

Appendix A – NYSDEC Notice of Intent (NOI)
(Will be prepared during final design)

Appendix B – NYSDEC Acknowledgement of NOI Letter

Appendix C – Location Map/Soils Information

(Note: Refer to preliminary design drawings for more detailed views of soil type locations)



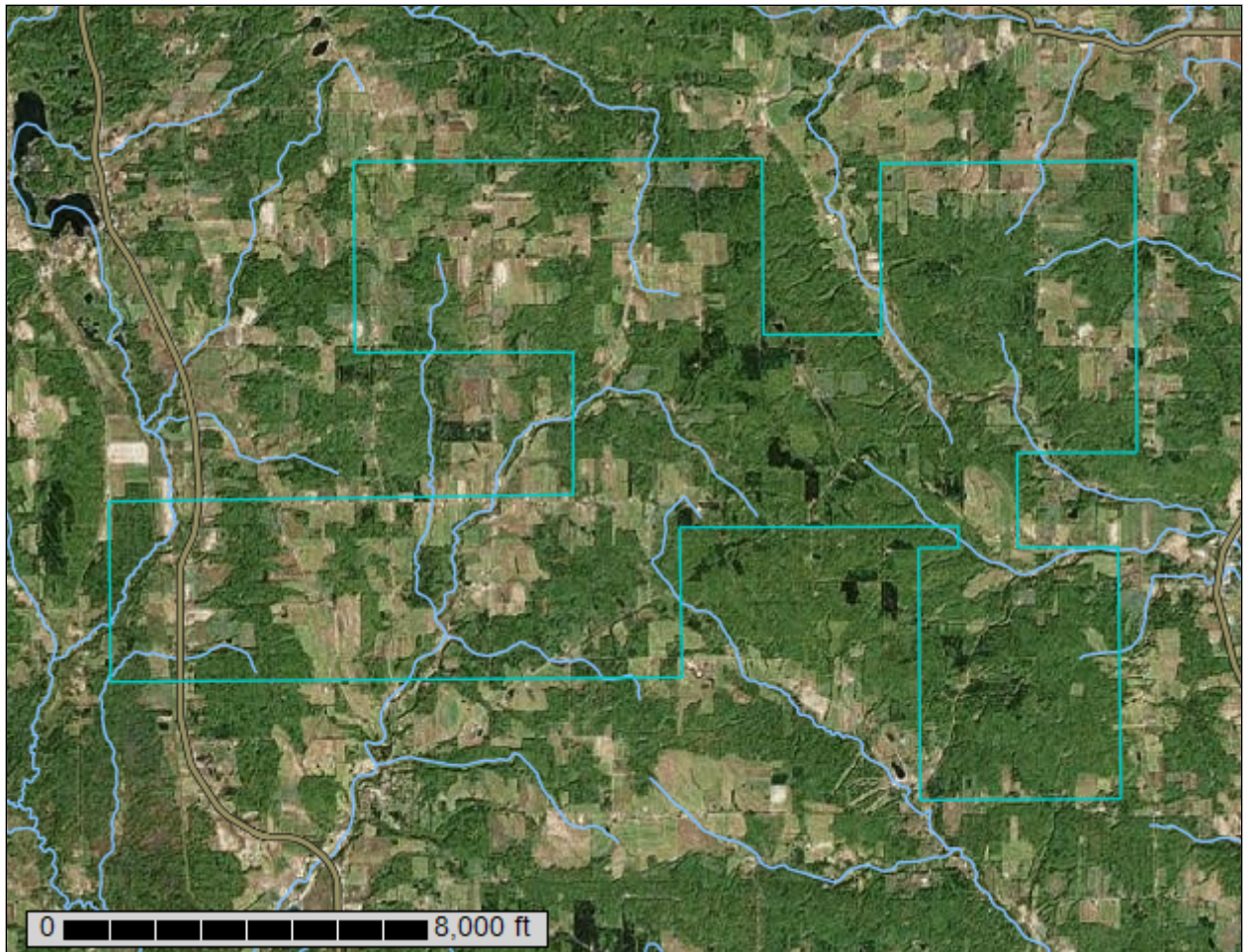
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Chautauqua County, New York**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<http://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

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individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

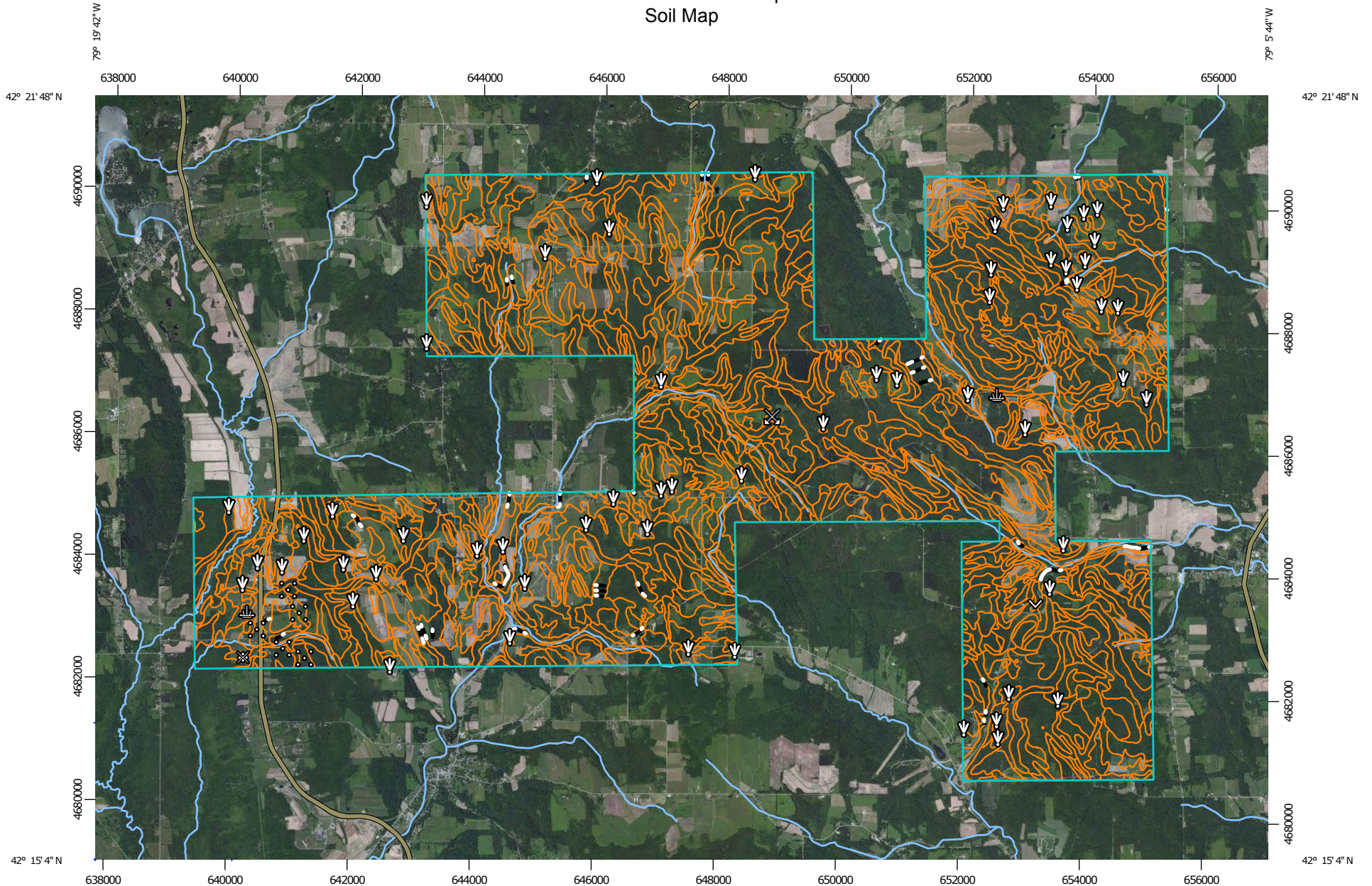
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

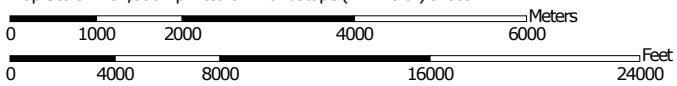
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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Map Scale: 1:87,800 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



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.

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 13, Sep 21, 2015

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
Ad	Alden mucky silt loam	73.8	0.3%
AIA	Allard silt loam, 0 to 3 percent slopes	77.0	0.3%
As	Ashville silt loam	502.9	2.3%
BsA	Busti silt loam, 0 to 3 percent slopes	692.4	3.1%
BsB	Busti silt loam, 3 to 8 percent slopes	5,716.6	25.8%
BsC	Busti silt loam, 8 to 15 percent slopes	766.9	3.5%
Cb	Canandaigua silt loam, loamy substratum	98.1	0.4%
Cc	Canandaigua mucky silt loam	45.6	0.2%
CdC	Canaseraga silt loam, 8 to 15 percent slopes	17.0	0.1%
Ce	Carlisle muck	5.1	0.0%
ChB	Chadakoin silt loam, 3 to 8 percent slopes	48.9	0.2%
ChC	Chadakoin silt loam, 8 to 15 percent slopes	232.1	1.0%
ChD	Chadakoin silt loam, 15 to 25 percent slopes	704.5	3.2%
ChE	Chadakoin silt loam, 25 to 35 percent slopes	657.2	3.0%
ChF	Chadakoin silt loam, 35 to 50 percent slopes	570.0	2.6%
CkB	Chautauqua silt loam, 3 to 8 percent slopes	2,270.9	10.3%
CkC	Chautauqua silt loam, 8 to 15 percent slopes	2,518.6	11.4%
CkD	Chautauqua silt loam, 15 to 25 percent slopes	466.3	2.1%
CIA	Chenango silt loam, 0 to 3 percent slopes	24.0	0.1%
CnA	Chenango gravelly loam, 0 to 3 percent slopes	2.1	0.0%
CnB	Chenango gravelly loam, 3 to 8 percent slopes	48.7	0.2%
CnC	Chenango gravelly loam, 8 to 15 percent slopes	53.0	0.2%
CnD	Chenango gravelly loam, 15 to 25 percent slopes	10.9	0.0%

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Chautauqua County, New York (NY013)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CoA	Chenango channery loam, fan, 0 to 3 percent slopes	165.3	0.7%
CoB	Chenango channery loam, fan, 3 to 8 percent slopes	272.5	1.2%
DaA	Dalton silt loam, 0 to 3 percent slopes	103.8	0.5%
DaB	Dalton silt loam, 3 to 8 percent slopes	39.8	0.2%
EIA	Elnora fine sandy loam, 0 to 3 percent slopes	40.2	0.2%
ErA	Erie silt loam, 0 to 3 percent slopes	11.6	0.1%
ErB	Erie silt loam, 3 to 8 percent slopes	73.7	0.3%
Fe	Fluvaquents-Udifluvents complex, frequently flooded	207.1	0.9%
FmA	Fremont silt loam, 0 to 3 percent slopes	240.9	1.1%
FmB	Fremont silt loam, 3 to 8 percent slopes	1,581.6	7.1%
FmC	Fremont silt loam, 8 to 15 percent slopes	448.8	2.0%
Ge	Getzville silt loam	161.9	0.7%
HnB	Hinesburg fine sandy loam, 3 to 8 percent slopes	11.2	0.1%
HnC	Hinesburg fine sandy loam, 8 to 15 percent slopes	33.6	0.2%
Ho	Holderton silt loam, 0 to 3 percent slopes, occasionally flooded 140	115.8	0.5%
La	Lamson silt loam	125.2	0.6%
LnB	Langford silt loam, 3 to 8 percent slopes	24.6	0.1%
LnC	Langford silt loam, 8 to 15 percent slopes	26.3	0.1%
MdB	Mardin channery silt loam, 3 to 8 percent slopes	100.0	0.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	17.2	0.1%
MdD	Mardin channery silt loam, 15 to 25 percent slopes	5.4	0.0%
Me	Middlebury silt loam	40.6	0.2%
Mn	Minoa fine sandy loam	94.9	0.4%
OrA	Orpark silt loam, 0 to 3 percent slopes	36.6	0.2%
OrB	Orpark silt loam, 3 to 8 percent slopes	178.8	0.8%

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Chautauqua County, New York (NY013)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
OrC	Orpark silt loam, 8 to 15 percent slopes	119.0	0.5%
Pa	Palms muck	10.1	0.0%
Pg	Pits, gravel	0.1	0.0%
Po	Pompton silt loam	25.7	0.1%
RaA	Raynham silt loam, 0 to 3 percent slopes	22.6	0.1%
RaB	Raynham silt loam, 3 to 8 percent slopes	2.8	0.0%
Rf	Raynham silt loam, flooded	23.2	0.1%
Rh	Red Hook silt loam	119.3	0.5%
ShB	Schuyler silt loam, 3 to 8 percent slopes	219.3	1.0%
ShC	Schuyler silt loam, 8 to 15 percent slopes	424.3	1.9%
ShD	Schuyler silt loam, 15 to 25 percent slopes	96.2	0.4%
ShE	Schuyler silt loam, 25 to 35 percent slopes	67.7	0.3%
Sw	Swormville silt loam	50.7	0.2%
Tg	Tioga silt loam	52.7	0.2%
ToB	Towerville silt loam, 3 to 8 percent slopes	16.5	0.1%
ToC	Towerville silt loam, 8 to 15 percent slopes	91.4	0.4%
ToD	Towerville silt loam, 15 to 25 percent slopes	68.8	0.3%
ToF	Towerville silt loam, 35 to 50 percent slopes	79.8	0.4%
VaB	Valois gravelly silt loam, 3 to 8 percent slopes	102.9	0.5%
VaC	Valois gravelly silt loam, 8 to 15 percent slopes	128.6	0.6%
VaD	Valois gravelly silt loam, 15 to 25 percent slopes	101.2	0.5%
VaE	Valois gravelly silt loam, 25 to 35 percent slopes	57.3	0.3%
VaF	Valois gravelly silt loam, 35 to 50 percent slopes	17.5	0.1%
VcC	Valois gravelly silt loam, rolling	107.6	0.5%
VoA	Volusia channery silt loam, 0 to 3 percent slopes	9.9	0.0%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	190.1	0.9%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	11.0	0.0%

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Chautauqua County, New York (NY013)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	Water	25.1	0.1%
Wa	Wakeville silt loam	6.2	0.0%
Wy	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	120.5	0.5%
Totals for Area of Interest		22,128.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Chautauqua County, New York

Ad—Alden mucky silt loam

Map Unit Setting

National map unit symbol: 9qjk
Elevation: 300 to 1,500 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Alden and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Alden

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: A silty mantle of local deposition overlying loamy till

Typical profile

H1 - 0 to 9 inches: mucky silt loam
H2 - 9 to 35 inches: silt loam
H3 - 35 to 72 inches: gravelly loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 5 percent
Landform: Depressions

Custom Soil Resource Report

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions

Fremont

Percent of map unit: 5 percent

Wayland

Percent of map unit: 5 percent

Landform: Flood plains

AIA—Allard silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qjl

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Allard and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Allard

Setting

Landform: Alluvial fans, outwash plains, terraces

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Silty eolian, glaciolacustrine, or old alluvial deposits over sandy and gravelly glaciofluvial deposits

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 30 inches: very fine sandy loam

H3 - 30 to 72 inches: stratified sand to very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 6.1 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B

Minor Components

Chenango

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

Tioga

Percent of map unit: 3 percent

Unadilla

Percent of map unit: 3 percent

Scio

Percent of map unit: 3 percent

As—Ashville silt loam

Map Unit Setting

National map unit symbol: 9qjn

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Ashville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ashville

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Silty local colluvium and in some places the underlying till

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 36 inches: silt loam

H3 - 36 to 72 inches: gravelly silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions

Busti

Percent of map unit: 5 percent

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions

Fremont

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent
Landform: Depressions

BsA—Busti silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qjr
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Busti and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Busti

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 19 inches: silt loam

H3 - 19 to 27 inches: gravelly silt loam

H4 - 27 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 3 percent

Landform: Depressions

Ashville

Percent of map unit: 3 percent

Landform: Depressions

Unnamed soils

Percent of map unit: 3 percent

Erie

Percent of map unit: 3 percent

Fremont

Percent of map unit: 3 percent

BsB—Busti silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qjs
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Busti and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Busti

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 19 inches: silt loam
H3 - 19 to 27 inches: gravelly silt loam
H4 - 27 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 4 percent
Landform: Depressions

Chautauqua

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Erie

Percent of map unit: 4 percent

Fremont

Percent of map unit: 4 percent

BsC—Busti silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qjt
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Busti and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Busti

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 19 inches: silt loam
H3 - 19 to 27 inches: gravelly silt loam
H4 - 27 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 4 percent
Landform: Depressions

Chadakoin

Percent of map unit: 4 percent

Chautauqua

Percent of map unit: 4 percent

Erie

Percent of map unit: 4 percent

Fremont

Percent of map unit: 4 percent

Cb—Canandaigua silt loam, loamy substratum

Map Unit Setting

National map unit symbol: 9qjw
Elevation: 100 to 1,200 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canandaigua, loamy substratum, and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canandaigua, Loamy Substratum

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 36 inches: silt loam
H3 - 36 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 4 percent
Landform: Depressions

Ashville

Percent of map unit: 4 percent
Landform: Depressions

Canadice

Percent of map unit: 4 percent
Landform: Depressions

Lamson

Percent of map unit: 4 percent
Landform: Depressions

Niagara

Percent of map unit: 4 percent

Cc—Canandaigua mucky silt loam

Map Unit Setting

National map unit symbol: 9qjx
Elevation: 100 to 1,000 feet
Mean annual precipitation: 39 to 50 inches

Custom Soil Resource Report

Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Canandaigua and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canandaigua

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: mucky silt loam
H2 - 10 to 36 inches: silt loam
H3 - 36 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: High (about 11.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 3 percent
Landform: Depressions

Canadice

Percent of map unit: 3 percent
Landform: Depressions

Palms

Percent of map unit: 3 percent
Landform: Marshes, swamps

Lamson

Percent of map unit: 3 percent
Landform: Depressions

Unnamed soils

Percent of map unit: 3 percent
Landform: Depressions

CdC—Canaseraga silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qjz
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Canaseraga and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canaseraga

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: A silty mantle over loamy till derived from siltstone, shale, and sandstone, with varying amounts of limestone

Typical profile

H1 - 0 to 2 inches: silt loam
H2 - 2 to 23 inches: silt loam
H3 - 23 to 55 inches: gravelly loam
H4 - 55 to 72 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 15 to 36 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Custom Soil Resource Report

Hydrologic Soil Group: C

Minor Components

Chautauqua

Percent of map unit: 3 percent

Dalton

Percent of map unit: 3 percent

Mardin

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

Schuyler

Percent of map unit: 3 percent

Ce—Carlisle muck

Map Unit Setting

National map unit symbol: 9qk0

Elevation: 600 to 1,200 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Carlisle and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Carlisle

Setting

Landform: Marshes, swamps

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Deep organic material

Typical profile

H1 - 0 to 90 inches: muck

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 5.95 in/hr)*

Custom Soil Resource Report

Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water storage in profile: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D

Minor Components

Unnamed soils

Percent of map unit: 3 percent
Landform: Depressions

Palms

Percent of map unit: 3 percent
Landform: Marshes, swamps

Halsey

Percent of map unit: 2 percent
Landform: Depressions

Canandaigua

Percent of map unit: 2 percent
Landform: Depressions

ChB—Chadakoin silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qk3
Elevation: 800 to 1,800 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Chadakoin and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chadakoin

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 24 inches: silt loam
H3 - 24 to 43 inches: gravelly loam
H4 - 43 to 72 inches: gravelly loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Minor Components

Busti

Percent of map unit: 4 percent

Chautauqua

Percent of map unit: 4 percent

Chenango

Percent of map unit: 4 percent

Towerville

Percent of map unit: 4 percent

Schuyler

Percent of map unit: 4 percent

ChC—Chadakoin silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qk4
Elevation: 800 to 1,800 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Chadakoin and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chadakoin

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 24 inches: silt loam

H3 - 24 to 43 inches: gravelly loam

H4 - 43 to 72 inches: gravelly loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Minor Components

Chautauqua

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Valois

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

ChD—Chadakoin silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qk5

Elevation: 800 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Chadakoin and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chadakoin

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 24 inches: silt loam

H3 - 24 to 43 inches: gravelly loam

H4 - 43 to 72 inches: gravelly loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Minor Components

Busti

Percent of map unit: 4 percent

Chautauqua

Percent of map unit: 4 percent

Towerville

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

Schuyler

Percent of map unit: 4 percent

ChE—Chadakoin silt loam, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9qk6

Elevation: 800 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Chadakoin and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chadakoin

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 24 inches: silt loam

H3 - 24 to 43 inches: gravelly loam

H4 - 43 to 72 inches: gravelly loam

Properties and qualities

Slope: 25 to 35 percent

Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Minor Components

Chautauqua

Percent of map unit: 4 percent

Schuyler

Percent of map unit: 4 percent

Towerville

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

Fluvaquents

Percent of map unit: 2 percent

Landform: Flood plains

Udifluvents

Percent of map unit: 2 percent

ChF—Chadakoin silt loam, 35 to 50 percent slopes

Map Unit Setting

National map unit symbol: 9qk7

Elevation: 800 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Chadakoin and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chadakoin

Setting

Landform: Hills, till plains, drumlinoid ridges

Custom Soil Resource Report

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 4 inches: silt loam

H2 - 4 to 24 inches: silt loam

H3 - 24 to 43 inches: gravelly loam

H4 - 43 to 72 inches: gravelly loam

Properties and qualities

Slope: 35 to 50 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Minor Components

Schuyler

Percent of map unit: 7 percent

Towerville

Percent of map unit: 7 percent

Valois

Percent of map unit: 5 percent

Udifluvents

Percent of map unit: 3 percent

Fluvaquents

Percent of map unit: 3 percent

Landform: Flood plains

CkB—Chautauqua silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qk8

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Custom Soil Resource Report

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Chautauqua and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chautauqua

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 34 inches: gravelly silt loam

H3 - 34 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Minor Components

Busti

Percent of map unit: 5 percent

Chadakoin

Percent of map unit: 5 percent

Langford

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

CkC—Chautauqua silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qk9

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Chautauqua and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chautauqua

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 34 inches: gravelly silt loam

H3 - 34 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Minor Components

Busti

Percent of map unit: 3 percent

Custom Soil Resource Report

Chadakoin

Percent of map unit: 3 percent

Schuyler

Percent of map unit: 3 percent

Towerville

Percent of map unit: 3 percent

Langford

Percent of map unit: 3 percent

CkD—Chautauqua silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qkb

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Chautauqua and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chautauqua

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from siltstone, sandstone, and smaller amounts of shale

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 34 inches: gravelly silt loam

H3 - 34 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Custom Soil Resource Report

Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C/D

Minor Components

Chadakoin

Percent of map unit: 5 percent

Langford

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

CIA—Chenango silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qkc

Elevation: 600 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 14 inches: silt loam

Custom Soil Resource Report

H3 - 14 to 45 inches: very gravelly fine sandy loam

H4 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)*

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: A

Minor Components

Allard

Percent of map unit: 4 percent

Pompton

Percent of map unit: 4 percent

Red hook

Percent of map unit: 4 percent

Unadilla

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

CnA—Chenango gravelly loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qkf

Elevation: 600 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 6 inches: gravelly loam

H2 - 6 to 45 inches: very gravelly fine sandy loam

H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Minor Components

Pompton

Percent of map unit: 4 percent

Tioga

Percent of map unit: 4 percent

Allard

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

CnB—Chenango gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qkg
Elevation: 600 to 1,800 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 6 inches: gravelly loam
H2 - 6 to 45 inches: very gravelly fine sandy loam
H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A

Minor Components

Pompton

Percent of map unit: 4 percent

Tioga

Percent of map unit: 4 percent

Allard

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

CnC—Chenango gravelly loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qkh

Elevation: 600 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Chenango and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 6 inches: gravelly loam

H2 - 6 to 45 inches: very gravelly fine sandy loam

H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Minor Components

Pompton

Percent of map unit: 4 percent

Tioga

Percent of map unit: 4 percent

Allard

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

CnD—Chenango gravelly loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qkj

Elevation: 600 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Chenango and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango

Setting

Landform: Terraces, valley trains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Riser

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 6 inches: gravelly loam

H2 - 6 to 45 inches: very gravelly fine sandy loam

H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Minor Components

Allard

Percent of map unit: 4 percent

Tioga

Percent of map unit: 4 percent

Unadilla

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

CoA—Chenango channery loam, fan, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qkl

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango, fan, and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango, Fan

Setting

Landform: Alluvial fans

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 9 inches: channery loam

H2 - 9 to 45 inches: very gravelly fine sandy loam

H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: About 36 to 72 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Minor Components

Pompton

Percent of map unit: 5 percent

Red hook

Percent of map unit: 5 percent

Middlebury

Percent of map unit: 5 percent

Valois

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

CoB—Chenango channery loam, fan, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qkm
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Chenango, fan, and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chenango, Fan

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from sandstone, shale, and siltstone

Typical profile

H1 - 0 to 9 inches: channery loam
H2 - 9 to 45 inches: very gravelly fine sandy loam
H3 - 45 to 72 inches: very gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A

Minor Components

Pompton

Percent of map unit: 5 percent

Red hook

Percent of map unit: 5 percent

Middlebury

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

Valois

Percent of map unit: 5 percent

DaA—Dalton silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qkw

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Dalton and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dalton

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: A silty mantle of glaciolacustrine deposits over loamy till derived from siltstone, shale, and sandstone

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 23 inches: silt loam

H3 - 23 to 46 inches: gravelly silt loam

2C - 46 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 15 to 36 inches to fragipan

Natural drainage class: Somewhat poorly drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Minor Components

Alden

Percent of map unit: 4 percent

Landform: Depressions

Busti

Percent of map unit: 4 percent

Canaseraga

Percent of map unit: 4 percent

Fremont

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

DaB—Dalton silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qkx

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Dalton and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dalton

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, tread

Down-slope shape: Concave

Across-slope shape: Linear

Custom Soil Resource Report

Parent material: A silty mantle of glaciolacustrine deposits over loamy till derived from siltstone, shale, and sandstone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 23 inches: silt loam
H3 - 23 to 46 inches: gravelly silt loam
2C - 46 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 36 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D

Minor Components

Ashville

Percent of map unit: 4 percent
Landform: Depressions

Busti

Percent of map unit: 4 percent

Canaseraga

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Fremont

Percent of map unit: 4 percent

EIA—Elnora fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9ql3
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elnora and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elnora

Setting

Landform: Beach ridges, deltas

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Sandy glaciofluvial, eolian, or deltaic deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 30 inches: loamy fine sand

H3 - 30 to 72 inches: fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: A/D

Minor Components

Collamer

Percent of map unit: 5 percent

Colonie

Percent of map unit: 5 percent

Minoa

Percent of map unit: 5 percent

Scio

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

ErA—Erie silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9q15

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Erie and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Erie

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from siltstone, sandstone, shale, and limestone

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 15 inches: silt loam

H3 - 15 to 35 inches: gravelly silt loam

H4 - 35 to 72 inches: very gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 10 to 21 inches to fragipan

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Minor Components

Ashville

Percent of map unit: 4 percent
Landform: Depressions

Darien

Percent of map unit: 4 percent

Fremont

Percent of map unit: 4 percent

Langford

Percent of map unit: 4 percent

Busti

Percent of map unit: 4 percent

ErB—Erie silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9ql6
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Erie and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Erie

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived from siltstone, sandstone, shale, and limestone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 15 inches: silt loam
H3 - 15 to 35 inches: gravelly silt loam
H4 - 35 to 72 inches: very gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 10 to 21 inches to fragipan
Natural drainage class: Somewhat poorly drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Minor Components

Ashville

Percent of map unit: 5 percent

Landform: Depressions

Darien

Percent of map unit: 5 percent

Fremont

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

Langford

Percent of map unit: 5 percent

Fe—Fluvaquents-Udifuluents complex, frequently flooded

Map Unit Setting

National map unit symbol: 9ql8

Elevation: 100 to 3,000 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents and similar soils: 55 percent

Udifuluents and similar soils: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Custom Soil Resource Report

Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium with highly variable texture

Typical profile

H1 - 0 to 5 inches: gravelly silt loam
H2 - 5 to 70 inches: very gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D

Description of Udifluvents

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium with a wide range of texture

Typical profile

H1 - 0 to 4 inches: gravelly silt loam
H2 - 4 to 70 inches: very gravelly loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 19.98 in/hr)
Depth to water table: About 24 to 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A

Minor Components

Holderton

Percent of map unit: 5 percent

Teel

Percent of map unit: 5 percent

Wayland

Percent of map unit: 5 percent

Landform: Flood plains

FmA—Fremont silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9ql9

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Fremont and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fremont

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from soft shale with some siltstone and sandstone

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 35 inches: channery silty clay loam

H3 - 35 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 5 percent

Landform: Depressions

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

FmB—Fremont silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qlb

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Fremont and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fremont

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from soft shale with some siltstone and sandstone

Typical profile

H1 - 0 to 8 inches: silt loam

Custom Soil Resource Report

H2 - 8 to 35 inches: channery silty clay loam

H3 - 35 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 5 percent

Landform: Depressions

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

FmC—Fremont silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qlc

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Fremont and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fremont

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from soft shale with some siltstone and sandstone

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 35 inches: channery silty clay loam

H3 - 35 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Minor Components

Ashville

Percent of map unit: 5 percent

Landform: Depressions

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Busti

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

Ge—Getzville silt loam

Map Unit Setting

National map unit symbol: 9qlh

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Getzville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Getzville

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Silty and clayey glaciolacustrine deposits over sandy glaciolacustrine deposits

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 22 inches: silt loam

H3 - 22 to 72 inches: stratified sand to loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: B/D

Minor Components

Raynham

Percent of map unit: 5 percent

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions

Lamson

Percent of map unit: 5 percent

Landform: Depressions

Swormville

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

Landform: Depressions

HnB—Hinesburg fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qln

Elevation: 90 to 1,000 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Hinesburg and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinesburg

Setting

Landform: Lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciolacustrine or deltaic deposits over loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 32 inches: loamy fine sand

H3 - 32 to 72 inches: silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Minor Components

Allard

Percent of map unit: 3 percent

Minoa

Percent of map unit: 3 percent

Colonie

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

Unadilla

Percent of map unit: 3 percent

HnC—Hinesburg fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qlp

Elevation: 90 to 1,000 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinesburg and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinesburg

Setting

Landform: Lake plains

Custom Soil Resource Report

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciolacustrine or deltaic deposits over loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam

H2 - 9 to 32 inches: loamy fine sand

H3 - 32 to 72 inches: silt loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: A

Minor Components

Allard

Percent of map unit: 4 percent

Minoa

Percent of map unit: 4 percent

Colonie

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Unadilla

Percent of map unit: 4 percent

Ho—Holderton silt loam, 0 to 3 percent slopes, occasionally flooded 140

Map Unit Setting

National map unit symbol: 2rw9q

Elevation: 160 to 1,970 feet

Mean annual precipitation: 31 to 68 inches

Mean annual air temperature: 43 to 52 degrees F

Frost-free period: 105 to 180 days

Custom Soil Resource Report

Farmland classification: Prime farmland if drained

Map Unit Composition

Holderton and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Holderton

Setting

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 10 inches: silt loam

Bw1 - 10 to 18 inches: loam

Bw2 - 18 to 35 inches: fine sandy loam

C1 - 35 to 42 inches: sandy loam

C2 - 42 to 72 inches: gravelly loamy coarse sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum in profile: 1 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Minor Components

Middlebury

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Convex

Wayland

Percent of map unit: 5 percent

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Dip

Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Concave

La—Lamson silt loam

Map Unit Setting

National map unit symbol: 9qly

Elevation: 50 to 1,100 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Lamson and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lamson

Setting

Landform: Depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Deltaic or glaciolacustrine deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 37 inches: fine sandy loam

H3 - 37 to 72 inches: stratified fine sandy loam to fine sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: A/D

Minor Components

Canandaigua

Percent of map unit: 5 percent
Landform: Depressions

Minoa

Percent of map unit: 5 percent

Getzville

Percent of map unit: 5 percent
Landform: Depressions

Halsey

Percent of map unit: 5 percent
Landform: Depressions

Raynham

Percent of map unit: 5 percent

LnB—Langford silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qlz
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Langford and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Langford

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived from siltstone, sandstone, shale, and some limestone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 21 inches: silt loam
H3 - 21 to 45 inches: gravelly silt loam
H4 - 45 to 72 inches: gravelly silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 15 to 28 inches to fragipan
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 14 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Available water storage in profile: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Erie

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

LnC—Langford silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qm0
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Langford and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Langford

Setting

Landform: Hills, till plains, drumlinoid ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest

Custom Soil Resource Report

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived from siltstone, sandstone, shale, and some limestone

Typical profile

H1 - 0 to 9 inches: silt loam

H2 - 9 to 21 inches: silt loam

H3 - 21 to 45 inches: gravelly silt loam

H4 - 45 to 72 inches: gravelly silt loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 15 to 28 inches to fragipan

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 14 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Erie

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

MdB—Mardin channery silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2srhb

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mardin and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mardin

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam

BE - 8 to 12 inches: channery silt loam

Bw1 - 12 to 16 inches: channery silt loam

Bw2 - 16 to 20 inches: channery silt loam

Bx1 - 20 to 36 inches: channery silt loam

Bx2 - 36 to 57 inches: channery silt loam

C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 3 to 8 percent

Percent of area covered with surface fragments: 0.0 percent

Depth to restrictive feature: 14 to 26 inches to fragipan

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 13 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: D

Minor Components

Bath

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Concave

Across-slope shape: Linear

Volusia

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, interfluve, side slope

Custom Soil Resource Report

Down-slope shape: Concave

Across-slope shape: Linear

Lordstown

Percent of map unit: 5 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, concave

Across-slope shape: Linear

MdC—Mardin channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2srhj

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Mardin and similar soils: 88 percent

Minor components: 12 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mardin

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Interfluve, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam

BE - 8 to 12 inches: channery silt loam

Bw1 - 12 to 16 inches: channery silt loam

Bw2 - 16 to 20 inches: channery silt loam

Bx1 - 20 to 36 inches: channery silt loam

Bx2 - 36 to 57 inches: channery silt loam

C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent

Percent of area covered with surface fragments: 0.0 percent

Depth to restrictive feature: 14 to 26 inches to fragipan

Natural drainage class: Moderately well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 13 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Minor Components

Bath

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, side slope

Down-slope shape: Linear

Across-slope shape: Linear

Volusia

Percent of map unit: 5 percent

Landform: Hills, mountains

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, interfluvium, side slope

Down-slope shape: Concave

Across-slope shape: Linear

Lordstown

Percent of map unit: 2 percent

Landform: Ridges

Landform position (two-dimensional): Summit, shoulder

Landform position (three-dimensional): Side slope

Down-slope shape: Linear, concave

Across-slope shape: Linear

MdD—Mardin channery silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2srh8

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Mardin and similar soils: 85 percent

Minor components: 15 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mardin

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam
BE - 8 to 12 inches: channery silt loam
Bw1 - 12 to 16 inches: channery silt loam
Bw2 - 16 to 20 inches: channery silt loam
Bx1 - 20 to 36 inches: channery silt loam
Bx2 - 36 to 57 inches: channery silt loam
C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 15 to 25 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 14 to 26 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D

Minor Components

Volusia

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluvium, side slope
Down-slope shape: Concave
Across-slope shape: Linear

Lordstown

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Base slope, side slope
Down-slope shape: Linear, concave
Across-slope shape: Linear

Bath

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear

Me—Middlebury silt loam

Map Unit Setting

National map unit symbol: 9qm4
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Middlebury and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Middlebury

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy alluvium predominantly from areas of shale and sandstone with some lime-bearing material

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 43 inches: loam
H3 - 43 to 72 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D

Minor Components

Holderton

Percent of map unit: 4 percent

Pompton

Percent of map unit: 4 percent

Scio

Percent of map unit: 4 percent

Tioga

Percent of map unit: 4 percent

Fluvaquents

Percent of map unit: 2 percent

Landform: Flood plains

Udifluvents

Percent of map unit: 2 percent

Mn—Minoa fine sandy loam

Map Unit Setting

National map unit symbol: 9qm5

Elevation: 250 to 800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Minoa and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Minoa

Setting

Landform: Deltas on lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Deltaic or glaciolacustrine deposits with a high content of fine and very fine sand

Typical profile

H1 - 0 to 5 inches: fine sandy loam

H2 - 5 to 35 inches: fine sandy loam

H3 - 35 to 48 inches: very fine sandy loam

H4 - 48 to 72 inches: silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Minor Components

Canandaigua

Percent of map unit: 5 percent

Landform: Depressions

Elnora

Percent of map unit: 5 percent

Halsey

Percent of map unit: 5 percent

Landform: Depressions

Unnamed soils

Percent of map unit: 5 percent

Lamson

Percent of map unit: 5 percent

Landform: Depressions

OrA—Orpark silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qm9

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Orpark and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orpark

Setting

Landform: Benches, ridges, till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived mainly from shale, siltstone, and sandstone

Typical profile

H1 - 0 to 3 inches: silt loam

H2 - 3 to 26 inches: channery silt loam

H3 - 26 to 30 inches: weathered bedrock

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 5 percent

Landform: Depressions

Fremont

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

OrB—Orpark silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qmb
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Orpark and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orpark

Setting

Landform: Benches, ridges, till plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived mainly from shale, siltstone, and sandstone

Typical profile

H1 - 0 to 3 inches: silt loam
H2 - 3 to 26 inches: channery silt loam
H3 - 26 to 30 inches: weathered bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions

Fremont

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

OrC—Orpark silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qmc

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Orpark and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Orpark

Setting

Landform: Benches, ridges, till plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived mainly from shale, siltstone, and sandstone

Typical profile

H1 - 0 to 3 inches: silt loam

H2 - 3 to 26 inches: channery silt loam

H3 - 26 to 30 inches: weathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.4 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Minor Components

Alden

Percent of map unit: 5 percent

Landform: Depressions

Fremont

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Volusia

Percent of map unit: 5 percent

Pa—Palms muck

Map Unit Setting

National map unit symbol: 9qmf

Elevation: 250 to 1,500 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Palms and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palms

Setting

Landform: Marshes, swamps

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Organic material over loamy glacial drift

Typical profile

H1 - 0 to 36 inches: muck

H2 - 36 to 72 inches: silty clay loam

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Calcium carbonate, maximum in profile: 20 percent

Available water storage in profile: Very high (about 18.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Minor Components

Alden

Percent of map unit: 4 percent

Landform: Depressions

Canandaigua

Percent of map unit: 4 percent

Landform: Depressions

Carlisle

Percent of map unit: 4 percent

Landform: Marshes, swamps

Lamson

Percent of map unit: 4 percent

Landform: Depressions

Henrietta

Percent of map unit: 4 percent

Landform: Marshes, swamps

Pg—Pits, gravel

Map Unit Setting

National map unit symbol: 9qmg

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Pits, gravel: 75 percent

Minor components: 25 percent

Custom Soil Resource Report

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Gravel

Typical profile

H1 - 0 to 6 inches: very gravelly sand

H2 - 6 to 60 inches: very gravelly coarse sand

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Minor Components

Allard

Percent of map unit: 5 percent

Chenango

Percent of map unit: 5 percent

Halsey

Percent of map unit: 5 percent

Landform: Depressions

Pompton

Percent of map unit: 5 percent

Red hook

Percent of map unit: 5 percent

Po—Pompton silt loam

Map Unit Setting

National map unit symbol: 9qmh

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Pompton and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pompton

Setting

Landform: Terraces, valley trains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy over sandy and gravelly glaciofluvial deposits

Custom Soil Resource Report

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 34 inches: gravelly sandy loam

H3 - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: A/D

Minor Components

Allard

Percent of map unit: 4 percent

Chenango

Percent of map unit: 4 percent

Red hook

Percent of map unit: 4 percent

Scio

Percent of map unit: 4 percent

Valois

Percent of map unit: 4 percent

RaA—Raynham silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 9qmj

Elevation: 50 to 500 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Raynham and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Raynham

Setting

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 24 inches: silt loam

H3 - 24 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 6 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Available water storage in profile: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Getzville

Percent of map unit: 5 percent

Landform: Depressions

Niagara

Percent of map unit: 5 percent

Scio

Percent of map unit: 5 percent

Swormville

Percent of map unit: 5 percent

Red hook

Percent of map unit: 5 percent

RaB—Raynham silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qmk
Elevation: 50 to 500 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Raynham and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Raynham

Setting

Landform: Lake plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 24 inches: silt loam
H3 - 24 to 72 inches: silt loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D

Minor Components

Red hook

Percent of map unit: 5 percent

Getzville

Percent of map unit: 5 percent

Landform: Depressions

Niagara

Percent of map unit: 5 percent

Scio

Percent of map unit: 5 percent

Swormville

Percent of map unit: 5 percent

Rf—Raynham silt loam, flooded

Map Unit Setting

National map unit symbol: 9qml

Elevation: 90 to 1,000 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Raynham, flooded, and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Raynham, Flooded

Setting

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Glaciolacustrine, eolian, or old alluvial deposits, comprised mainly of silt and very fine sand

Typical profile

H1 - 0 to 7 inches: silt loam

H2 - 7 to 24 inches: silt loam

H3 - 24 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D

Minor Components

Red hook

Percent of map unit: 5 percent

Swormville

Percent of map unit: 5 percent

Teel

Percent of map unit: 5 percent

Wayland

Percent of map unit: 5 percent
Landform: Flood plains

Scio

Percent of map unit: 5 percent

Rh—Red Hook silt loam

Map Unit Setting

National map unit symbol: 9qmm
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Red hook and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Red Hook

Setting

Landform: Terraces, valley trains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy glaciofluvial deposits

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 32 inches: gravelly fine sandy loam
H3 - 32 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D

Minor Components

Busti

Percent of map unit: 5 percent

Halsey

Percent of map unit: 5 percent
Landform: Depressions

Scio

Percent of map unit: 5 percent

Swormville

Percent of map unit: 5 percent

ShB—Schuyler silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qmr
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Schuyler and similar soils: 75 percent

Custom Soil Resource Report

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schuyler

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale with some siltstone and sandstone

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

H1 - 3 to 12 inches: silt loam

H2 - 12 to 32 inches: channery silt loam

H3 - 32 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Fremont

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Langford

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

ShC—Schuyler silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qms

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Schuyler and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schuyler

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale with some siltstone and sandstone

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

H1 - 3 to 12 inches: silt loam

H2 - 12 to 32 inches: channery silt loam

H3 - 32 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Fremont

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Langford

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

ShD—Schuyler silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qmt

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Schuyler and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schuyler

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale with some siltstone and sandstone

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

H1 - 3 to 12 inches: silt loam

H2 - 12 to 32 inches: channery silt loam

H3 - 32 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 2 percent

Fremont

Percent of map unit: 2 percent

Mardin

Percent of map unit: 2 percent

Langford

Percent of map unit: 2 percent

Towerville

Percent of map unit: 2 percent

ShE—Schuyler silt loam, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9qmv

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Schuyler and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Schuyler

Setting

Landform: Hills, till plains, drumlinoid ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Loamy till derived mainly from shale with some siltstone and sandstone

Typical profile

Oe - 0 to 3 inches: moderately decomposed plant material

H1 - 3 to 12 inches: silt loam

H2 - 12 to 32 inches: channery silt loam

H3 - 32 to 72 inches: channery silty clay loam

Properties and qualities

Slope: 25 to 35 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: High (about 9.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: C/D

Minor Components

Chadakoin

Percent of map unit: 5 percent

Fremont

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

Orpark

Percent of map unit: 5 percent

Towerville

Percent of map unit: 5 percent

Sw—Swormville silt loam

Map Unit Setting

National map unit symbol: 9qmz

Elevation: 250 to 650 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Prime farmland if drained

Map Unit Composition

Swormville and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swormville

Setting

Landform: Lake plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Silty glaciolacustrine deposits overlying sandy glaciolacustrine, deltaic, or glaciofluvial deposits

Typical profile

H1 - 0 to 10 inches: silt loam

H2 - 10 to 25 inches: silt loam

H3 - 25 to 30 inches: loamy fine sand

H4 - 30 to 72 inches: sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Minor Components

Getzville

Percent of map unit: 4 percent

Landform: Depressions

Minoa

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

Raynham

Percent of map unit: 4 percent

Lamson

Percent of map unit: 4 percent

Landform: Depressions

Tg—Tioga silt loam

Map Unit Setting

National map unit symbol: 9qn1
Elevation: 600 to 1,800 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Tioga and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tioga

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 11 inches: silt loam
H2 - 11 to 38 inches: silt loam
H3 - 38 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: About 36 to 72 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A

Minor Components

Chenango

Percent of map unit: 4 percent

Hamlin

Percent of map unit: 4 percent

Holderton

Percent of map unit: 4 percent

Middlebury

Percent of map unit: 4 percent

Udifuluents

Percent of map unit: 2 percent

Fluvaquents

Percent of map unit: 2 percent

Landform: Flood plains

ToB—Towerville silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qn2

Elevation: 1,000 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Towerville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Towerville

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale, siltstone, and smaller amounts of sandstone

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 22 inches: channery silt loam

H3 - 22 to 30 inches: channery silt loam

H4 - 30 to 34 inches: unweathered bedrock

Custom Soil Resource Report

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

ToC—Towerville silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qn3

Elevation: 1,000 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Towerville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Towerville

Setting

Landform: Ridges, hills

Custom Soil Resource Report

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale, siltstone, and smaller amounts of sandstone

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 22 inches: channery silt loam

H3 - 22 to 30 inches: channery silt loam

H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

ToD—Towerville silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qn4

Elevation: 1,000 to 1,800 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Custom Soil Resource Report

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Towerville and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Towerville

Setting

Landform: Ridges, hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from shale, siltstone, and smaller amounts of sandstone

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 22 inches: channery silt loam

H3 - 22 to 30 inches: channery silt loam

H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: About 18 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C/D

Minor Components

Chautauqua

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

ToF—Towerville silt loam, 35 to 50 percent slopes

Map Unit Setting

National map unit symbol: 9qn6
Elevation: 1,000 to 1,800 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Towerville and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Towerville

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till derived mainly from shale, siltstone, and smaller amounts of sandstone

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 22 inches: channery silt loam
H3 - 22 to 30 inches: channery silt loam
H4 - 30 to 34 inches: unweathered bedrock

Properties and qualities

Slope: 35 to 50 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C/D

Minor Components

Chadakoin

Percent of map unit: 5 percent

Hornell

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Orpark

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

VaB—Valois gravelly silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9qnf

Elevation: 600 to 1,750 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Valois and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois

Setting

Landform: End moraines, lateral moraines, valley sides

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam

H2 - 6 to 45 inches: gravelly loam

H3 - 45 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 2 percent

Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Minor Components

Pompton

Percent of map unit: 3 percent

Chautauqua

Percent of map unit: 3 percent

Chenango

Percent of map unit: 3 percent

Mardin

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

VaC—Valois gravelly silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9qng

Elevation: 600 to 1,750 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Valois and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois

Setting

Landform: End moraines, lateral moraines, valley sides

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex

Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam

H2 - 6 to 45 inches: gravelly loam

H3 - 45 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 2 percent

Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Minor Components

Pompton

Percent of map unit: 5 percent

Chautauqua

Percent of map unit: 5 percent

Chenango

Percent of map unit: 5 percent

Mardin

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

VaD—Valois gravelly silt loam, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9qnh

Elevation: 600 to 1,750 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Custom Soil Resource Report

Map Unit Composition

Valois and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois

Setting

Landform: End moraines, lateral moraines, valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam

H2 - 6 to 45 inches: gravelly loam

H3 - 45 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 2 percent

Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B

Minor Components

Chadakoin

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

Chenango

Percent of map unit: 3 percent

Mardin

Percent of map unit: 3 percent

Pompton

Percent of map unit: 3 percent

VaE—Valois gravelly silt loam, 25 to 35 percent slopes

Map Unit Setting

National map unit symbol: 9qnj
Elevation: 600 to 1,750 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Valois and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois

Setting

Landform: End moraines, lateral moraines, valley sides
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam
H2 - 6 to 45 inches: gravelly loam
H3 - 45 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 25 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 2 percent
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B

Minor Components

Chadakoin

Percent of map unit: 4 percent

Chenango

Percent of map unit: 4 percent

Pompton

Percent of map unit: 4 percent

Schuyler

Percent of map unit: 4 percent

Fluvaquents

Percent of map unit: 2 percent

Landform: Flood plains

Udifluvents

Percent of map unit: 2 percent

VaF—Valois gravelly silt loam, 35 to 50 percent slopes

Map Unit Setting

National map unit symbol: 9qnk

Elevation: 600 to 1,750 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Valois and similar soils: 75 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois

Setting

Landform: End moraines, lateral moraines, valley sides

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam

H2 - 6 to 45 inches: gravelly loam

H3 - 45 to 72 inches: very gravelly sandy loam

Custom Soil Resource Report

Properties and qualities

Slope: 35 to 50 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 2 percent

Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Minor Components

Chadakoin

Percent of map unit: 5 percent

Chenango

Percent of map unit: 5 percent

Pompton

Percent of map unit: 5 percent

Schuyler

Percent of map unit: 5 percent

Fluvaquents

Percent of map unit: 3 percent

Landform: Flood plains

Udifluvents

Percent of map unit: 2 percent

VcC—Valois gravelly silt loam, rolling

Map Unit Setting

National map unit symbol: 9qnl

Elevation: 600 to 1,750 feet

Mean annual precipitation: 39 to 50 inches

Mean annual air temperature: 45 to 50 degrees F

Frost-free period: 105 to 190 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Valois, rolling, and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Valois, Rolling

Setting

Landform: End moraines, lateral moraines, valley sides

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Crest

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy till derived mainly from sandstone, siltstone, and shale

Typical profile

H1 - 0 to 6 inches: gravelly silt loam

H2 - 6 to 45 inches: gravelly loam

H3 - 45 to 72 inches: very gravelly sandy loam

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 2 percent

Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Minor Components

Busti

Percent of map unit: 4 percent

Chadakoin

Percent of map unit: 4 percent

Chautauqua

Percent of map unit: 4 percent

Mardin

Percent of map unit: 4 percent

Unnamed soils

Percent of map unit: 4 percent

VoA—Volusia channery silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2srfc

Elevation: 330 to 2,460 feet

Mean annual precipitation: 31 to 70 inches

Mean annual air temperature: 39 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Volusia and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Volusia

Setting

Landform: Hills, mountains

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Base slope, interflue, side slope

Down-slope shape: Concave

Across-slope shape: Linear

Parent material: Loamy till derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 9 inches: channery silt loam

Bw - 9 to 15 inches: channery silt loam

Eg - 15 to 17 inches: channery silt loam

Bx1 - 17 to 29 inches: channery loam

Bx2 - 29 to 54 inches: channery loam

C - 54 to 72 inches: channery silt loam

Properties and qualities

Slope: 0 to 3 percent

Percent of area covered with surface fragments: 0.0 percent

Depth to restrictive feature: 10 to 22 inches to fragipan

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 5 percent

Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: D

Minor Components

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex

Chippewa

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

VoB—Volusia channery silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2srfh
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Volusia and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Volusia

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 15 inches: channery silt loam
Eg - 15 to 17 inches: channery silt loam
Bx1 - 17 to 29 inches: channery loam
Bx2 - 29 to 54 inches: channery loam
C - 54 to 72 inches: channery silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 3 to 8 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D

Minor Components

Chippewa

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear

VoC—Volusia channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2srfj
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Volusia and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Volusia

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy till derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 15 inches: channery silt loam
Eg - 15 to 17 inches: channery silt loam
Bx1 - 17 to 29 inches: channery loam
Bx2 - 29 to 54 inches: channery loam
C - 54 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Available water storage in profile: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D

Minor Components

Mardin

Percent of map unit: 6 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear

Chippewa

Percent of map unit: 4 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

W—Water

Map Unit Setting

National map unit symbol: 9qnq
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wa—Wakeville silt loam

Map Unit Setting

National map unit symbol: 9qns
Elevation: 250 to 1,100 feet
Mean annual precipitation: 39 to 50 inches
Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 105 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Wakeville and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wakeville

Setting

Landform: Flood plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Silty alluvium washed from areas of glacial drift derived mainly from shale, siltstone, and sandstone, with some limestone

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 42 inches: silt loam
H3 - 42 to 72 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches

Custom Soil Resource Report

Natural drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Available water storage in profile: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: B/D

Minor Components

Chenango

Percent of map unit: 4 percent

Hamlin

Percent of map unit: 4 percent

Teel

Percent of map unit: 4 percent

Alden

Percent of map unit: 4 percent

Landform: Depressions

Wayland

Percent of map unit: 4 percent

Landform: Flood plains

Wy—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2srgv

Elevation: 160 to 1,970 feet

Mean annual precipitation: 31 to 68 inches

Mean annual air temperature: 43 to 52 degrees F

Frost-free period: 105 to 180 days

Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent

Wayland, very poorly drained, and similar soils: 30 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: silt loam

Bg1 - 6 to 12 inches: silt loam

Bg2 - 12 to 18 inches: silt loam

C1 - 18 to 46 inches: silt loam

C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: Frequent

Frequency of ponding: None

Calcium carbonate, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains

Landform position (three-dimensional): Tread

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam

Bg1 - 6 to 12 inches: silt loam

Bg2 - 12 to 18 inches: silt loam

C1 - 18 to 46 inches: silt loam

C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Very poorly drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: Frequent

Frequency of ponding: Frequent

Calcium carbonate, maximum in profile: 15 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Minor Components

Wakeville

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Linear

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Appendix D – SHPO Documentation
(Documentation will not be available until the final design phase of the project)

Appendix E – Pre-Construction Requirements

E-1: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

General Project Information			
Project Name	Cassadaga Wind Project		
Project Location	Towns of Charlotte, Cherry Creek, Arkwright, and Stockton.	County	Chautauqua County, NY
SPDES Permit I.D. No.		NYSDEC Date of Authorization	

PREAMBLE TO SITE ASSESSMENT AND INSPECTIONS – TO BE READ BY ALL PERSONS INVOLVED IN THE CONSTRUCTION OF STORMWATER RELATED ACTIVITIES

- 1) The Owner/Operator and Contractors shall read the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities GP-0-15-002. This SWPPP has been prepared for the project and represents the minimum standards for compliance. The Contractors must follow the requirements of the SWPPP.
- 2) A copy of the General Permit (GP-0-15-002), the SWPPP, NOI, NOI Acknowledgement Letter, MS4 Acceptance form (if applicable), inspection reports and any correspondence with the NYSDEC must be kept at the work site at all times. (e.g. – In the job trailer.)
- 3) Prior to commencing soil disturbance, the Owner/Operator and/or Contractors must complete the forms and certifications in this Appendix. This information must be kept up to date.
- 4) All enclosed certifications shall be completed by the contractor. Subcontractors responsible for implementing erosion and sediment control measures or constructing stormwater management practices shall also complete the certifications. Each certification is to be completed and signed by a president, treasurer or vice president, or any person who performs similar policy or decision-making functions, and by the on-site individual having responsibility for the firm.
- 5) The Owner/Operator shall have a qualified inspector conduct an assessment of installed erosion and sediment controls and overall preparedness of the site prior to the commencement of construction. The inspection report in this section shall be used record the results of the inspection.
- 6) Site inspections shall be conducted by the qualified inspector at least once every seven calendar days when construction actives commence. For sites where the Owner/Operator has received authorization from the New York State Department of Environmental Conservation (NYSDEC) to disturb greater than five acres of soil at one time or where the project site discharges directly to a 303(d) impaired waterbody or is in a watershed listed in Appendix C of the General Permit, the qualified inspector shall conduct at least two site inspections every seven calendar days. There shall be a minimum of two full calendar days between inspections. The Owner/Operator shall maintain a record of all inspection reports on site in Appendix F and have them available to the permitting authorities upon request.
- 7) The qualified inspector will notify the Owner/Operator and Contractor of any items to be addressed within one day business day of the inspection. The Contractors need to start corrective measures within one business day of notification and complete corrective actions in a reasonable time frame.
- 8) Prior to filing the Notice of Termination (NOT) or the end of permit term, the Owner/Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing, etc.) have been removed and that post-construction stormwater management practices have been installed in accordance with the SWPPP. The Owner/Operator must certify that all based upon their inquiry, the information in the NOT is true.
- 9) Prior to submitting the NOT, the Owner/Operation is required to have one of the following in place (for permanent stormwater practices):

- a. Provide proof that the post-construction stormwater management practices, including any right-of-ways needed for maintenance of such practices, have been deeded to the municipality in which the practices are located, or
 - b. Provide confirmation that the municipality has executed an agreement to maintain the post-construction stormwater management practices, or
 - c. For privately-owned post-construction stormwater management practices, provide proof that the Owner/Operator has modified their deed of record to include a deed covenant that requires operation of the practices in accordance with the operations and maintenance plan.
 - d. For institutional-owned or municipal-owned post-construction stormwater practices, provide proof that the Owner/Operator has policy and procedure in place to ensure operation of the practices in accordance with the operations and maintenance plan.
- 10) In the event of a transfer of ownership or responsibility for stormwater runoff, the original Owner/Operator (permittee) must notify the new Owner/Operator in writing of the requirement to obtain permit coverage by submitting a new Notice of Intent. Once the new Owner/Operator obtains permit coverage, the original Owner/Operator shall submit a completed NOT with the name and permit identification number of the new Owner/Operator. If the original Owner/Operator maintains ownership of a portion of the construction activity and will disturb soil, they must obtain their coverage under the general permit. Permit coverage for the new Owner/Operator will be effective when an acknowledgement letter is received from the NYSDEC confirming receipt of the completed Notice of Intent (NOI), provided the original Owner/Operator was not subject to a sixty business day authorization period that has not expired as of the date the Department receives the NOI from the new Owner/Operator.

E-1: PRE-CONSTRUCTION MEETING DOCUMENTS AND INSPECTION REPORTS

General Project Information			
Project Name	Cassadaga Wind Project		
Project Location	Towns of Charlotte, Cherry Creek, Arkwright, and Stockton.	County	Chautauqua County, NY
SPDES Permit I.D. No.		NYSDEC Date of Authorization	

PRE-CONSTRUCTION SITE ASSESSMENT CHECKLIST

Construction (soil disturbance) shall not commence until all Erosion & Sediment Control Facilities have been installed, inspected, and found acceptable by the Owner/Operator. Add comments below as necessary.

Notice of Intent, SWPPP, and Contractor's Certification		
1.	Has Notice of Intent (NOI) been filed with NYSDEC, MS4 Certification (if applicable) and the NOI Acknowledgment form been received?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Is the SWPPP on-site? If yes, where? _____	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.	Is the SWPPP current? What is the latest revision date? ____/____/____	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.	Have all the Contractors involved with stormwater-related activities signed a Contractor's Certification Statement (Appendix E-3)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.	Has the Contractor's Construction Stabilization Schedule (Appendix E-2) been received?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Resource Protection		
6.	Are construction limits clearly flagged or fenced?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
7.	Have the important trees and associated root zones, on-site septic system absorption fields, existing vegetation areas suitable for filter strips been flagged for protection?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
8.	Were creek-crossings installed prior to land-disturbing activity?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
9.	Have wetlands been identified, flagged and protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Surface Water Protection		
10.	Has runoff from undisturbed areas been diverted away from or around areas to be disturbed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
11.	Have bodies of water either on-site or in the vicinity been identified and protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
12.	Have appropriate practices to protect on-site or downstream surface water been installed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
13.	Has any grading operation occurred prior to this inspection, except for Erosion & Sediment Control Practices installation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Stabilized Construction Entrance		
14.	Has a temporary construction entrance been installed to prevent mud and debris from entering the public roadway?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
15.	Have construction routes and equipment parking areas needed to begin construction been stabilized immediately as work takes place, with gravel or other cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

16.	Is there a plan to remove or clean sediment tracked on to public roadways?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sediment Controls		
17.	Does the silt fence material and installation comply with the contract drawing, SWPPP, and specifications?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
18.	Are silt fences installed at appropriate spacing intervals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
19.	Were sediment trapping devices installed as the first land disturbing activity?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Waste and Hazardous Material Handling		
20.	Has the Owner and/or Operator or designated representative been assigned to implement the spill prevention avoidance and response approach?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
21.	Are there appropriate materials to control spills on site? If yes, where? _____	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

Items that need to be addressed prior to completion of Qualified Inspector's Certification

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

QUALIFIED INSPECTOR'S CREDENTIALS AND CERTIFICATION

I hereby certify that I meet the Qualified Inspector criteria set forth in the General Permit and that the appropriate erosion and sediment controls described in the SWPPP and as described this checklist have been adequately installed or implemented, ensuring the overall preparedness of this site for the commencement of construction.

Signature: _____

Name (please print): _____

Title: _____ Date: _____

Company Name: _____

Address: _____

Phone: _____ Email: _____

E-2: CONSTRUCTION STABILIZATION SCHEDULE

General Project Information			
Project Name	Cassadaga Wind Project		
Project Location	Towns of Charlotte, Cherry Creek, Arkwright, and Stockton.	County	Chautauqua County, NY
SPDES Permit I.D. No.		NYSDEC Date of Authorization	

For portions of the site where soil disturbance activities have temporarily or permanently ceased, stabilization measures must be initiated by the contractor by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. Stabilization must be completed within 7 calendar days if the site current disturbance 5 acres or greater.

When construction activity is precluded by snow cover, stabilization measures shall be initiated as soon as practical.

Contractors are responsible to provide a construction schedule for review and approval by the Owner/Operator:

Soil Disturbing Activities	Location	Anticipated Start Date	Anticipated Stabilization Date
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

E-3: CONTRACTOR CERTIFICATION STATEMENT

General Project Information			
Project Name	Cassadaga Wind Project		
Project Location	Towns of Charlotte, Cherry Creek, Arkwright, and Stockton	County	Chautauqua County, NY
SPDES Permit I.D. No.		NYSDEC Date of Authorization	

Each Contractor/Subcontractor is required to complete this form and sign this certification statement prior to working on site.

CONTRACTOR INFORMATION

Contracting Firm: _____

Contracting Firm Address: _____

Telephone Numbers (office): _____ Job Site (Trailer): _____

Contacts: 1) _____ (Mobile #): _____

2) _____ (Mobile #): _____

3) _____ (Mobile #): _____

TRAINED CONTACTOR RESPONSIBILITIES

A Trained Individual is an employee that has received four hours of training approved by the NYSDEC, from a Soil and Water Conservation District, from CPESC, Inc., or from another NYSDEC-endorsed entity providing training in proper erosion and sediment control principles. Training must be completed prior to the date that this project commences, (prior to project mobilization). After receiving the initial training, the individual shall receive four hours of NYSDEC-approved training every three years.

Names of Trained Individuals from the Contractor's company that will be responsible for implementing the SWPPP:

Name: _____ Title: _____

Measures Responsible for : 1. _____

2. _____

3. _____

4. _____

Name: _____ Title: _____

- Measures Responsible for :
1. _____
 2. _____
 3. _____
 4. _____

Name: _____ Title: _____

- Measures Responsible for :
1. _____
 2. _____
 3. _____
 4. _____

CONTRACTOR'S CERTIFICATION

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the Owner and/or Operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System (SPDES) general permit for stormwater discharges from construction activities, and it is unlawful for any person to cause, or contribute to, a violation of water quality standards.

Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations.

I also certify that I have received a copy of the SWPPP and will retain a copy of such SWPPP on-site during construction.

SIGNATURE OF PRESIDENT, VICE PRESIDENT OR TREASURER DSF

Signature

Date

Name (print)

Title

SIGNATURE OF RESPONSIBLE ON-SITE INDIVIDUAL (MUST MEET REQUIREMENTS OF TRAINED CONTRACTOR)

Signature

Date

Name (print)

Title

Appendix F – Stormwater Construction Site Inspection Reports

Stormwater Construction Site Inspection Report		Report #	
General Information			
Project Name	Cassadaga Wind Project		
SPDES Permit I.D. No.		EDR Project No.	14048
Date & Time of Inspection		Project Location	Towns of Charlotte, Cherry Creek, Arkwright, and Stockton in Chautauqua County, NY
Qualified Inspector's Name(s)		Qualified Inspector's Title(s)	
Inspector's Contact Information	<input type="checkbox"/> Environmental Design & Research, Landscape Architecture and Engineering, D.P.C. (EDR) 217 Montgomery Street, Suite 1000 Syracuse, NY 13202 (315) 471-0688	<input type="checkbox"/> Environmental Design & Research, Landscape Architecture and Engineering, D.P.C. (EDR) 274 N. Goodman Street Rochester, NY 14607 (585) 271-0040	
Describe present phase of construction			
Type of Inspection	<input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event		
Weather at time of this inspection?			
Soil Conditions at time of this inspection?	<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Saturated		
Are there any discharges at the time of inspection?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Describe the condition of all points of discharge to natural surface waters located within, or immediately adjacent to the project's property boundaries, which receive runoff from disturbed areas (specifically note if sediment is present):			
SWPPP Documentation Compliance			
1.	Has Notice of Intent (NOI) been filed with NYSDEC and the NOI Acknowledgment form been received?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.	Is the SWPPP on-site?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.	Is the Approved Phasing Plan for Disturbance > 5 Acres being followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
4.	Is the Project Schedule being followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.	SWPPP has been revised to reflect and site and control changes? Latest revision date: (list all revisions and dates)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.	Site SWPPP inspection documentation available and current?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP/Activity	Maintained? If no, list Corrective Action	List Required Completion Date, Company, and Responsible Person
Disturbance			
1.	Are construction limits and important resource areas clearly flagged or fenced? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.	Are areas outside the construction limits undergoing disturbance? If yes, explain <input type="checkbox"/> Yes <input type="checkbox"/> No		
3.	Has any single area > 5 Acres been disturbed? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.	Are clearing and grubbing operations minimized to the smallest practicable area? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.	Has clean stormwater runoff been diverted around areas to be disturbed? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
E&SC Practices			
6.	Were the sediment traps installed prior to any land-disturbing activity? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7.	Are stabilized temporary construction entrances and construction staging area(s) in place? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8.	Have construction access roads been properly stabilized? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9.	Is there evidence of sediment being tracked onto the street? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10.	Has silt fence been or other perimeter sediment control barriers been installed? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11.	Are storm drain inlets properly protected? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12.	Are washout facilities for concrete available and clearly marked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13.	Are temporary and/or permanent check dams in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14.	Are top soil and excess excavated material stored in stabilized stock piles? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	BMP/Activity	Maintained? If no, list Corrective Action	List Required Completion Date, Company, and Responsible Person
15.	Are dust control measures being properly implemented? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16.	Were creek crossings installed prior to any land-disturbing activity? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Stabilization			
17.	Are all slopes not being actively worked properly stabilized? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18.	Are soil slopes steeper than 1V: 3H undergoing surface roughening? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
19.	Are soil slopes steeper than 1V: 3H receiving temporary seed and mulch? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20.	Are disturbed areas stabilized within 14 days? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
21.	Is the site adequately stabilized at this time? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other Best Management Practices			
22.	Are vehicle and equipment fueling, clean-out, and maintenance areas free of spills, leaks, or any other deleterious material? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
23.	Are materials that are potential stormwater contaminants stored inside or under cover? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
24.	Are appropriate materials to control spill located onsite? <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
25.	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> Yes <input type="checkbox"/> No	
26.	Is trash/litter from work areas collected and placed in covered dumpsters? <input type="checkbox"/> Yes <input type="checkbox"/> No		
27.	Are any practices listed in the SWPPP missing? <input type="checkbox"/> Yes <input type="checkbox"/> No		

Inspector's Signature: _____

Date: _____

Appendix G – Post-Construction Maintenance Requirements

Post-Construction Operation and Maintenance – Vegetated Filter Strip/Riparian Forest Buffer			
Project Name	Cassadaga Wind Project		
Location			
Site Status		Inspector's Name	
Date		Time	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Debris Removal			
1.	Channel clear of debris	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Level Spreader ((Spring, Fall and after Major Storm Events)			
2.	No evidence of bypass of level spreader	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
3.	No erosion on level outlet	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Vegetation (Spring and Fall)			
4.	Mowed as necessary to encourage dense growth	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
5.	All areas have suitable vegetative cover (minimum 85%)/No evidence of erosion or scour	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
6.	Fertilized per specification	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
7.	No unwanted vegetation (avoid use of pesticides)		
Ponding (Spring and Fall)			
8.	No evidence of excessive ponding/low spots	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Sediment Deposition (Spring and Fall)			
9.	Clear of sediment	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	

Note – The level spreader is depressed area with level earthen or concrete outlet to create uniform sheet flow over the vegetated filter strip or riparian forest buffer.

Actions to be Taken:

Inspector's Signature: _____

Post-Construction Operation and Maintenance – Open Channels			
Project Name	Cassadaga Wind Project		
Location			
Site Status		Inspector's Name	
Date		Time	

	Maintenance Item	Satisfactory/ Unsatisfactory	Comments
Debris Removal			
1.	Channel clear of debris	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Check Dams or Energy Dissipaters (Spring, Fall and after Major Storm Events)			
2.	No evidence of bypass of check dams or energy dissipaters	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
3.	No erosion at downstream end	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Vegetation (Spring and Fall)			
4.	Mowed as necessary	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
5.	All areas have suitable vegetative cover/No evidence of erosion	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
6.	Fertilized per specification	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Dewatering (Spring and Fall)			
7.	Dewaters between storm/no standing water	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Sediment Deposition (Spring and Fall)			
8.	Clear of sediment	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
Outlet/Overflow Spillway (Spring and Fall)			
9.	Good condition, no need for repairs	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
10.	No evidence of erosion	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	

Actions to be Taken:

Inspector's Signature: _____

Appendix H – Stormwater Management Memorandum
(Will be prepared during final design)

Appendix I – NYSDEC Notice of Termination (NOT)



**New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505**

(NOTE: Submit completed form to address above)

**NOTICE OF TERMINATION for Storm Water Discharges Authorized
under the SPDES General Permit for Construction Activity**

Please indicate your permit identification number: NYR ____ _

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

5. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP.
*Date final stabilization completed (month/year): _____

9b. Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ____ _
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? yes no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? yes no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? yes no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, the deed of record has been modified to include a deed covenant that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, college, university), or government agency or authority, policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____ (acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? yes no
(If Yes, complete section VI - "MS4 Acceptance" statement)

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

(NYS DEC Notice of Termination - January 2010)