617.20
Appendix A
State Environmental Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Purpose: The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

Full EAF Components: The full EAF is comprised of three parts:

Part 1: Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.

Part 2: Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.

Part 3: If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

THIS AREA FOR LEAD AGENCY USE ONLY

DETERMINATION OF SIGNIFICANCE -- Type 1 and Unlisted Actions

Identify the Portions of EAF completed for this project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

☐ A. The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore **a negative declaration will be prepared.**

☐ B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore **a CONDITIONED negative declaration will be prepared.***

☒ C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore **a positive declaration will be prepared**.

*A Conditioned Negative Declaration is only valid for Unlisted Actions

China City of America (CCOA) Thompson Education Center

Name of Action

Town of Thompson Planning Board

Name of Lead Agency

Patrice Chester

Print or Type Name of Responsible Officer in Lead Agency

Chairman

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (If different from responsible officer)

August 28, 2013

Date

website

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PART 1--PROJECT INFORMATION
Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

Name of Action: China City of America (CCOA) Thompson Educational Center

Location of Action (include Street Address, Municipality and County)

Wild Turnpike, Town of Thompson, Sullivan County, New York

Name of Applicant/Sponsor: China City of America, Inc.

Address: 198 Bridgeville Road

City / PO: Monticello State: NY Zip Code: 12701

Business Telephone: 212-845-9519

Name of Owner (if different): Parkwood JV, LLC

Address: PO Box 2121

City / PO: Monroe State: NY Zip Code: 10949

Business Telephone: 845-774-8000

Description of Action:

The CCOA Thompson Educational Center is a school and college plus related recreational and other facilities on a 570+/ parcel off Wild Turnpike in the Town of Thompson (s/b/l 26-1-6). There will be an inn, a separate conference center, 35 units of college benefactor housing, 96 faculty/student units, 2,456 dormitory units of student housing, 4 classroom buildings, several student activity centers, 10 recreational facilities, 2 parks, 5 playground and child care units, 9 community center units, a library/museum and sports center. Most aspects of the project are designed in circular fashion consistent with Chinese culture. The project will be phased. A Master Plan is attached to illustrate.

Phase 1 will include basic college facilities, student housing and cultural/recreational facilities. It will involve a gross area of 254.2 acres of which 173 acres will remain as open space. The remaining 81.2 acres will developed for student housing (264 units of 2 and 3-story townhouse style dormitory units and 1,400 apartment type dormitory units). It will also include eight college buildings placed over 2 distinct areas totaling 29.5 acres, plus 3 recreational facilities and 3 additional outdoor recreational areas. The road system in integrated with other phases, with emergency access from Wild Turnpike through the Town of Fallsburg and, potentially Mamakating, although no other development is currently planned with respect to either town.

Phase II will consist of 792 units of student housing, a library/museum facility, a cultural/performance facilities area, 23 units of college benefactor housing and 13 student center/recreational facilities on 122.9 acres of land with 40.8 acres of open space.

Phase III includes 81.1 acres of development with 12 units of college benefactor housing, 96 units of faculty housing, an inn, college conference center and recreation.

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Please Complete Each Question--Indicate N.A. if not applicable

A. SITE DESCRIPTION

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use: ☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☑ Rural (non-farm)
   ☑ Forest ☐ Agriculture ☐ Other _____

2. Total acreage of project area: 570+/- acres.

APPROXIMATE ACREAGE		PRESENTLY	AFTER COMPLETION
Meadow or Brushland (Non-agricultural)		0 acres	0 acres
Forested		422+/- acres	137+/- acres
Agricultural (Includes orchards, cropland, pasture, etc.)		0 acres	0 acres
Wetland (Freshwater or tidal as per Articles 24,25 of ECL)		148+/- acres	148+/- acres
Water Surface Area		_____ acres	_____ acres
Unvegetated (Rock, earth or fill)		1 acres	1 acres
Roads, buildings and other paved surfaces	Note: Includes forested and grass buffers around buildings	1 acres	285+/- acres
Other (Indicate type) _____		_____ acres	_____ acres

3. What is predominant soil type(s) on project site? WIC Wellsboro/Wurt. (see attached)

   a. Soil drainage: ☑ Well drained 50 % of site ☑ Moderately well drained 20 % of site.
   ☑ Poorly drained 30 % of site

   b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? N/A acres (see 1 NYCRR 370).

4. Are there bedrock outcroppings on project site? ☐ Yes ■ No

   a. What is depth to bedrock 5 (in feet)

5. Approximate percentage of proposed project site with slopes:

   ☑ 0-10% 75 % ☑ 10- 15% 23 % ☑ 15% or greater 2 %

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? ☐ Yes ■ No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? ☐ Yes ■ No

8. What is the depth of the water table? 2.5 – 5.0 (in feet)

9. Is site located over a primary, principal, or sole source aquifer? ☐ Yes ■ No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? ☐ Yes ■ No

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11. Does project site contain any species of plant or animal life that is identified as threatened or endangered? ☐ Yes ☒ No

According to:

Robert G. Torgersen, LA, CPE Landscape Architecture and Environmental Sciences
Jason Tesauro, Biologist/Ecological Consultant

Identify each species:

A site investigation was conducted over the time of several years and several site investigations for the purpose of investigating the existing native flora and fauna. Report entitled "Biological Report Habitat Site Investigation and Assessment" was issued as of July, 2013.

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations?

☒ Yes ☐ No

Describe:

The Harlen Swamp Wetland Complex encompasses wetlands on the project site.

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?

☐ Yes ☒ No

If yes, explain:

14. Does the present site include scenic views known to be important to the community? ☐ Yes ☒ No

N/A

15. Streams within or contiguous to project area:

South Brook

a. Name of Stream and name of River to which it is tributary

Gumaer Brook to the Basherkill to the Neversink River to the Delaware River

16. Lakes, ponds, wetland areas within or contiguous to project area:

South Brook Lake
NYS-DEC Wetlands WO42, WO43, WO54, WO56
Unnamed pond

b. Size (in acres):

South Brook Lake - 25 acres
Wetlands - 148 acres
Unnamed pond - 3 acres

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17. Is the site served by existing public utilities? ☐ Yes ☒ No

a. If **YES,** does sufficient capacity exist to allow connection? ☐ Yes ☒ No

b. If **YES**, will improvements be necessary to allow connection? ☒ Yes ☐ No

18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☒ No

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? ☐ Yes ☒ No

20. Has the site ever been used for the disposal of solid or hazardous wastes? ☐ Yes ☒ No

B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate).

a. Total contiguous acreage owned or controlled by project sponsor: 570+/- acres.

b. Project acreage to be developed: 91+/- acres initially; 272+/- acres ultimately.

c. Project acreage to remain undeveloped: 298+/- acres.

d. Length of project, in miles: N/A (if appropriate)

e. If the project is an expansion, indicate percent of expansion proposed. N/A %

f. Number of off-street parking spaces existing 0 ; proposed 700

g. Maximum vehicular trips generated per hour: 300+/- (upon completion of project)?

h. If residential: Number and type of housing units: Student, faculty and college benefactor housing only. See attached detail.

	One Family	Two Family	Multiple Family	Condominium
Initially	0	N/A	N/A	N/A
Ultimately	35	N/A	N/A	N/A

i. Dimensions (in feet) of largest proposed structure: 35 height; 75 width; 75 length.

j. Linear feet of frontage along a public thoroughfare project will occupy is? 1,500+/- ft.

2. How much natural material (i.e. rock, earth, etc.) will be removed from the site? 0 tons/cubic yards. Will be stockpiled in already disturbed areas.

3. Will disturbed areas be reclaimed ☒ Yes ☐ No ☐ N/A

a. If yes, for what intended purpose is the site being reclaimed?

Building sites, lawns, roads and recreation areas.

b. Will topsoil be stockpiled for reclamation? ☒ Yes ☐ No

c. Will upper subsoil be stockpiled for reclamation? ☒ Yes ☐ No

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? See Note acres. See Table 1 attached.

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5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project?

☐ Yes ☒ No

6. If single phase project: Anticipated period of construction: N/A months, (including demolition)

7. If multi-phased:

   a. Total number of phases anticipated 3 (number)

   b. Anticipated date of commencement phase 1: Jun month 2014 year, (including demolition)

   c. Approximate completion date of final phase: Dec month 2019 year.

   d. Is phase 1 functionally dependent on subsequent phases? ☒ Yes ☐ No

8. Will blasting occur during construction? ☒ Yes ☐ No

9. Number of jobs generated: during construction 7,000+/- ; after project is complete 1,000+/-

10. Number of jobs eliminated by this project 0 .

11. Will project require relocation of any projects or facilities? ☐ Yes ☒ No

Note: Construction jobs estimated at one per $100,000 of coonstruction; 3,500 for dormitory construction, 2,500 for classrooms and related uses and 1,000 for site improvements and recreational facilities. Jobs after completion include 500 faculty and support staff, 250 administration and 250 in maintanance and operations.

If yes, explain:

N/A

12. Is surface liquid waste disposal involved? ☐ Yes ☒ No

   a. If yes, indicate type of waste (sewage, industrial, etc) and amount N/A

   b. Name of water body into which effluent will be discharged N/A

13. Is subsurface liquid waste disposal involved? ☐ Yes ☒ No Type N/A

14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ☒ No

If yes, explain:

N/A

15. Is project or any portion of project located in a 100 year flood plain? ☐ Yes ☒ No

16. Will the project generate solid waste? ☒ Yes ☐ No

   a. If yes, what is the amount per month? 12+/- tons

   b. If yes, will an existing solid waste facility be used? ☒ Yes ☐ No

   c. If yes, give name Sullivan County ; location Monticello

   d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☐ Yes ☒ No

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e. If yes, explain:

N/A

17. Will the project involve the disposal of solid waste? ☐ Yes ☒ No

a. If yes, what is the anticipated rate of disposal? N/A tons/month.

b. If yes, what is the anticipated site life? N/A years.

18. Will project use herbicides or pesticides? ☐ Yes ☒ No

19. Will project routinely produce odors (more than one hour per day)? ☐ Yes ☒ No

20. Will project produce operating noise exceeding the local ambient noise levels? ☐ Yes ☒ No

21. Will project result in an increase in energy use? ☒ Yes ☐ No

If yes, indicate type(s)

Heating fuel and utilities.

22. If water supply is from wells, indicate pumping capacity Note gallons/minute.

23. Total anticipated water usage per day 140000 gallons/day.

24. Does project involve Local, State or Federal funding? ☐ Yes ☒ No

If yes, explain:

Leggette, Brashears & Graham, Inc. (LBG) conducted a groundwater exploration program which included the drilling of seven successful test wells. The well yields demonstrated during the 72-hour pumping test program are sufficient to support an average project water demand of 0.617 mgd (million gallons per day).

N/A

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25. Approvals Required:

			Type	Submittal Date
City, Town, Village Board	☑ Yes	☐ No	Sewer and roads	9/13
City, Town, Village Planning Board	☑ Yes	☐ No	Subdivision/site plan review	9/13
City, Town Zoning Board	☐ Yes	☑ No	N/A	N/A
City, County Health Department	☐ Yes	☑ No	N/A	N/A
Other Local Agencies	☐ Yes	☑ No	Sullivan Co. Planning-239	12/13
Other Regional Agencies	☑ Yes	☐ No	DRBC water supply	12/13
			NYS-DOH water supply	12/13
			NYS-DOT highway access	12/13
State Agencies	☑ Yes	☐ No	DEC - water supply	12/13
			DEC - stormwater/sewer	12/13
		See attached wetlands validations.	DEC - wetlands validation	Received
Federal Agencies	☑ Yes	☐ No	ACOE - wetlands validation	Received

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? ☑ Yes ☐ No

If Yes, indicate decision required:

☐ Zoning amendment	☐ Zoning variance	☐ New/revision of master plan	☐ Subdivision
☑ Site plan	☐ Special use permit	☐ Resource management plan	☐ Other

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2. What is the zoning classification(s) of the site?

RR-2 Rural Residential

3. What is the maximum potential development of the site if developed as permitted by the present zoning?

351 if single-family but a college is proposed and there are no applicable bulk standards for a college

4. What is the proposed zoning of the site?

N/A

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?

N/A

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? ■ Yes ☐ No

N/A

7. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action?

Town of Fallsburg – REC-1 Recreation
Town of Thompson – RR-2 Rural Residential
Town of Mamakating – RR-2 Rural Residential
Entire area rural residential in nature.

8. Is the proposed action compatible with adjoining/surrounding land uses with a ¼ mile? ■ Yes ☐ No

9. If the proposed action is the subdivision of land, how many lots are proposed? _____

a. What is the minimum lot size proposed? _____

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10. Will proposed action require any authorization(s) for the formation of sewer or water districts? ☒ Yes ☐ No

Yes, the existing district(s) for that area will have to be extended to include the property.

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection?

☒ Yes ☐ No

a. If yes, is existing capacity sufficient to handle projected demand? ☐ Yes ☒ No

It is believed Town of Thompson services and infrastructure more adequate to serve project but it is assumed for purposes of analysis they are not until further investigated. Such an analysis is underway.

12. Will the proposed action result in the generation of traffic significantly above present levels? ☒ Yes ☐ No

a. If yes, is the existing road network adequate to handle the additional traffic. ☐ Yes ☒ No

Wild Turnpike currently under-utilized but a thorough traffic study is being conducted in the entire highway system.

D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be any adverse impacts associated with your proposal, please discuss such impacts and the measures which you propose to mitigate or avoid them.

E. Verification

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name China City of America, LLC Date 8/28/13

Signature _____

Title _____

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

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Part II - PROJECT IMPACTS AND THEIR MAGNITUDE

Responsibility of Lead Agency

General Information (Read Carefully)

- In completing the form, the reviewer should be guided by the question: Have my responses and determinations been **reasonable?** The reviewer is not expected to be an expert environmental analyst.
- The **Examples** provided are to assist the reviewer by showing types of impacts and, wherever possible, the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.
- The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.
- The number of examples per question does not indicate the importance of each question.
- In identifying impacts, consider long term, short term and cumulative effects.

Instructions (Read carefully)

a. Answer each of the 20 questions in PART 2. Answer **Yes** if there will be **any** impact.
b. **Maybe** answers should be considered as **Yes** answers.
c. If answering **Yes** to a question then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.
d. Identifying that an impact will be potentially large (column 2) does not mean that it is also necessarily **significant**. Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.
e. If reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3.
f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the **Yes** box in column 3. A **No** response indicates that such a reduction is not possible. This must be explained in Part 3.

IMPACT ON LAND

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
1. Will the proposed action result in a physical change to the project site? ☐ **NO** ☒ **YES**			
Examples that would apply to column 2:			
• Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.	☐	☒	☒Yes ☐ No
• Construction on land where the depth to the water table is less than 3 feet.	☐	☒	☒Yes ☐ No
• Construction of paved parking area for 1,000 or more vehicles.	☐	☐	☐Yes ☐ No
• Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.	☐	☒	☒Yes ☐ No
• Construction that will continue for more than 1 year or involve more than one phase or stage.	☐	☒	☐Yes ☒ No
• Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.	☐	☐	☐Yes ☐ No
• Construction or expansion of a sanitary landfill.	☐	☐	☐Yes ☐ No
• Construction in a designated floodway.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
2. Will there be an effect to any unique or unusual land forms found on the site? (i.e., cliffs, dunes, geological formations, etc.) ☐NO ☒YES Specific land forms: Harlem Swamp Wetland Complex	☐	☒	☒Yes ☐ No

IMPACT ON WATER

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated By Project Change
3. Will proposed action affect any water body designated as protected? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL) ☒NO ☐ YES			
Examples that would apply to column 2:			
• Developable area of site contains a protected water body.	☐	☐	☐Yes ☐ No
• Dredging more than 100 cubic yards of material from channel of a protected stream.	☐	☐	☐Yes ☐ No
• Extension of utility distribution facilities through a protected water body.	☐	☐	☐Yes ☐ No
• Construction in a designated freshwater or tidal wetland.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
4. Will proposed action affect any non-protected existing or new body of water? ☒ NO ☐ YES			
Examples that would apply to column 2			
• A 10% increase or decrease in the surface area of any body of water or more than a 10-acre increase or decrease.	☐	☐	☐Yes ☐ No
• Construction of a body of water that exceeds 10 acres of surface area.	☐	☐	☐Yes ☐ No
Other impacts:	☐	☐	☐Yes ☐ No
5. Will Proposed Action affect surface or groundwater quality or quantity? ☐NO ☒ YES			
Examples that would apply to column 2			
• Proposed Action will require a discharge permit.	☐	☒	☒ Yes ☐ No
• Proposed Action requires use of a source of water that does not have approval to serve proposed (project) action.	☐	☒	☒Yes ☐ No
• Proposed Action requires water supply from wells with greater than 45 gallons per minute pumping capacity.	☐	☒	☒Yes ☐ No
• Construction or operation causing any contamination of a water supply system.	☐	☐	☐Yes ☐ No
• Proposed Action will adversely affect groundwater.	☐	☒	☒Yes ☐ No
• Liquid effluent will be conveyed off the site to facilities, which presently do not exist or have inadequate capacity.	☐	☐	☐Yes ☐ No
• Proposed Action would change flood water flows	☐	☐	☐Yes ☐ No
• Proposed Action would use water in excess of 20,000 gallons per day.	☐	☒	☒Yes ☐ No
• Proposed Action will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.	☐	☐	☐Yes ☐ No
• Proposed Action will require the storage of petroleum or chemical products greater than 1,100 gallons.	☐	☒	☒Yes ☐ No
• Proposed Action will allow residential uses in areas without water and/or sewer services.	☐	☒	☒Yes ☐ No
• Proposed Action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated By Project Change
6. Will proposed action alter drainage flow or patterns, or surface water runoff? ☐NO ☒ YES			
Examples that would apply to column 2			
• Proposed Action may cause substantial erosion.	☐	☒	☒Yes ☐ No
• Proposed Action is incompatible with existing drainage patterns.	☐	☐	☐Yes ☐ No
• Proposed Action will allow development in a designated floodway.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON AIR			
7. Will proposed action affect air quality? ☒NO ☐YES			
Examples that would apply to column 2:			
• Proposed Action will induce 1,000 or more vehicle trips in any given hour.	☐	☐	☐Yes ☐ No
• Proposed Action will result in the incineration of more than 1 ton of refuse per hour.	☐	☐	☐Yes ☐ No
• Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.	☐	☐	☐Yes ☐ No
• Proposed action will allow an increase in the amount of land committed to industrial use.	☐	☐	☐Yes ☐ No
• Proposed Action will allow an increase in the density of industrial development within existing industrial areas.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON PLANTS AND ANIMALS			
8. Will Proposed Action affect any threatened or endangered species? ☒NO ☐YES			
Examples that would apply to column 2			
• Reduction of one or more species listed on the New York or Federal list, using the site, over or near site, or found on the site.	☐	☐	☐Yes ☐ No
• Removal of any portion of a critical or significant wildlife habitat.	☐	☐	☐Yes ☐ No
• Application of pesticide or herbicide more than twice a year, other than for agricultural purposes.	☐	☐	☐Yes ☐ No
Other impacts:	☐	☐	☐Yes ☐ No
9. Will Proposed Action substantially affect non-threatened or non-endangered species? ☐ NO ☒YES			
Examples that would apply to column 2			
• Proposed Action would substantially interfere with any resident or migratory fish, shellfish or wildlife species.	☐	☒	☒Yes ☐ No
Proposed Action requires the removal of more than 10 acres of mature forest (over 100 years of age) or other locally important vegetation.	☐	☐	☐Yes ☐ No
IMPACT ON AGRICULTURAL LAND RESOURCES			
10. Will the Proposed Action affect agricultural land resources? ☒NO ☐YES			
Examples that would apply to column 2			
• The proposed action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.)	☐	☐	☐Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated By Project Change
• Construction activity would excavate or compact the soil profile of agricultural land.	☐	☐	☐Yes ☐ No
• The proposed action would irreversibly convert more than 10 acres of agricultural land or if located in an Agricultural District, more than 2.5 acres of agricultural land.	☐	☐	☐Yes ☐ No
• The proposed action would disrupt or prevent installation of agricultural land management systems (e.g., subsurface drain lines, outlet ditches, strip cropping); or create a need for such measures (e.g., cause a farm field to drain poorly due to increased runoff).	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON AESTHETIC RESOURCES			
11. Will proposed action affect aesthetic resources? ☐NO ☒ YES (If necessary, use the Visual EAF Addendum in Section 617.20, Appendix B.)			
Examples that would apply to column 2			
• Proposed land uses, or project components obviously different from, or in sharp contrast to current surrounding land use patterns, whether man-made or natural.	☐	☒	☐Yes ☒ No
• Proposed land uses, or project components visible to users of aesthetic resources, which will eliminate, or significantly reduce, their enjoyment of the aesthetic qualities of that resource.	☐	☐	☐Yes ☐ No
• Project components that will result in the elimination, or significant screening, of scenic views known to be important to the area.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES			
12. Will Proposed Action impact any site or structure of historic, prehistoric or paleontological importance? ☒NO ☐YES			
Examples that would apply to column 2			
• Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Register of historic places.	☐	☐	☐Yes ☐ No
• Any impact to an archaeological site or fossil bed located within the project site.	☐	☐	☐Yes ☐ No
• Proposed Action will occur in an area designated as sensitive for archaeological sites on the NYS Site Inventory.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON OPEN SPACE AND RECREATION			
13. Will proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities? ☒NO ☐YES			
Examples that would apply to column 2			
• The permanent foreclosure of a future recreational opportunity.	☐	☐	☐Yes ☐ No
• A major reduction of an open space important to the community.	☐	☐	☐Yes ☐ No

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated By Project Change
IMPACT ON CRITICAL ENVIRONMENTAL AREAS			
14.Will Proposed Action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6 NYCRR 617.14(g)? ☒NO ☐YES			
List the environmental characteristics that caused the designation of the CEA.			
1.	☐	☐	☐Yes ☐ No
2.	☐	☐	☐Yes ☐ No
3.	☐	☐	☐Yes ☐ No
4.	☐	☐	☐Yes ☐ No
5.	☐	☐	☐Yes ☐ No
Examples that would apply to column 2			
• Proposed Action to locate within the CEA?	☐	☐	☐Yes ☐ No
• Proposed Action will result in a reduction in the quantity of the resource?	☐	☐	☐Yes ☐ No
• Proposed Action will result in a reduction in the quality of the resource?	☐	☐	☐Yes ☐ No
• Proposed Action will impact the use, function or enjoyment of the resource?	☐	☐	☐Yes ☐ No
Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON TRANSPORTATION			
15. Will there be an effect to existing transportation systems? ☐NO ☒YES			
Examples that would apply to column 2			
• Alteration of present patterns of movement of people and/or goods	☐	☒	☒Yes ☐ No
• Proposed Action will result in major traffic problems.	☐	☒	☒Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
IMPACT ON ENERGY			
16. Will proposed action affect the community's sources of fuel or energy supply? ☒NO ☐YES			
Examples that would apply to column 2			
• Proposed Action will cause a greater than 5% increase in the use of any form of energy in the municipality.	☐	☐	☐Yes ☐ No
• Proposed Action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use.	☐	☐	☐Yes ☐ No
• Other impacts:	☐	☐	☐Yes ☐ No
NOISE AND ODOR IMPACTS			
17. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action? ☒NO ☐YES			
Examples that would apply to column 2			
• Blasting within 1,500 feet of a hospital, school or other sensitive facility.	☐	☐	☐Yes ☐ No
• Odors will occur routinely (more than one hour per day).	☐	☐	☐Yes ☐ No

	1 Small To Moderate Impact	2 Potential Large Impact	3 Can Impact Be Mitigated By Project Change
• Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures.	☐	☐	☐Yes ☐ No
• Proposed Action will remove natural barriers that would act as a noise screen.	☐	☐	☐Yes ☐ No
Other impacts:	☐	☐	☐Yes ☐ No

IMPACT ON PUBLIC HEALTH

18. Will Proposed Action affect public health and safety? ☒**NO** ☐**YES**

Examples that would apply to column 2

• Proposed Action may cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission.	☐	☐	☐Yes ☐ No
• Proposed Action may result in the burial of "hazardous wastes" in any form (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.).	☐	☐	☐Yes ☐ No
• Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.	☐	☐	☐Yes ☐ No
• Proposed action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.	☐	☐	☐Yes ☐ No
• Other Impacts:	☐	☐	☐Yes ☐ No

IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD

19. Will proposed action affect the character of the existing community? ☐**NO** ☒ **YES**

Examples that would apply to column 2

• The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.	☐	☐	☐Yes ☐ No
• The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.	☐	☐	☐Yes ☐ No
• Proposed Action will conflict with officially adopted plans or goals.	☐	☐	☐Yes ☐ No
• Proposed Action will cause a change in the density of land use.	☐	☒	☒Yes ☐ No
• Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community.	☐	☐	☐Yes ☐ No
• Development will create a demand for additional community services (e.g. schools, police and fire, etc.).	☐	☒	☒Yes ☐ No
• Proposed Action will set an important precedent for future projects.	☐	☐	☐Yes ☐ No
• Proposed Action will create or eliminate employment.	☐	☒	☐Yes ☒ No
• Other impacts:	☐	☐	☐Yes ☐ No

20. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts? ☐**NO** ☒**YES**

If any action in Part 2 is identified as a potential large impact, or if you cannot determine the magnitude of impact, proceed to Part 3

Part 3 - EVALUATION OF THE IMPORTANCE OF IMPACTS

Responsibility of Lead Agency

Part 3 must be prepared if one or more impact(s) is considered to be potentially large, even if the impact(s) may be mitigated.

Instructions (If you need more space, attach additional sheets)

Discuss the following for each impact identified in Column 2 of Part 2:

1. Briefly describe the impact.

2. Describe (if applicable) how the impact could be mitigated or reduced to a small to moderate impact by project change(s).

3. Based on the information available, decide if it is reasonable to conclude that this impact is **important**.

   To answer the question of importance, consider:

   - The probability of the impact occurring
   - The duration of the impact
   - Its irreversibility, including permanently lost resources of value
   - Whether the impact can or will be controlled
   - The regional consequence of the impact
   - Its potential divergence from local needs and goals
   - Whether known objections to the project relate to this impact.

Applicant will prepare a Draft Environmental Impact Statement to address all issues on Phase 1. The document will also serve as a Draft Generic Environmental Impact Statement on Phases 2 and 3 of the CCOA Thompson Education Center.

Reset

Soils Report

Custom Soil Resource Survey

Prepared For:

CCOA Thompson Educational Center

July 2013

Prepared By:

USDA

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

United States Department of Agriculture

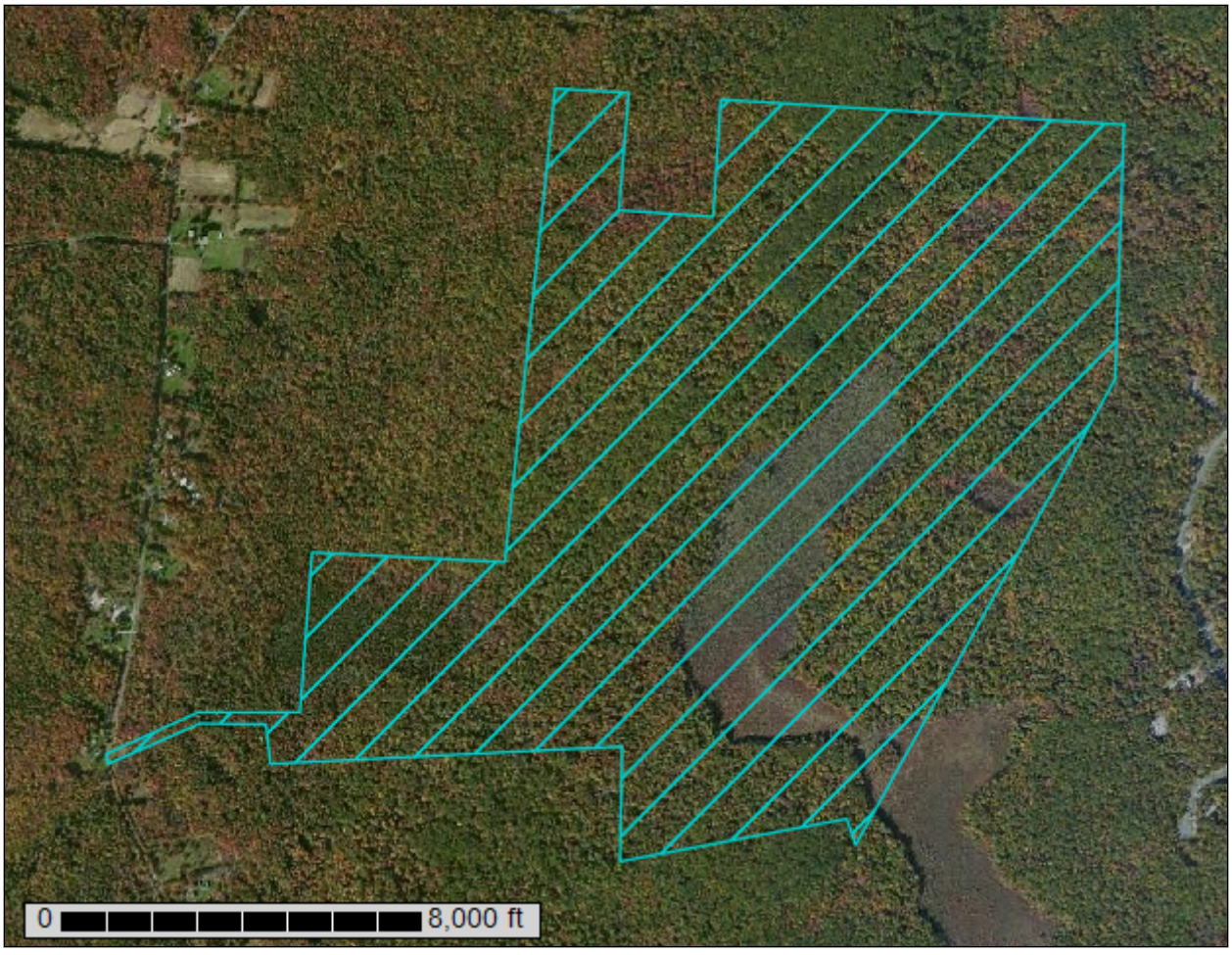
NRCS

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 Sullivan County, New York

CHINA CITY REGIONAL CENTER And its Authorized Project Companies - July 2013



July 31, 2013

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://soils.usda.gov/sqi/) 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://soils.usda.gov/contact/state_offices/).

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 Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

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Contents

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

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.

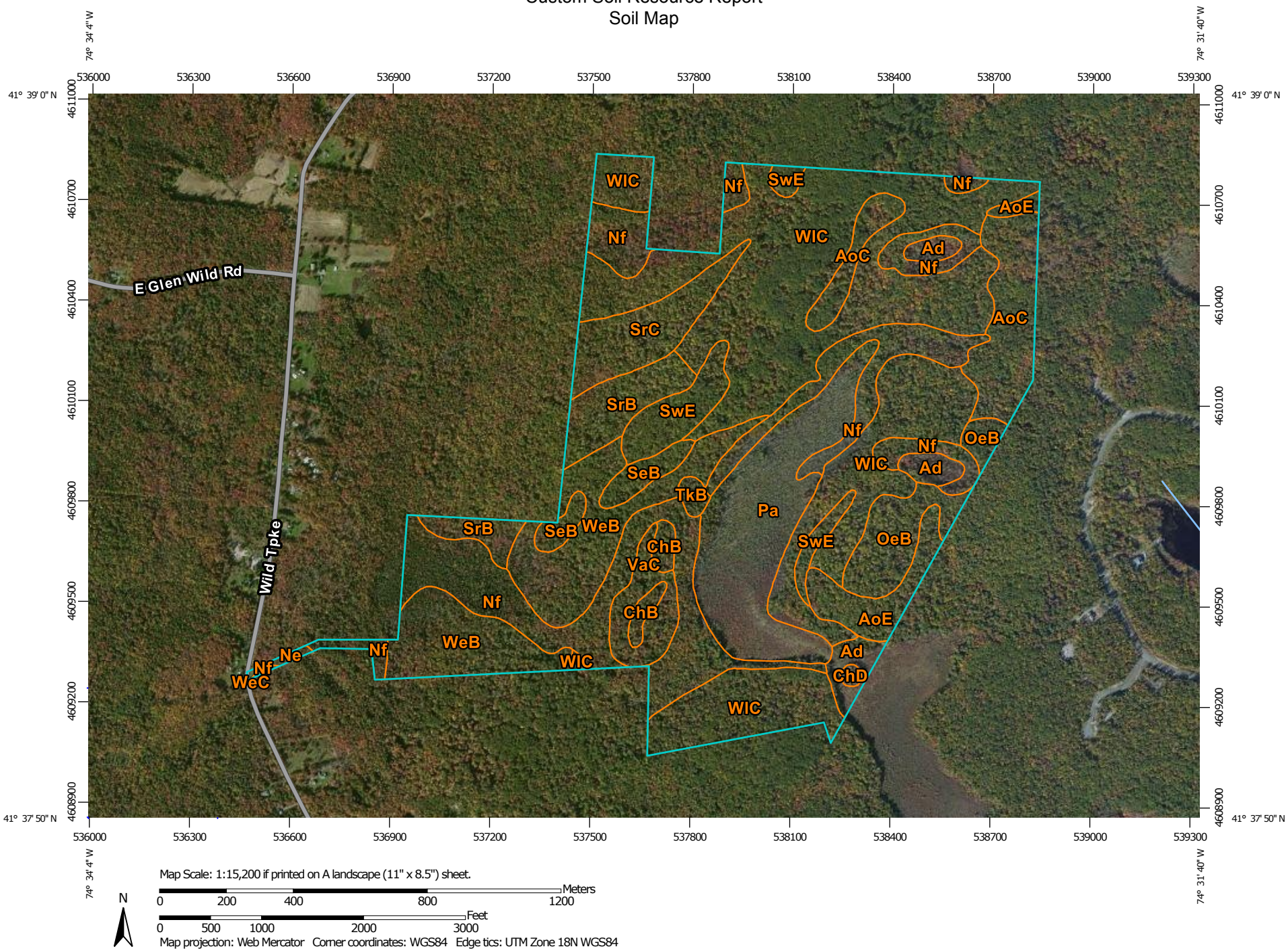
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree 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.

Custom Soil Resource Report
Soil Map



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: Sullivan County, New York
Survey Area Data: Version 11, Sep 21, 2012

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

Date(s) aerial images were photographed: Mar 20, 2011—Oct 10, 2011

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

Sullivan County, New York (NY105)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
Ad	Alden silt loam	11.1	2.1%
AoC	Arnot-Oquaga complex, 0 to 15 percent slopes, very rocky	30.7	5.7%
AoE	Arnot-Oquaga complex, 15 to 35 percent slopes, very rocky	14.3	2.6%
ChB	Chenango gravelly loam, 3 to 8 percent slopes	4.4	0.8%
ChD	Chenango gravelly loam, 15 to 25 percent slopes	0.8	0.2%
Ne	Neversink loam	0.7	0.1%
Nf	Neversink and Alden soils, very stony	92.2	17.1%
OeB	Oquaga very channery silt loam, 3 to 8 percent slopes	18.7	3.5%
Pa	Palms muck	52.5	9.7%
SeB	Scriba and Morris loams, gently sloping, extremely stony	8.7	1.6%
SrB	Swartswood gravelly loam, 3 to 8 percent slopes, stony	20.0	3.7%
SrC	Swartswood gravelly loam, 8 to 15 percent slopes, stony	19.3	3.6%
SwE	Swartswood and Lackawanna soils, steep, very stony	17.0	3.1%
TkB	Tunkhannock gravelly loam, 3 to 8 percent slopes	2.0	0.4%
VaC	Valois gravelly sandy loam, 8 to 15 percent slopes	11.3	2.1%
WeB	Wellsboro gravelly loam, 3 to 8 percent slopes	54.8	10.1%
WeC	Wellsboro gravelly loam, 8 to 15 percent slopes	0.1	0.0%
WlC	Wellsboro and Wurtsboro soils, strongly sloping, extremely stony	181.4	33.6%
Totals for Area of Interest		**540.1**	**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.

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.

Sullivan County, New York

Ad—Alden silt loam

Map Unit Setting

Elevation: 300 to 1,500 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Alden and similar soils: 80 percent
Minor components: 20 percent

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

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
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: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 9.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 5w
Hydrologic Soil Group: C/D

Typical profile

0 to 12 inches: Silt loam
12 to 33 inches: Silt loam
33 to 60 inches: Gravelly silt loam

Minor Components

Morris

Percent of map unit: 5 percent

Palms

Percent of map unit: 5 percent
Landform: Marshes, swamps

Scriba

Percent of map unit: 5 percent

Neversink

Percent of map unit: 5 percent
Landform: Depressions

AoC—Arnot-Oquaga complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Arnot and similar soils: 45 percent
Oquaga and similar soils: 40 percent
Minor components: 15 percent

Description of Arnot

Setting

Landform: Hills, ridges, benches
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 acid sandstone, siltstone, and shale

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.0 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: D

Typical profile

0 to 1 inches: Moderately decomposed plant material
1 to 3 inches: Channery loam
3 to 17 inches: Very channery loam
17 to 21 inches: Unweathered bedrock

Description of Oquaga

Setting

Landform: Hills, ridges, benches
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till with lithology dominated by reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: C

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 6 inches: Very channery silt loam
6 to 36 inches: Very channery loam
36 to 40 inches: Unweathered bedrock

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Tuller

Percent of map unit: 4 percent

Cheshire

Percent of map unit: 2 percent

Lackawanna

Percent of map unit: 2 percent

Wellsboro

Percent of map unit: 2 percent

AoE—Arnot-Oquaga complex, 15 to 35 percent slopes, very rocky

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Arnot and similar soils: 50 percent
Oquaga and similar soils: 35 percent
Minor components: 15 percent

Description of Arnot

Setting

Landform: Hills, ridges, benches
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 acid sandstone, siltstone, and shale

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.0 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: D

Typical profile

0 to 1 inches: Moderately decomposed plant material
1 to 3 inches: Channery loam
3 to 17 inches: Very channery loam
17 to 21 inches: Unweathered bedrock

Description of Oquaga

Setting

Landform: Hills, ridges, benches

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till with lithology dominated by reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: C

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 6 inches: Very channery silt loam
6 to 36 inches: Very channery loam
36 to 40 inches: Unweathered bedrock

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 4 percent

Cheshire

Percent of map unit: 3 percent

Lackawanna

Percent of map unit: 3 percent

ChB—Chenango gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Chenango and similar soils: 85 percent
Minor components: 15 percent

Description of Chenango

Setting

Landform: Valley trains, terraces
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

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
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 content: 1 percent
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2s
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Gravelly loam
4 to 31 inches: Very gravelly loam
31 to 60 inches: Very gravelly loamy coarse sand

Minor Components

Pompton

Percent of map unit: 5 percent

Valois

Percent of map unit: 5 percent

Red hook

Percent of map unit: 3 percent

Otisville

Percent of map unit: 2 percent

ChD—Chenango gravelly loam, 15 to 25 percent slopes

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Chenango and similar soils: 85 percent
Minor components: 15 percent

Description of Chenango

Setting

Landform: Valley trains, terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
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

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
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 content: 1 percent
Available water capacity: Low (about 4.3 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 4e
Hydrologic Soil Group: A

Typical profile

0 to 4 inches: Gravelly loam
4 to 31 inches: Very gravelly loam
31 to 60 inches: Very gravelly loamy coarse sand

Minor Components

Otisville

Percent of map unit: 5 percent

Riverhead
Percent of map unit: 5 percent

Valois
Percent of map unit: 5 percent

Ne—Neversink loam

Map Unit Setting
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition
Neversink and similar soils: 80 percent
Minor components: 20 percent

Description of Neversink

Setting
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Acid loamy till derived from sandstone, siltstone, and shale

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: 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 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.1 inches)

Interpretive groups
Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 4w
Hydrologic Soil Group: C/D

Typical profile
0 to 2 inches: Slightly decomposed plant material
2 to 7 inches: Loam
7 to 23 inches: Gravelly loam
23 to 60 inches: Gravelly sandy loam

Minor Components

Alden
Percent of map unit: 5 percent
Landform: Depressions

Scriba
Percent of map unit: 5 percent

Unnamed soils
Percent of map unit: 4 percent
Landform: Depressions

Wallington
Percent of map unit: 3 percent

Morris
Percent of map unit: 1 percent

Wellsboro
Percent of map unit: 1 percent

Wurtsboro
Percent of map unit: 1 percent

Nf—Neversink and Alden soils, very stony

Map Unit Setting
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition
Neversink, very stony, and similar soils: 45 percent
Alden, very stony, and similar soils: 40 percent
Minor components: 15 percent

Description of Neversink, Very Stony

Setting
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Acid loamy till derived from sandstone, siltstone, and shale

Properties and qualities
Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: 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 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: C/D

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 7 inches: Loam
7 to 23 inches: Gravelly loam
23 to 60 inches: Gravelly sandy loam

Description of Alden, Very Stony

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

Properties and qualities

Slope: 0 to 3 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
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: None
Calcium carbonate, maximum content: 15 percent
Available water capacity: High (about 9.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 6s
Hydrologic Soil Group: C/D

Typical profile

0 to 12 inches: Silt loam
12 to 33 inches: Silt loam
33 to 60 inches: Gravelly silt loam

Minor Components

Morris

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

Landform: Bogs

Scriba

Percent of map unit: 5 percent

OeB—Oquaga very channery silt loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Oquaga and similar soils: 85 percent
Minor components: 15 percent

Description of Oquaga

Setting

Landform: Hills, ridges, benches
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Channery loamy till with lithology dominated by reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.4 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 6 inches: Very channery silt loam
6 to 36 inches: Very channery loam
36 to 40 inches: Unweathered bedrock

Minor Components

Arnot
Percent of map unit: 5 percent

Cheshire
Percent of map unit: 3 percent

Lackawanna
Percent of map unit: 3 percent

Wellsboro
Percent of map unit: 3 percent

Tuller
Percent of map unit: 1 percent

Pa—Palms muck

Map Unit Setting
Elevation: 250 to 1,500 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition
Palms and similar soils: 85 percent
Minor components: 15 percent

Description of Palms

Setting
Landform: Swamps, marshes
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

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
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: None
Calcium carbonate, maximum content: 20 percent
Available water capacity: Very high (about 15.6 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 5w
Hydrologic Soil Group: B/D

Typical profile

0 to 12 inches: Muck
12 to 22 inches: Muck
22 to 60 inches: Loam

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions

Carlisle

Percent of map unit: 5 percent
Landform: Swamps, marshes

Wayland

Percent of map unit: 3 percent
Landform: Flood plains

Neversink

Percent of map unit: 2 percent
Landform: Depressions

SeB—Scriba and Morris loams, gently sloping, extremely stony

Map Unit Setting

Elevation: 600 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Morris, extremely stony, and similar soils: 40 percent
Scriba, extremely stony, and similar soils: 40 percent
Minor components: 20 percent

Description of Scriba, Extremely Stony

Setting

Landform: Drumlins, 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 dominated by sandstone, with lesser amounts of limestone and shale

Properties and qualities

Slope: 2 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 12 to 20 inches to fragipan
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 content: 15 percent
Available water capacity: Very low (about 1.9 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: D

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 8 inches: Loam
8 to 20 inches: Channery loam
20 to 60 inches: Channery loam

Description of Morris, Extremely Stony

Setting

Landform: Drumlinoid ridges, hills, till plains
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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 2 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 10 to 22 inches to fragipan
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 capacity: Very low (about 2.8 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: D

Typical profile

0 to 6 inches: Loam
6 to 20 inches: Gravelly loam
20 to 60 inches: Gravelly loam

Minor Components

Wurtsboro
Percent of map unit: 5 percent

Neversink
Percent of map unit: 5 percent
Landform: Depressions

Unnamed soils
Percent of map unit: 4 percent

Alden
Percent of map unit: 3 percent
Landform: Depressions

Wellsboro
Percent of map unit: 3 percent

SrB—Swartswood gravelly loam, 3 to 8 percent slopes, stony

Map Unit Setting
Elevation: 1,000 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition
Swartswood and similar soils: 85 percent
Minor components: 15 percent

Description of Swartswood

Setting
Landform: Hills, till plains
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 quartzite, conglomerate, and sandstone

Properties and qualities
Slope: 3 to 8 percent
Depth to restrictive feature: 22 to 30 inches to fragipan
Drainage class: Well 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 18 to 26 inches
Frequency of flooding: None

Frequency of ponding: None
Available water capacity: Very low (about 2.6 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 2e
Hydrologic Soil Group: C/D

Typical profile

0 to 1 inches: Gravelly loam
1 to 26 inches: Gravelly loam
26 to 60 inches: Gravelly sandy loam

Minor Components

Cheshire

Percent of map unit: 5 percent

Wurtsboro

Percent of map unit: 5 percent

Scriba

Percent of map unit: 2 percent

Valois

Percent of map unit: 1 percent

Wellsboro

Percent of map unit: 1 percent

Lackawanna

Percent of map unit: 1 percent

SrC—Swartswood gravelly loam, 8 to 15 percent slopes, stony

Map Unit Setting

Elevation: 1,000 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Swartswood and similar soils: 85 percent
Minor components: 15 percent

Description of Swartswood

Setting

Landform: Hills, till plains
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 quartzite, conglomerate, and sandstone

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 22 to 30 inches to fragipan
Drainage class: Well 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 18 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.6 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: C/D

Typical profile

0 to 1 inches: Gravelly loam
1 to 26 inches: Gravelly loam
26 to 60 inches: Gravelly sandy loam

Minor Components

Wurtsboro

Percent of map unit: 5 percent

Cheshire

Percent of map unit: 5 percent

Scriba

Percent of map unit: 2 percent

Valois

Percent of map unit: 1 percent

Lackawanna

Percent of map unit: 1 percent

Wellsboro

Percent of map unit: 1 percent

SwE—Swartswood and Lackawanna soils, steep, very stony

Map Unit Setting

Elevation: 1,000 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Lackawanna, very stony, and similar soils: 40 percent
Swartswood, very stony, and similar soils: 40 percent
Minor components: 20 percent

Description of Swartswood, Very Stony

Setting

Landform: Hills, till plains
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 quartzite, conglomerate, and sandstone

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 22 to 30 inches to fragipan
Drainage class: Well 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 18 to 26 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: C/D

Typical profile

0 to 2 inches: Slightly decomposed plant material
2 to 3 inches: Gravelly loam
3 to 28 inches: Gravelly loam
28 to 60 inches: Gravelly sandy loam

Description of Lackawanna, Very Stony

Setting

Landform: Drumlinoid ridges, hills, till plains
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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 17 to 36 inches to fragipan
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 16 to 35 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 4.5 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: C

Typical profile

0 to 2 inches: Moderately decomposed plant material
2 to 5 inches: Channery loam
5 to 34 inches: Channery loam
34 to 60 inches: Channery loam

Minor Components

Wellsboro

Percent of map unit: 5 percent

Wurtsboro

Percent of map unit: 5 percent

Valois

Percent of map unit: 3 percent

Cheshire

Percent of map unit: 3 percent

Lordstown

Percent of map unit: 2 percent

Oquaga

Percent of map unit: 2 percent

TkB—Tunkhannock gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 700 to 2,000 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Tunkhannock and similar soils: 85 percent
Minor components: 15 percent

Description of Tunkhannock

Setting

Landform: Valley trains, terraces

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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.0 inches)

Interpretive groups

Farmland classification: All areas are prime farmland
Land capability (nonirrigated): 2s
Hydrologic Soil Group: A

Typical profile

0 to 6 inches: Gravelly loam
6 to 38 inches: Very gravelly very fine sandy loam
38 to 60 inches: Stratified very gravelly sand

Minor Components

Barbour

Percent of map unit: 5 percent

Unnamed soils

Percent of map unit: 5 percent

Suncook

Percent of map unit: 5 percent

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

Map Unit Setting

Elevation: 600 to 1,750 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Valois and similar soils: 80 percent
Minor components: 20 percent

Description of Valois

Setting

Landform: End moraines, valley sides, lateral moraines
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

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
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
Calcium carbonate, maximum content: 2 percent
Available water capacity: Low (about 5.8 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: B

Typical profile

0 to 1 inches: Moderately decomposed plant material
1 to 4 inches: Gravelly sandy loam
4 to 26 inches: Gravelly sandy loam
26 to 37 inches: Gravelly sandy loam
37 to 60 inches: Gravelly sandy loam

Minor Components

Chenango

Percent of map unit: 5 percent

Riverhead

Percent of map unit: 5 percent

Wurtsboro

Percent of map unit: 3 percent

Unnamed soils

Percent of map unit: 3 percent

Swartswood

Percent of map unit: 2 percent

Lordstown

Percent of map unit: 2 percent

WeB—Wellsboro gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 1,100 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Wellsboro and similar soils: 85 percent
Minor components: 15 percent

Description of Wellsboro

Setting

Landform: Drumlinoid ridges, hills, till plains
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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 12 to 30 inches to fragipan
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 10 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 2w
Hydrologic Soil Group: D

Typical profile

0 to 7 inches: Gravelly loam
7 to 23 inches: Gravelly loam
23 to 60 inches: Gravelly loam

Minor Components

Morris

Percent of map unit: 4 percent

Lackawanna

Percent of map unit: 3 percent

Swartswood
Percent of map unit: 2 percent

Wurtsboro
Percent of map unit: 2 percent

Scriba
Percent of map unit: 2 percent

Unnamed soils
Percent of map unit: 2 percent

WeC—Wellsboro gravelly loam, 8 to 15 percent slopes

Map Unit Setting

Elevation: 1,100 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition

Wellsboro and similar soils: 85 percent
Minor components: 15 percent

Description of Wellsboro

Setting

Landform: Drumlinoid ridges, hills, till plains
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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 12 to 30 inches to fragipan
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 10 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Farmland classification: Farmland of statewide importance
Land capability (nonirrigated): 3e
Hydrologic Soil Group: D

Typical profile
0 to 7 inches: Gravelly loam
7 to 23 inches: Gravelly loam
23 to 60 inches: Gravelly loam

Minor Components

Lackawanna
Percent of map unit: 4 percent

Oquaga
Percent of map unit: 2 percent

Morris
Percent of map unit: 2 percent

Swartswood
Percent of map unit: 2 percent

Wurtsboro
Percent of map unit: 2 percent

Unnamed soils
Percent of map unit: 2 percent

Scriba
Percent of map unit: 1 percent

WlC—Wellsboro and Wurtsboro soils, strongly sloping, extremely stony

Map Unit Setting
Elevation: 1,100 to 1,800 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days

Map Unit Composition
Wurtsboro, extremely stony, and similar soils: 40 percent
Wellsboro, extremely stony, and similar soils: 40 percent
Minor components: 20 percent

Description of Wellsboro, Extremely Stony

Setting
Landform: Drumlinoid ridges, hills, till plains
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 reddish sandstone, siltstone, and shale

Properties and qualities

Slope: 0 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 12 to 30 inches to fragipan
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 10 to 28 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: D

Typical profile

0 to 7 inches: Gravelly loam
7 to 23 inches: Gravelly loam
23 to 60 inches: Gravelly loam

Description of Wurtsboro, Extremely Stony

Setting

Landform: Hills, till plains
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 acid quartzite, conglomerate, and sandstone

Properties and qualities

Slope: 0 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 28 inches to fragipan
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 12 to 22 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 3.8 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability (nonirrigated): 7s
Hydrologic Soil Group: C/D

Typical profile

0 to 2 inches: Moderately decomposed plant material
2 to 4 inches: Loam
4 to 28 inches: Loam
28 to 60 inches: Gravelly fine sandy loam

Minor Components

Scriba
Percent of map unit: 5 percent

Swartswood
Percent of map unit: 5 percent

Lackawanna
Percent of map unit: 3 percent

Morris
Percent of map unit: 3 percent

Lordstown
Percent of map unit: 2 percent

Oquaga
Percent of map unit: 2 percent

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CCOA Thompson Education Center - Table 1

Phase	Area	Building Coverage (Acres)	Roadways & Grounds (Acres)	Total Acres	%
I	A	1.5	7.7	9.2	
I	B	2.3	14	16.3	
I	C	1	7.6	8.6	
I	D	12.7	24	36.7	
Sub-total		**17.5**	**53.3**	**70.8**	**12%**
II	E	4.3	8.5	12.8	
II	F	1.1	0.6	1.7	
II	G	5.5	20.4	25.9	
II	H	2.2	27.7	29.9	
II	I	1.3	5.4	6.7	
II	J	12.9	25.3	38.2	
Sub-total		**27.3**	**87.9**	**115.2**	**20%**
III	K	10.2	10.8	21	
III	L	1.9	9.8	11.7	
III	M	2.3	15.3	17.6	
III	N	2.9	22	24.9	
Sub-total		**17.3**	**57.9**	**75.2**	**13%**
Total - All Buildable Area		**62.1**	**199.1**	**261.2**	**45%**
Open Space				**313.8**	**55%**
Total Area				**575.0**	**100%**

CCOA Thompson Education Center - Table 2

Phase	Area	Buildings	Unit Type	Number of Dormitory and Other Units	Unit Size Square Feet	Sq. Ft. Per Unit	Total Sq. Ft.
I	A	1 ,3	College Student Union & Studios	2	153 x 153 = 23,409 x 3 stories	70,227	140,454
I	A	2, 4	College Student Studios	2	100 x 100 = 10,000 x 3 stories	30,000	60,000
I	B	5, 8	College Classroom Building	2	140 x 140 = 19,600 x 3 stories	58,800	117,600
I	B	6	College Classroom Building	1	160 x 160 = 25,600 x 3 stories	76,800	76,800
I	B	7	College Classroom Building	1	190 x 190 = 36,100 x 3 stories	108,300	108,300
I	C	9	College Clubhouse	1	100 x 100 = 10,000	10,000	10,000
I	C	10	College Sports Center	1	160 x 160 =2 5,600 x 3 stories	76,800	76,800
I	C	11	College Community Center	1	100 x 100 = 10,000	10,000	10,000
I	C	12, 13	College Playground	2	100 (circle)	7,854	15,708
I	C	14	College Playground	1	200 (circle)	31,416	31,416
I	D	p/o 15 - 18	College Student Housing Building	4 Bldgs x 200 Dorm Units = 800	274 x 274 = 75,076 x 3 stories	425	340,000
I	D	p/o 15 - 18	College Student Housing Building	4 Bldgs x 100 Dorm Units = 400		850	340,000
I	D	p/o 15 - 18	College Student Housing Building	4 Bldgs x 50 Dorm Units = 200		1,105	220,912
I	D	p/o 19 - 26	College Townhouse Dormitory Units	8 Bldgs x 33 Dorm Units = 264	19 x 40 = 760 x 2/3 Stories	2,168	572,352
I	D	p/o 19 - 26	College Student Recreational Buildings	8 Blocks x 4 Buildings = 32	40 x 40 = 1,600	1,600	51,200
II	E	p/o 27 - 32	College Townhouse Dormitory Units	24 Blocks x 33 Dorm Units = 792	19 x 40 = 760 x 2/3 Stories	2,168	1,717,056
II	E	p/o 27 - 32 p/o 80 - 97	College Student Recreational Buildings	18 Blocks x 4 Bldgs = 72	40 x 40 = 1,600	1,600	115,200
II	F	33	College Library & Museum	1	40 x 120, 40 x 200, 40 x 280 x 2 stories	48,000	48,000
II	G	N/A	College Parks	1	N/A	142,576	142,576
II	G	34 - 41, 44 - 45	College Clubhouses	10	100 x 100 = 10,000	10,000	100,000
II	G	42 - 43	College Clubhouses	2	193 x 193 = 37,249	37,249	74,498
II	G	46 - 47	College Clubhouses	2	180 x 180	32,400	64,800
II	H	48 - 70	College Benefactor Housing	23 Units	N/A	13,450	309,350
II	I	71 - 79	College Performance Center	9	80 x 80 = 6,400	6,400	57,600
III	K	98 - 100, 104 - 105	College Performance Center	5	100 x 100 = 10,000	10,000	50,000
III	K	101	College Performance Center	1	250 x 250 = 62,500	62,500	62,500
III	K	102	College Conference Center	1	175 x 630 = 110,250 x 2 stories	220,500	220,500
III	K	103	College Inn	100 Rooms	175 x 1,260	2,205	220,500
III	L	106	College Recreational Facility	1	150 (circle)	17,671	17,671
III	L	107 - 130	College Faculty Housing	48 Faculty Units	N/A	3,766	180,768
III	L	131	College Playground	1	150 (circle)	17,671	17,671
III	M	132, 133, 146	College Recreational Facility	3	150 (circle)	17,671	53,013
III	M	134 - 145	College Benefactor Housing	12 Units	N/A	12,105	145,260
III	N	147, 200	College Playground	2	150 (circle)	17,671	35,342
III	N	148 - 150, 199	College Recreational Facility	4	150 (circle)	17,671	70,684
III	L	151 - 198	College Faculty Housing	48 Faculty Units	N/A	5,380	258,240
Totals		**200 Buildings and**		**2,456 Dormitory Units**			**3,190,320**

New York State Department of Environmental Conservation
Division of Environmental Permits, Region 3
21 South Putt Corners Road, New Paltz, New York 12561-1696
Phone: (845) 256-3003 • **FAX:** (845) 255-3042
Website: www.dec.state.ny.us

Denise M. Sheehan
Commissioner

22 June 2006

Robert Torgersen
3 Main Dr.
Nanuet, NY 10954

Re: Parkwood Subdivision

Dear Mr. Torgersen:

DEC is in receipt of your Jurisdictional Screening Request dated 22 May 2006 for the proposed Parkwood Subdivision located off County Route 56 in the Towns of Mamakating/Thompson, Sullivan County. After reviewing the location map provided, DEC has identified the following permit jurisdictions:

This project has several NYS Freshwater Wetlands on site or in the vicinity. Wetlands on site are as follows:

WO-56, ClassII
WO-56, Class II
WO-43, Class II
WO-42, Class II

Wetlands whose Adjacent Area (AA) is close to the site and can be impacted are as follows:

WO-53, Class II
WO-41, ClassII
YL-4, Class II
WO-55. Class III

Construction in NYS Freshwater Wetlands requires a permit from DEC. Enclosed are permit application materials. Please pass this information on to your client (unnamed in your correspondence.) Be advised DEC encourages avoidance of wetlands.

There are also protected streams on the property:

WIN #: D-1-12-25-1 Primrose Brook, Class C(T)
WIN #: D-1-12-25-1-2 South Brook, Class C(T)

Construction that will effect protected streams requires a permit from DEC. Enclosed are permit application materials. Please also pass this information on to your client.

No Threatened/Endangered Species are mapped within the project site or immediate vicinity. As always, however, if you see a species of concern, please contact the Threatened/Endangered Species Unit at 845-256-4094.

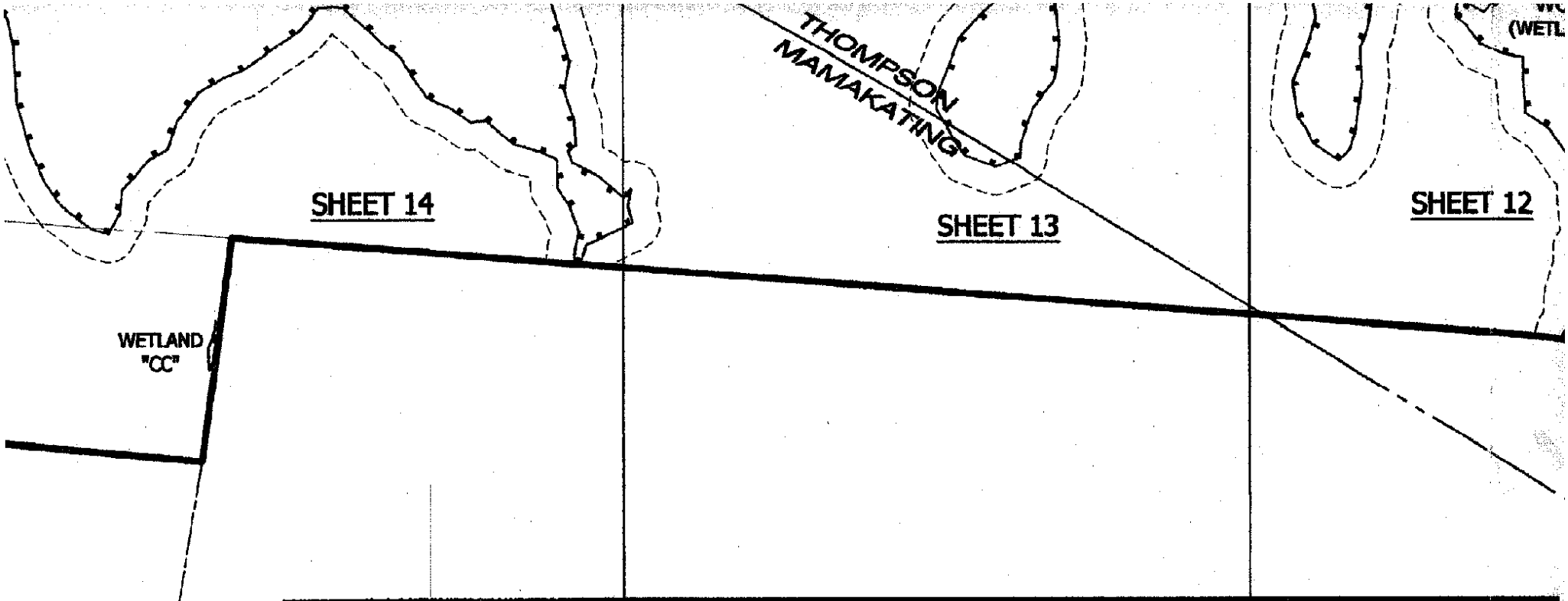
If proposed construction will disturb more that one acre of soil, it will require a State Pollutant Discharge Elimination System (SPDES) General Permit 02-01 for stormwater discharges associated with construction. You may acess the form used to apply for this permit at http://www.dec.state.ny.us/website/dcs/permits/olpermits/index.html.

Please feel free to contact the Region 3 DEC Office at 845-256-3054 with further questions.

Sincerely,

Andrea Sheeran Glick
Division of Environmental Permits

Enclosures:
Peg Duke
Town of Mamakating
Town of Thompson
D. Gaugler
J. Isaacs
file



NYS DEC FRESHWATER WETLANDS BOUNDARY VALIDATION

THE FRESHWATER WETLAND BOUNDARY A REPRESENTED ON THESE PLANS ACCURALTEY DEPICTS THE LIMITS OF FRESHWATER WETLANDS WO-42, WO-43, WO-54 AND W O-56 AS DELINEATED BY PETER JORGENSEN ON JUNE 2006

DEC STAFF: Douglas Gaugler
DOUGLAS GAUGLER - BIOLOGIST I

SURVEYOR/ENGINEER: JOSEPH HALLER

DATE 12/29/06

SEAL

STATE OF NEW YORK JOSEPH HALLER LICENSED LAND SURVEYOR NO. 49336

WETLAND BOUNDARY DELINEATION AS VALIDATED BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION REMAINS VALID FOR 10 YEARS UNLESS EXISTING EXEMPT ACTIVITIES, AREA HYDROLOGY, OR LAND USE PRACTICES CHANGE (e.g. AGRICULTURAL TO RESIDENTIAL). AFTER 10 YEARS THE BOUNDARY MUST BE REVALIDATED BY DEC STAFF. REVALIDATION MAY INCLUDE A NEW DELINEATION AND SURVEY OF THE WETLAND BOUNDARY.

ANY PROPOSED CONSTRUCTION, GRADING, FILLING, EXCAVATING, CLEARING OR OTHER REGULATED ACTIVITY IN THE FRESHWATER WETLAND OR WITHIN 100 FEET OF THE WETLAND BOUNDARY AS DEPICTED ON THE PLAN REQUIRES A PERMIT FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION UNDER ARTICLE 24 OF THE ENVIRONMENTAL CONSERVATION LAW (FRESHWATER WETLANDS ACT) PRIOR TO COMMENCEMENT OF WORK.

OPERTY OWNER
KWOOD PARTNERS, LLC
. BOX 2121
NROE, NEW YORK 10949
)NE: 1-845-774-8090

NYS DEC FRESHWATER WETLANDS BOUNDARY VALIDATION

THE FRESHWATER WETLAND BOUNDARY A REPRESENTED ON THESE PLANS ACCURALTEY DEPICTS THE LIMITS OF

FRESHWATER WETLANDS YL-8 AS DELINEATED BY ROBERT TORGERSEN, LA CPESCON MARCH 28, 2007.

DEC STAFF: James M. Kimberly SURVEYOR/ENGINEER: JOSEPH HALLER

DATE: 12/19/07 SEAL

STATE OF NEW YORK JOSEPH HALLER NO. 49336 LICENSED LAND SURVEYOR

WETLAND BOUNDARY DELINEATION AS VALIDATED BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION REMAINS VALID FOR 10 YEARS UNLESS EXISTING EXEMPT ACTIVITIES, AREA HYDROLOGY, OR LAND USE PRACTICES CHANGE (e.g. AGRICULTURAL TO RESIDENTIAL). AFTER 10 YEARS THE BOUNDARY MUST BE REVALIDATED BY DEC STAFF. REVALIDATION MAY INCLUDE A NEW DELINEATION AND SURVEY OF THE WETLAND BOUNDARY.

ANY PROPOSED CONSTRUCTION, GRADING, FILLING, EXCAVATING, CLEARING OR OTHER REGULATED ACTIVITY IN THE FRESHWATER WETLAND OR WITHIN 100 FEET OF THE WETLAND BOUNDARY AS DEPICTED ON THE PLAN REQUIRES A PERMIT FROM THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION UNDER ARTICLE 24 OF THE ENVIRONMENTAL CONSERVATION LAW (FRESHWATER WETLANDS ACT) PRIOR TO COMMENCEMENT OF WORK.

OCTOBER 31, 2007	3	REV. WETLAND "D" TO NYS DEC YL-8
SEPTEMBER 25, 2007	2	REV. WETLAND "C" & "D"

DATE REVISIONS	ISSUE	DESCRIPTION	CHKD.

WETLAND LOCATIONS

FOR

KINGWOOD

DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

JAN 1 4 2008

REPLY TO
ATTENTION OF:
Regulatory Branch

SUBJECT: Permit Application Number NAN-2007-1322-WCA
by Parkwood Properties, LLC

Robert G. Torgersen, LA, CPESC
Landscape Architecture and Environmental Sciences
Three Main Drive
Nanuet, New York 10954

Dear Mr. Torgersen:

On September 15, 2006, the New York District of the U.S. Army Corps of Engineers received a request for a Department of the Army jurisdictional determination for the above referenced project. This request was made by Robert G. Torgersen, Landscape Architecture and Environmental Sciences, as consultant for Parkwood Properties, LLC. The site consists of approximately 1,137.7 acres, and includes the following parcels designated as TM 65-1-11.59, L.954 P.153, TM 26 1-6, Part of TM 33-1-28, L.1675, P.9, TM 24-1-1, L.1675, P.9, Smerak L.687, P.137, TM 33 33-1-29.1, TM 24-1-3, L. 1303, P.148, TM 24-1-4.1, TM 24-1-52, TM 24-1-49.1, TM 24-1-49.3, TM 24-1-49.4, TM 24-1-29.2, TM 24-8-1, L. 1303, P. 148, TM 24-1-30, and TM 24-1-42. The site is located within the Delaware River watershed, in the Towns of Fallsburg, Mamakating and Thompson, Sullivan County, New York.

In the letter received on September 15, 2006, your office submitted a proposed delineation of the extent of waters of the United States within the project boundary. A site inspection was conducted by representatives of this office on October 17, 2007, in which it was agreed that changes would be made to the delineation and that the modified delineation would be submitted to this office. On October 30, 2007, this office received the modified delineation.

Based on the material submitted and the observations of the representatives of this office during the site visit, this site has been determined to contain jurisdictional waters of the United States based on: the presence of wetlands determined by the occurrence of hydrophytic vegetation, hydric soils and wetland hydrology according to criteria established in the 1987 "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1 that are either adjacent to or part of a tributary system; the presence of a defined water body (e.g. stream channel, lake, pond, river, etc.) which is part of a tributary system; and the fact that the location includes property below the ordinary high water mark of a water body as determined by known gage data or by the

presence of physical markings including, but not limited to, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter or debris or other characteristics of the surrounding area.

Based on the above, it has been determined that the drawings entitled "Wetland Location for Parkwood, Towns of Fallsburg, Mamakating and Thompson, Sullivan County, New York", Sheet 1 of 1, prepared by JL Consulting and dated October 18, 2007, and "Wetland Location for Parkwood, Towns of Fallsburg, Mamakating and Thompson, Sullivan County, New York", Sheets 1 through 17, prepared by JL Consulting and dated October 18, 2007, appear to accurately depict the extent of waters of the United States on the subject site. These drawings indicate that there are twelve (12) principal jurisdictional wetland areas occupying approximately 333.84 acres on the subject site. These jurisdictional areas include wetland areas "A (which includes a portion of South Brook), B, BB, C, D, G, H, I, J, N, P and an open water pond. Wetland areas C, D, G, H, I and J situated in the northern portion of the site discharge to Primrose Brook, a tributary to South Brook. Wetland areas A, B, BB, N, P and the open water pond situated in the central and southern portion of the site discharge to South Brook. South Brook extends through the central portion of the site and drains offsite to Gumaer Brook. Gumaer Brook is a tributary of the Basherkill, and the Basherkill is a tributary of the Neversink River. The Neversink River is a tributary of the Delaware River, a navigable water body.

It should be noted that, in light of the U.S. Supreme Court decision (Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, No. 99-1178, January 9, 2001), the wetland areas depicted as CC, E, F, K, M, Q, and R on the above referenced drawings do not meet the current criteria of waters of the United States under Section 404 of the Clean Water Act. The Court ruled that isolated, intrastate waters can no longer be considered waters of the United States, based solely upon their use by migratory birds.

This determination regarding the delineation shall be considered valid for a period of five years from the date of this letter unless new information warrants revision of the determination before the expiration date.

This delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed is a combined Notification of Appeal Process (NAP) and Request For Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the North Atlantic Division Office at the following address:

James W. Haggerty, Regulatory Appeals Review Officer
North Atlantic Division, U.S. Army Engineer Division
Fort Hamilton Military Community
General Lee Avenue, Building 301
Brooklyn, New York 11252-6700

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Park 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by MAR 14 2008. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is strongly recommended that the development of the site be carried out in such a manner as to avoid as much as possible the discharge of dredged or fill material into the delineated waters of the United States. If the activities proposed for the site involve such discharges, authorization from this office may be necessary prior to the initiation of the proposed work. The extent of such discharge of fill will determine the level of authorization that would be required.

If any questions should arise concerning this matter, please contact James Cannon, of my staff, at (917) 790-8412.

Sincerely,

George Nieves
Chief, Western Permits Section

Enclosures

Cf: NYSDEC - Region 3
Town of Fallsburg
Town of Mamakating
Town of Thompson

JURISDICTIONAL DETERMINATION Revised 8/13/04
U.S. Army Corps of Engineers

DISTRICT OFFICE: NEW YORK DISTRICT (CENAN)
FILE NUMBER: NAN-2007-1322-WCA

PROJECT LOCATION INFORMATION:
State: New York
County: Sullivan
Center coordinates of site (latitude/longitude): lat: 41.63 lon: 74.52
Approximate size of area (parcel) reviewed, including uplands: 1,137.7 acres.
Name of nearest waterway: South Brook
Name of watershed: Delaware River

JURISDICTIONAL DETERMINATION

Completed:	Desktop determination	[ ]	Date:
	Site visit(s)	[X]	Date(s): October 17, 2007

Jurisdictional Determination (JD):

[ ] Preliminary JD - Based on available information, [ ] *there appear to be* (or) [ ] *there appear to be no* "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).

[X] Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:

[ ] *There are* "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: .

[X] *There are* "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: 333.8.

[X] *There are "isolated, non-navigable, intra-state waters or wetlands"* within the reviewed area.
[X] Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:
A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":
[ ] The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":
[ ] (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
[ ] (2) The presence of interstate waters including interstate wetlands[1].
[ ] (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
[ ] (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
[ ] (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
[ ] (iii) which are or could be used for industrial purposes by industries in interstate commerce.
[ ] (4) Impoundments of waters otherwise defined as waters of the US.
[X] (5) The presence of a tributary to a water identified in (1) - (4) above.
[ ] (6) The presence of territorial seas.
[X] (7) The presence of wetlands adjacent[2] to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document*

the rationale used to make adjacency determination: Wetland areas C, D, G, H, I and J situated in the northern portion of the site discharge to Primrose Brook, a tributary to South Brook. Wetland areas A, B, BB, N, P and the open water pond situated in the central and southern portion of the site discharge to South Brook. South Brook extends through the central portion of the site and drains offsite to Gumaer Brook. Gumaer Brook is a tributary of the Basherkill, and the Basherkill is a tributary of the Neversink River. The Neversink River is a tributary of the Delaware River, a navigable water body.

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

[X] Ordinary High Water Mark indicated by:
- [X] clear, natural line impressed on the bank
- [X] the presence of litter and debris
- [ ] changes in the character of soil
- [X] destruction of terrestrial vegetation
- [ ] shelving
- [ ] other:

[ ] High Tide Line indicated by:
- [ ] oil or scum line along shore objects
- [ ] fine shell or debris deposits (foreshore)
- [ ] physical markings/characteristics
- [ ] tidal gages
- [ ] other:

[ ] Mean High Water Mark indicated by:
[ ] survey to available datum; [ ] physical markings; [ ] vegetation lines/changes in vegetation types.

[X] Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by: Robert G. Torgersen, LA, CPESC, Landscape Architecture and Environmental Sciences

Basis For Not Asserting Jurisdiction:

[ ] The reviewed area consists entirely of uplands.
[ ] Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
[ ] Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
[X] The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States: Areas designated as CC, E, F, K, M, Q, and R.
- [ ] Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
- [ ] Artificially irrigated areas, which would revert to upland if the irrigation ceased.
- [ ] Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- [ ] Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
- [ ] Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
- [X] Isolated, intrastate wetland with no nexus to interstate commerce.
- [ ] Prior converted cropland, as determined by the Natural Resources Conservation Service. Explain rationale:
- [ ] Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
- [ ] Other (explain):

DATA REVIEWED FOR JURISDICTIONAL DETERMINATION (mark all that apply):

[X] Maps, plans, plots or plat submitted by or on behalf of the applicant.
[X] Data sheets prepared/submitted by or on behalf of the applicant.
- [X] This office concurs with the delineation report, dated October 22, 2007, prepared by (company): Robert G. Torgersen, LA, CPESC, Landscape Architecture and Environmental Sciences
- [ ] This office does not concur with the delineation report, dated , prepared by (company):

[ ] Data sheets prepared by the Corps.
[ ] Corps' navigable waters' studies:
[ ] U.S. Geological Survey Hydrologic Atlas:
[X] U.S. Geological Survey 7.5 Minute Topographic maps: Yankee Lake and Woodridge, New York
[ ] U.S. Geological Survey 7.5 Minute Historic quadrangles:
[ ] U.S. Geological Survey 15 Minute Historic quadrangles:
[ ] USDA Natural Resources Conservation Service Soil Survey:
[ ] National wetlands inventory maps: Yankee Lake and Woodridge, New York