Stream	NYSOT Boring Location
Highway	Contour	NYSTA Boring Location
Railroad	NYSDEC Water Well Location	NYSDEC Oil & Gas Well Location
Water Body	Drumlin	

NOTICE

This geologic map was funded in part by the USGS National Cooperative Geologic Mapping Program STATEMAP award number 1434-93-A-1164 in the year 1994.

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily presenting the official policies, either expressed or implied, of the U.S. Government.

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Universal Transverse Mercator, Zone 18 N
North American Datum of 1983
Hydrology, and planimetry layers from the New York State DOT Raster Quadrangles for Westchester County.
(<https://gis.ny.gov/gisdata/inventories/member.cfm?OrganizationID=108>)
Geographic data layers from the NOAA TIGERLine shapes for transportation and hydrography:
(<https://www.census.gov/geographic/tiger/index.php>)
Shaded relief from 2009 Putnam East Hudson 2m:
(<http://gis.ny.gov/elevation/index.cfm>)
Magnetic declination from the NOAA online Declination Calculator:
(<http://www.ngdc.noaa.gov/geomag-web/declination>)
Field map notes and draft maps available through the NYSGS Open File:
(<https://www.nysgs.org/research/collections/geology/collections/open-file>)

SCALE 1:24,000
KILOMETERS
METERS
MILES
CONTOUR INTERVAL: 10 FEET

Geologic mapping by G. G. Connally, 1994
Digital data and cartography by J. Manchester & K. Backhaus, 2009 & 2021

UTM GRID AND 2023 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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2009