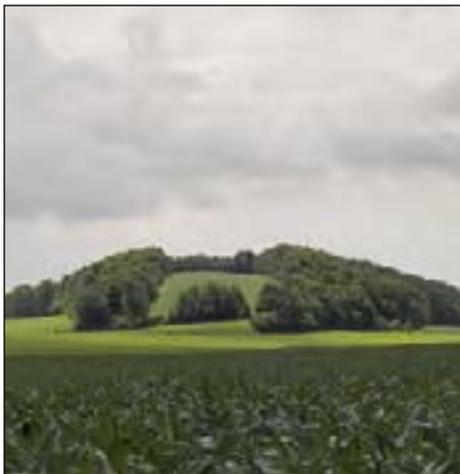


### III. Natural Resources

#### Soils and Topography

Cayuga County is endowed with a rich diversity of soil types suitable for a wide array of agricultural production activities. Prime farmland and farmland of statewide importance can be found in every town in the county (Map 3-1). Soils consisting primarily of silt loam can be found in the south west and central portions of the county, encompassing the towns between Cayuga and Owasco Lakes from Genoa to the south to Aurelius and Sennett to the north (Map 3-2). These USDA-designated prime farmland soils can also be found east of Owasco Lake in the Towns of Owasco and Niles. Coupled with the open topography of low rolling hills and flat uplands (Map 3-3), these soils are highly productive and particularly suitable for larger-scale field crop production and accompanying dairy and livestock farms. The major crops produced in these areas of the county are corn, soybeans and hay, but small grains such as wheat are also grown in smaller quantities, as are specialty crops such as vegetables and fruits. The towns in the south eastern corner of the county – Moravia, Sempronius, Locke, Summerhill and Niles – have some of the highest elevations and the most rugged terrain in the county. Despite these challenges, specialty and field crops are grown in this region of the county, mostly on silt loam soils, classified as farmland of statewide importance.



*Crop fields on a drumlin hill*



*Crop fields in the Town of Throop*

North of the City of Auburn, the soil types change along with the topography. Non-prime farmland soils with gravel, sand and clay are interspersed among highly productive agricultural soils in portions of the Towns of Aurelius, Throop, Sennett, Montezuma, Mentz, Brutus and Cato. The terrain becomes more hilly and is characterized by drumlin formations, steep-sided mounded hills that rise up out of the glacial lake plain and continue north all the way into the Town of Sterling. A wide variety of agricultural production is present north of Auburn, with relatively smaller-acreage field crop, dairy, livestock and poultry farms along with nurseries and greenhouses; and vegetable, orchard, honey and maple syrup production. Muck soils in the Towns of Mentz, Conquest, Victory and Ira provide a rich substrate for growing root vegetables and a wide variety of other crops. Soil characteristics help determine the relative abilities of these soils to support agricultural production and are factored into the USDA calculations of the agricultural value of soils (Map 3-4).

#### Land Cover

The most common type of land cover in the county is cultivated crops, followed by pastures and hay fields. There are several hundred acres of forested land, particularly in the southeastern and northern towns, although it is less common than farmland. The county also contains hundreds of acres of wetlands including the flat lands south of the Owasco Lake inlet, the Montezuma wetlands complex and areas along the Seneca River. There are additional wetlands scattered throughout the county, particularly in the towns north of Throop and Sennett. Low intensity development can be found in and around the villages and the city, as well as in some areas along Cayuga, Owasco, and Skaneateles Lakes. Residential and commercial uses are clustered in hamlets found



*Forested area in the Town of Victory*

throughout the county and along major transportation corridors. Medium and high density development is primarily located within the City of Auburn and its immediate vicinity. Patches of shrub and scrub land can be found mostly along the lakes and in the towns of Sterling and Victory (Map 3-5).

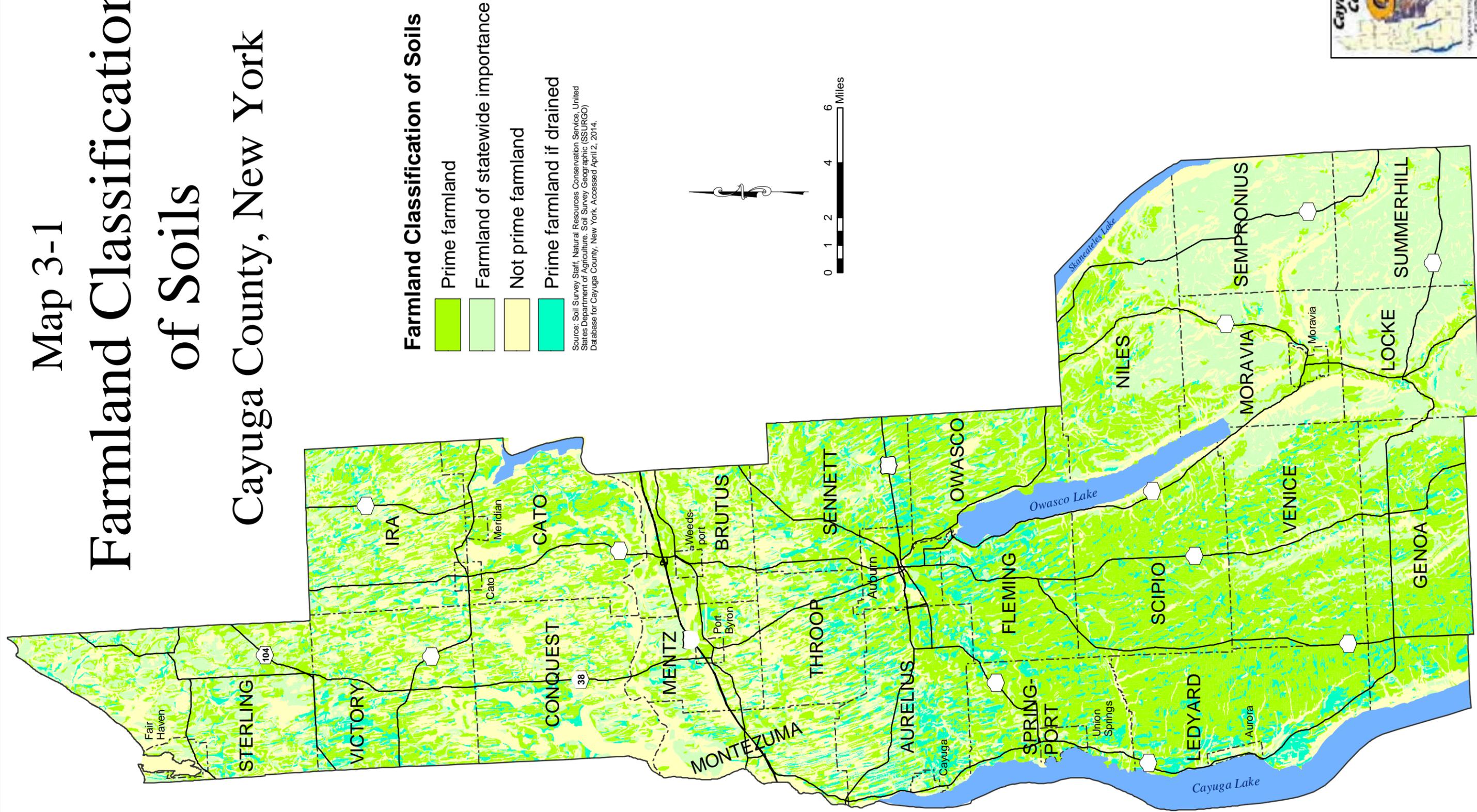
## Water Resources

Cayuga County has abundant water resources including hundreds of miles of streams and rivers, and over a hundred square miles of lakes and ponds including Owasco Lake, portions of Skaneateles and Cayuga Lakes, and the shore of Lake Ontario. Wetlands can also be found throughout the county, as can high-quality aquifers that are accessed for both residential and agricultural uses. Despite this abundant quantity of water, certain areas of the county have been known to experience drought. Big Salmon Creek experienced several droughts, most recently in the 1990's, which alternated from year to year with flood events. Several agricultural operations in Venice and Genoa including large dairy farms depend on Big Salmon Creek for their water. If farms continue to expand in the southern areas of the county, some farmers may eventually be challenged by the availability of a reliable and abundant water source. The land on and around the drumlin hills in the northern area of the county also experience some water limitations. Wetlands have tended to form between the drumlins, while the sides and tops of the drumlins themselves tend to be more arid. These conditions can limit farm size and the availability of suitable land for agricultural uses.



*Wetlands in the Town of Sterling*

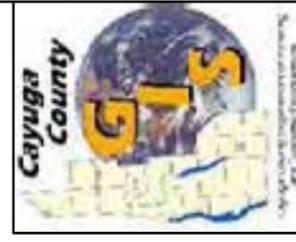
# Map 3-1 Farmland Classification of Soils Cayuga County, New York



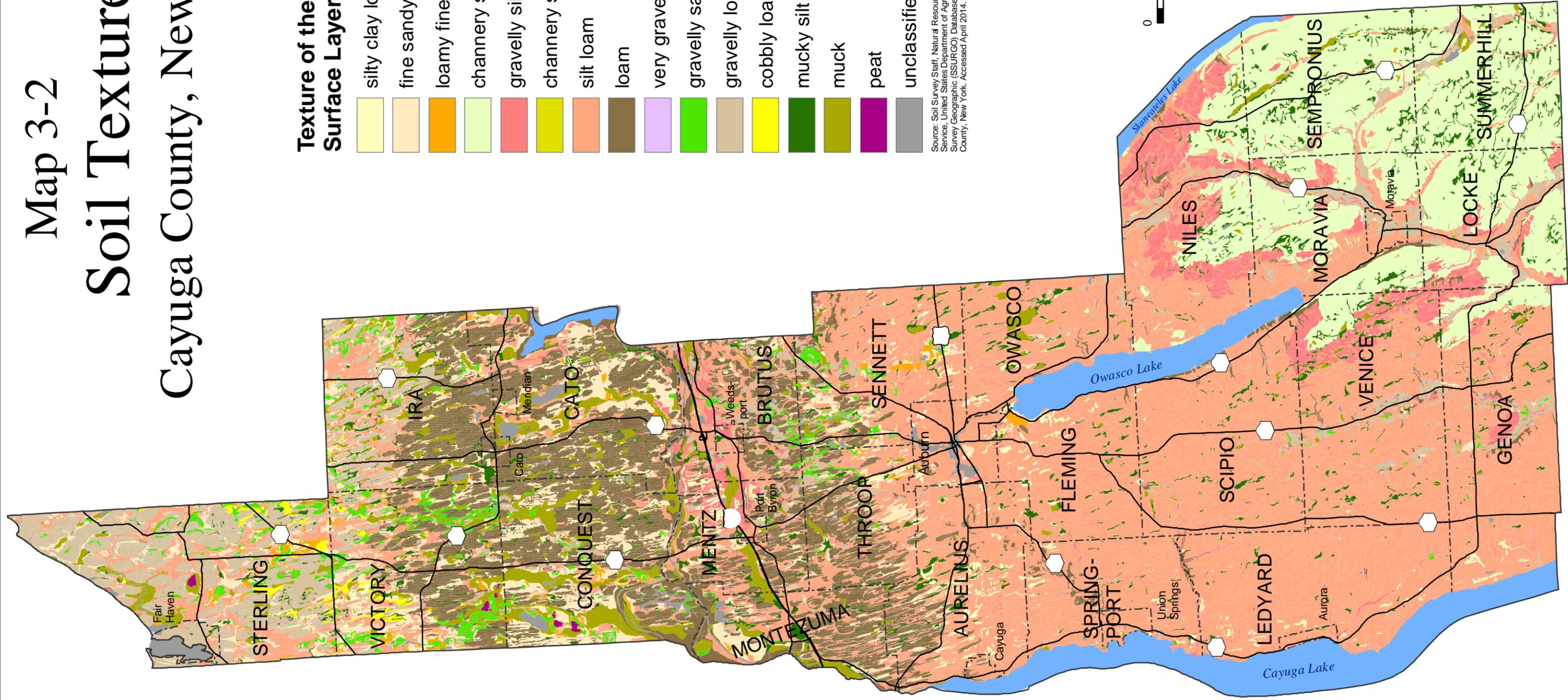
**Farmland Classification of Soils**

- Prime farmland
- Farmland of statewide importance
- Not prime farmland
- Prime farmland if drained

Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Cayuga County, New York. Accessed April 2, 2014.



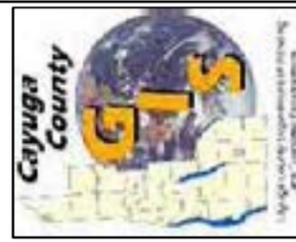
# Map 3-2 Soil Texture Cayuga County, New York



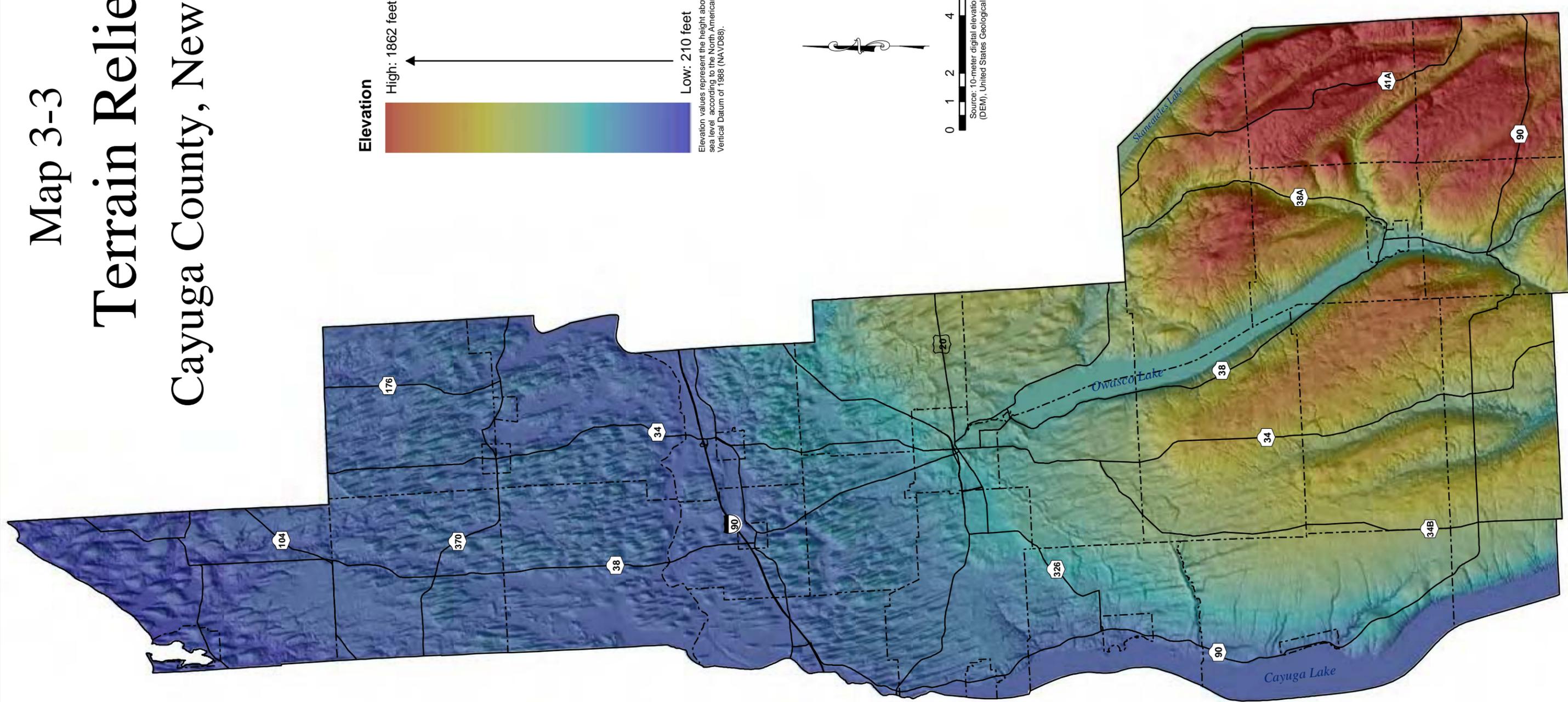
**Texture of the Surface Layer**

[Light Yellow]	silty clay loam
[Light Orange]	fine sandy loam
[Orange]	loamy fine sand
[Light Green]	channery silt loam
[Pink]	gravelly silt loam
[Yellow-Green]	channery sandy loam
[Light Brown]	silt loam
[Brown]	loam
[Purple]	very gravelly sand
[Green]	gravelly sandy loam
[Tan]	gravelly loam
[Yellow]	cobbly loam
[Dark Green]	mucky silt loam
[Olive]	muck
[Purple]	peat
[Grey]	unclassified

Source: Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Cayuga County, New York. Accessed April 2014.



# Map 3-3 Terrain Relief Cayuga County, New York



**Elevation**  
 High: 1862 feet  
 Low: 210 feet  
 Elevation values represent the height above sea level according to the North American Vertical Datum of 1988 (NAVD88).

0 1 2 4 6 Miles  
 Source: 10-meter digital elevation model (DEM), United States Geological Survey.

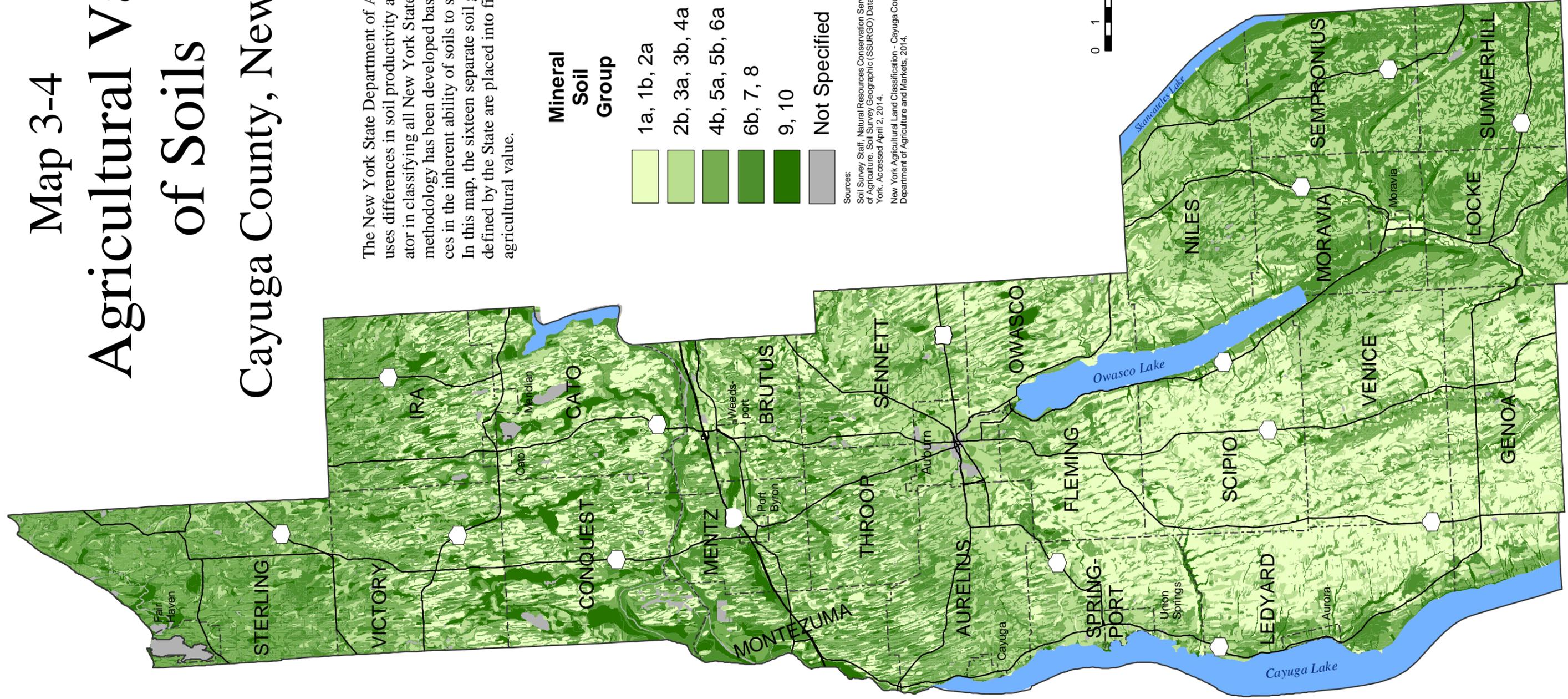
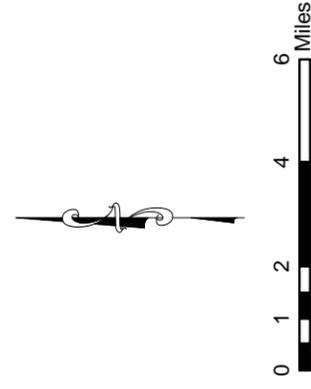


# Map 3-4 Agricultural Value of Soils Cayuga County, New York

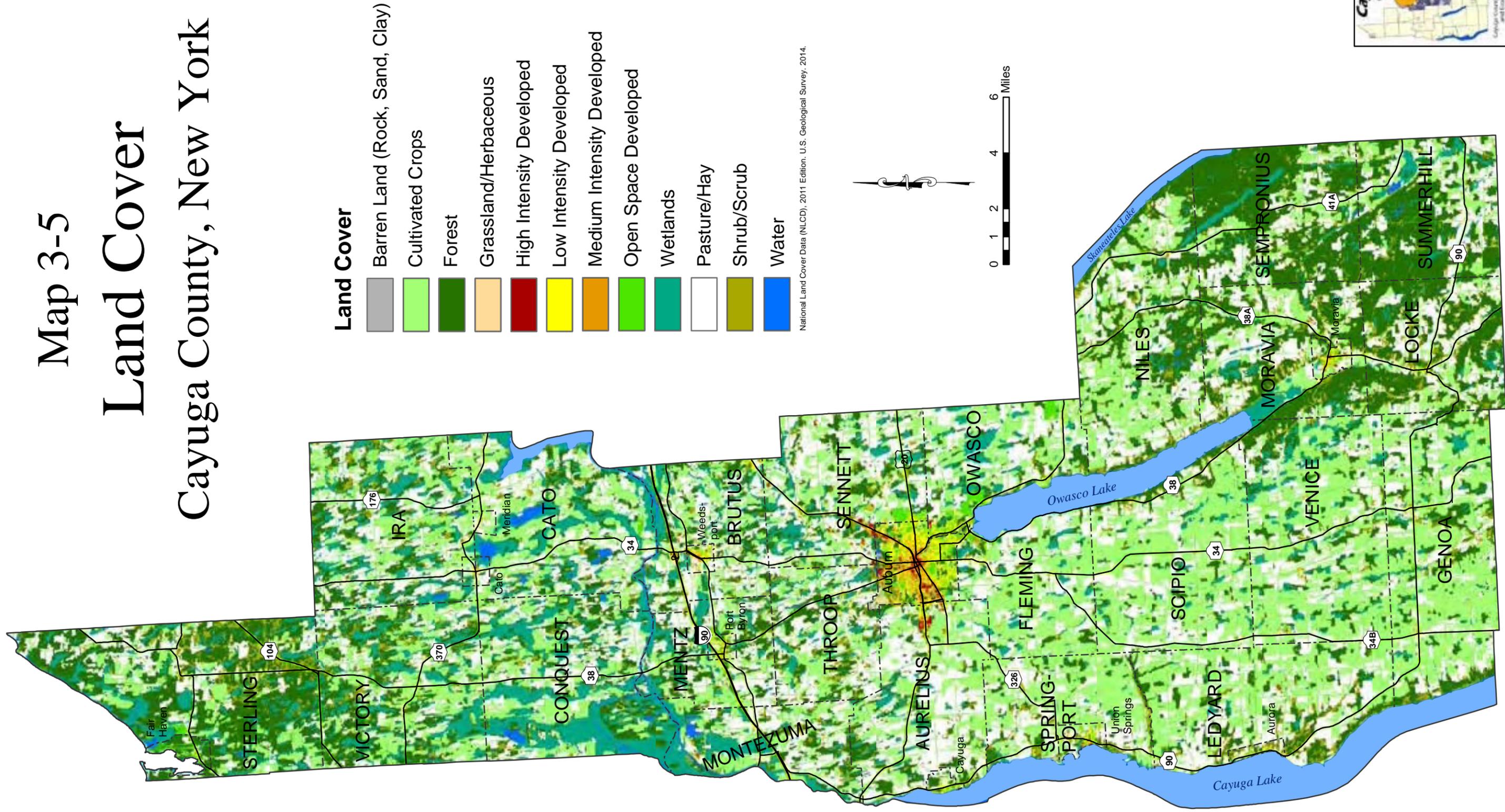
The New York State Department of Agriculture and Markets uses differences in soil productivity as the common denominator in classifying all New York State Farmland. A soil rating methodology has been developed based primarily on differences in the inherent ability of soils to support crop production. In this map, the sixteen separate soil groups and subgroups defined by the State are placed into five categories of potential agricultural value.

Mineral Soil Group	Value per Acre (in dollars)
1a, 1b, 2a	907 - 1019
2b, 3a, 3b, 4a	693 - 805
4b, 5a, 5b, 6a	479 - 591
6b, 7, 8	265 - 377
9, 10	51 - 163
Not Specified	--

Sources:  
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture, Soil Survey Geographic (SSURGO) Database for Cayuga County, New York. Accessed April 2, 2014.  
New York Agricultural Land Classification - Cayuga County, New York. State Department of Agriculture and Markets, 2014.



# Map 3-5 Land Cover Cayuga County, New York



- Land Cover**
- Barren Land (Rock, Sand, Clay)
  - Cultivated Crops
  - Forest
  - Grassland/Herbaceous
  - High Intensity Developed
  - Low Intensity Developed
  - Medium Intensity Developed
  - Open Space Developed
  - Wetlands
  - Pasture/Hay
  - Shrub/Scrub
  - Water

National Land Cover Data (NLCD), 2011 Edition. U.S. Geological Survey, 2014.

