MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Chautauqua County, New York
Survey Area Data: Version 12, Sep 14, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Chautauqua County, New York (NY013)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CnB	Chenango gravelly loam, 3 to 8 percent slopes	11.0	26.6%
ElB	Elnora fine sandy loam, 3 to 8 percent slopes	2.0	4.9%
Mn	Minoa fine sandy loam	0.5	1.3%
OrB	Orpark silt loam, 3 to 8 percent slopes	0.0	0.0%
RaA	Raynham silt loam, 0 to 3 percent slopes	7.1	17.1%
RaB	Raynham silt loam, 3 to 8 percent slopes	10.1	24.4%
Sw	Swormville silt loam	10.6	25.6%
Totals for Area of Interest		**41.3**	**100.0%**

Depth to Water Table

Depth to Water Table— Summary by Map Unit — Chautauqua County, New York (NY013)				
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
CnB	Chenango gravelly loam, 3 to 8 percent slopes	>200	11.0	26.6%
ElB	Elnora fine sandy loam, 3 to 8 percent slopes	54	2.0	4.9%
Mn	Minoa fine sandy loam	31	0.5	1.3%
OrB	Orpark silt loam, 3 to 8 percent slopes	31	0.0	0.0%
RaA	Raynham silt loam, 0 to 3 percent slopes	38	7.1	17.1%
RaB	Raynham silt loam, 3 to 8 percent slopes	38	10.1	24.4%
Sw	Swormville silt loam	31	10.6	25.6%
Totals for Area of Interest			**41.3**	**100.0%**

Description

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Rating Options

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: *None Specified*

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

Dwellings and Small Commercial Buildings

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect dwellings and small commercial buildings.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. This table shows the degree and kind of soil limitations that affect local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Report—Roads and Streets, Shallow Excavations, and Lawns and Landscaping

[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Roads and Streets, Shallow Excavations, and Lawns and Landscaping–Chautauqua County, New York							
Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CnB—Chenango gravelly loam, 3 to 8 percent slopes							
Chenango	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Unstable excavation walls	0.01	Low exchange capacity	0.75
				Dusty	0.01	Gravel content	0.06
						Dusty	0.01

Roads and Streets, Shallow Excavations, and Lawns and Landscaping–Chautauqua County, New York							
Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EIB—Elnora fine sandy loam, 3 to 8 percent slopes							
Elnora	75	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Low exchange capacity	0.75
		Depth to saturated zone	0.43	Unstable excavation walls	1.00	Droughty	0.45
						Depth to saturated zone	0.43
Mn—Minoa fine sandy loam							
Minoa	75	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Depth to saturated zone	0.99	Unstable excavation walls	0.01	Low exchange capacity	0.75
OrB—Orpark silt loam, 3 to 8 percent slopes							
Orpark	75	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to hard bedrock	1.00	Low exchange capacity	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Depth to hard bedrock	0.79	Unstable excavation walls	0.01	Depth to bedrock	0.80
				Dusty	0.01	Dusty	0.01
RaA—Raynham silt loam, 0 to 3 percent slopes							
Raynham	75	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Depth to saturated zone	0.94	Unstable excavation walls	0.01	Low exchange capacity	0.75
				Dusty	0.01	Dusty	0.01

Roads and Streets, Shallow Excavations, and Lawns and Landscaping–Chautauqua County, New York							
Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RaB—Raynham silt loam, 3 to 8 percent slopes							
Raynham	75	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.94
		Depth to saturated zone	0.94	Unstable excavation walls	0.01	Low exchange capacity	0.75
				Dusty	0.01	Dusty	0.01
Sw—Swormville silt loam							
Swormville	80	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Low strength	1.00	Unstable excavation walls	0.01	Low exchange capacity	0.50
		Depth to saturated zone	0.99	Dusty	0.01	Dusty	0.01

Data Source Information

Soil Survey Area: Chautauqua County, New York
Survey Area Data: Version 12, Sep 14, 2014

Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — Chautauqua County, New York (NY013)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CnB	Chenango gravelly loam, 3 to 8 percent slopes	A	11.0	26.6%
ElB	Elnora fine sandy loam, 3 to 8 percent slopes	A/D	2.0	4.9%
Mn	Minoa fine sandy loam	B/D	0.5	1.3%
OrB	Orpark silt loam, 3 to 8 percent slopes	C/D	0.0	0.0%
RaA	Raynham silt loam, 0 to 3 percent slopes	C/D	7.1	17.1%
RaB	Raynham silt loam, 3 to 8 percent slopes	C/D	10.1	24.4%
Sw	Swormville silt loam	C/D	10.6	25.6%
Totals for Area of Interest			**41.3**	**100.0%**