



**ONSITE WASTEWATER TREATMENT SYSTEM
ENGINEERING REPORT**

**FOR
BLUE STONE ESTATES
TOWN OF THOMPSON, SULLIVAN COUNTY, NEW YORK**

Prepared For:

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1.0 INTRODUCTION

Sterling Environmental Engineering, P.C. (STERLING) has prepared this Engineering Report in support of a new onsite wastewater treatment system (OWTS) for treatment and surface discharge of domestic wastewater for the Blue Stone Estates project. The project is located on Tax Map Parcel ID 29.-1-26.1 along Cold Spring Road in the Town of Thompson, Sullivan County, New York. A Site Location Map on a United States Geological Survey quadrangle map is provided as Figure 1, and a Site Vicinity Map on an aerial image is provided as Figure 2.

This Engineering Report provides the design details, supporting calculations, and evaluations supporting the selected OWTS.

1.1 Problem Definition and Objectives

The proposed development includes 107 residential units that require the collection and treatment of domestic wastewater. The proposed project also includes two 2,000 square foot pools and a 7,000 square foot community building as shown on the Site Plan Drawing included in Appendix B. The project is located within the Town of Thompson, which owns and operates three major consolidated sanitary sewer collection and treatment systems, and three smaller sanitary sewer collection districts. The closest system to the property is the Harris Consolidated Sewer System (formerly the Cold Spring Sewer District). While this sewer district is owned, maintained, and operated by the Town of Thompson, the wastewater is transported to the Village of Monticello wastewater treatment plant. There are no municipal sewers serving the subject property and installation of municipal sewers is not an economically viable option.

The project site contains constrained land including wetlands, steep slopes, and a utility easement. As shown in the attached Site Plan in Appendix B, the majority of buildable area is allocated to the 107 residential dwelling units, associated parking, and access roads. The remaining unconstrained land is allocated to recreational facilities and stormwater management areas. There is insufficient land space to accommodate an onsite groundwater disposal system. A review of current soil conditions on site using the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey indicates that the subject property is predominantly Hydrologic Soil Group C, C/D, and D which are defined as having slow to very slow infiltration rate. The soils were further evaluated for suitability of septic absorption fields, which indicated the soils are somewhat limited to very limited. Limitations are attributed to shallow saturated zones, shallow bedrock, and restricted permeability. A copy of the USDA NRCS soil report is included in Appendix C.

Based on the infeasibility of connection to a municipal sewer system or groundwater discharge, an OWTS with surface discharge is required. The objective of this Engineering Report is to provide the basis of design, supporting calculations, and evaluations supporting the proposed OWTS. This Engineering Report referred to the following design standards and regulations:

- New York State Design Standards for Intermediate Sized Wastewater Treatment Systems (March 5, 2014).
- Recommended Standards for Wastewater Facilities, Policies for the Design, Review, and Approval of Plans and Specifications for Wastewater Collection and Treatment Systems, aka the “Ten States Standards” (2014 Edition).

1.2 Flows and Organic Load

The design wastewater flow was determined using Method 1 of the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, which uses established typical per-unit hydraulic loading rates at the maximum expected operational conditions. The 107 residential dwelling units are proposed to have 5 bedrooms each. The two pools have a combined surface area of 4,000 square feet with a maximum swimmer capacity based on the highest swimmer density contained at 10 NYCRR 6-1.29 Swimming Pool Design Standard of 15 square feet per swimmer. The community building is assumed to have a daily wastewater load similar to a shopping center or department store based on the building's gross area. The community building is for the residents of the development, which are also included in the residential dwelling bedroom hydraulic load. Average day, maximum day, and peak hourly design flows are further described in Section 3.

Table 1 – Wastewater Design Flow

Building Use	Number	Unit	Flow Rate (gpd)	Total Demand (gpd)
Residential Dwelling	535	Bedroom	110	58,850
Community Space	7,000	Square Feet	0.1	700
Pool	267	Swimmers	10	2,670
Total Daily Flow (gpd)				62,220
Safety Factor				1.2
Design Daily Flow (gpd)				75,000
Design Daily Flow (gpm)				52

The design organic load is based on the Ten States Standards Section 11.253 and an assumed population of 750 persons based on the Ten States Standards Section 11.243 sizing criteria of 100 gallons per person per day:

$$BOD_5 \left(\frac{mg}{L} \right) = 0.17 \text{ lb/person/day} \times 750 \text{ persons} / 0.075 \text{ MGD} / 8.345 = 204 \text{ mg/L}$$

$$TSS \left(\frac{mg}{L} \right) = 0.20 \text{ lb/person/day} \times 750 \text{ persons} / 0.075 \text{ MGD} / 8.345 = 240 \text{ mg/L}$$

These design loads are within the range of typical influent concentrations contained in the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems, as summarized in the following table:

Table 2 – Influent Organic Load

Parameter	Design Standard Concentration (mg/L)	Calculated Organic Load (mg/L)
BOD5	155 – 286	204
TSS	155 – 330	240

1.3 Impact on Existing Wastewater Facilities

There will be no impact on existing wastewater facilities. The proposed project includes a standalone OWTS that is not connected to any existing wastewater facility. As described in Section 1.1, the project site is not located within an established sewer district.

1.4 Project Description

The proposed project includes 107 residential dwelling units that require the collection and treatment of domestic wastewater. The proposed project also includes two 2,000 square foot pools and a 7,000 square foot community building. The project team initiated contact with the New York State Department of Environmental Conservation (NYSDEC) to obtain preliminary effluent limits for the proposed discharge location. A copy of the preliminary effluent limits are provided in Appendix D based on discharge to an intermittent stream that flows into the unnamed Class B Tributary of Tannery Brook/Sheldrake Stream/Neversink River.

1.5 Location Drawings

A Site Location Map on a United States Geological Survey quadrangle map is provided as Figure 1, and a Site Vicinity Map on an aerial image is provided as Figure 2. A Site Plan Drawing is included in Appendix B depicting the project layout and location of the proposed OWTS and discharge location.

1.6 Engineering Criteria

Raw domestic wastewater composition is based on the calculations in Section 1.2 and typical design loads contained in Section B.6 of the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems. There are no projected commercial or industrial wastewater loads to the system. Treated sanitary discharge from the OWTS must be designed to achieve the preliminary effluent limits provided in Appendix D.

1.7 Site Information

A review of the USDA NRCS Web Soil Survey indicates that the subject property is predominantly Hydrologic Soil Group C, C/D and D, which are defined as having slow to very slow infiltration rate. The soils were further evaluated for suitability of septic absorption fields, which indicated the soils are somewhat limited to very limited. Limitations are attributed to shallow saturated zones, shallow bedrock, and restricted permeability. A copy of the USDA NRCS soil report is included in Appendix C.

As shown on the Site Plan in Appendix B, the property contains Federal Wetlands subject to jurisdiction of the United States Army Corps of Engineers (USACE) and a portion of the 100-foot adjacent area to State Freshwater Wetland MO-64 subject to jurisdiction of the NYSDEC.

1.8 Alternative Selection

In accordance with Delaware River Basin Commission (DRBC) WQR Section 3.10.3.B.1.a, the discharge of treated sanitary wastewater “shall be substantially free from unsightly or malodorous nuisances due to floating solids, sludge deposits, debris, oil, scum, substances in concentrations or combinations which are toxic or harmful to human, animal, plant, or aquatic life, or that produce color, taste, odor of the water, or taint fish or shellfish flesh.” The project sponsor will retain a vendor for the design of an onsite treatment system to achieve the preliminary effluent limits. The considered alternatives include Membrane Bioreactor

(MBR), Moving Bed Biofilm Reactor (MBBR), and Sequencing Batch Reactor (SBR) systems. Based on review of the considered alternatives, an MBR system has been selected to proceed to final design. The treatment system will be capable of achieving the WQR requirement to protect stream uses, public health and groundwater quality, and prevent nuisance conditions.

1.9 Environmental Review

An application for Site Plan Review was submitted to the Town of Thompson Planning Board in March 2024. The Planning Board classified the project as Type 1 under the State Environmental Quality Review Act (SEQRA) and undertook a coordinated review as Lead Agency. The Planning Board review is ongoing and a Determination of Significance has not yet been made. A copy of the Full Environmental Assessment Form and Lead Agency Designation are included in Appendix A.

2.0 PROPOSED FACILITY PLANS

2.1 Planning and Service Area

The planning and service area includes the proposed project development described in Section 1.1 consisting of 107 five-bedroom residential dwelling units, two pools, and a community building. The OWTS will only serve the proposed project and does not include any potential future service areas.

2.2 Population Projection and Planning

The design population assumes 750 persons based on the design wastewater flow of 100 gallons per person per day. This represents 20% safety factor over the tabulated wastewater load estimated in Table 1. Therefore, the design parameters conservatively considers the predicted population.

3.0 HYDRAULIC CAPACITY

3.1 Design Average Flows

As described in Section 1.2, the daily design flow at full buildout and occupancy is 75,000 gpd using tabulated hydraulic unit loads and a 20% safety factor. This design flow is expected to exceed the daily average flow. As a conservative measure, the design average flow will be 75,000 gpd.

3.2 Design Maximum Flow

The design maximum flow applies a peaking factor of 2 to the calculated base flow of 62,220 gpd. Therefore, the design maximum flow is 124,440 gpd.

3.3 Design Peak Hourly

The design peak hourly flow is based on Figure 1 of the Ten States Standards, which identifies a peaking factor of 3.9 for a design population of 750 persons.

$$\text{Design Peak Hourly Flow} = 3.9 \times 62,220 \text{ gpd} \div 24 \text{ hr/day} = 10,110 \text{ gallons/hr}$$

3.4 Design Peak Instantaneous Flow

The design peak instantaneous flow is based on the design peak hourly flow expressed as gallons per minute.

$$\text{Design Peak Instantaneous Flow} = 10,110 \text{ gph} \div 60 \text{ min/hr} = 168 \text{ gpm}$$

3.5 Organic Load Identification and Design

The design average day, maximum day, and peak hour organic load is based on the Ten States Standards Section 11.253 and an assumed population of 750 persons. The maximum day assumes a peaking factor of 2 and the peak hour assumes a peaking factor of 4.

Table 3 – Design Organic Loads

Parameter	Per Capita Load (lb/day)	Average Day Organic Load (lb/day)	Maximum Day Organic Load (lb/day)	Peak Hour Organic Load (lb/hr)
BOD5	0.17	127.5	255	21.25
TSS	0.20	150	300	25

4.0 WASTEWATER TREATMENT SYSTEM

The system will include primary screening and flow equalization, a packaged treatment plant, and UV disinfection prior to discharge of treated effluent. The collection, conveyance, and treatment will comply with applicable code requirements and provide for proper operation and maintenance. Detailed plans and specifications will be submitted to NYSDEC for approval prior to initiating construction.

4.1 Collection and Conveyance

Sanitary wastewater will be discharged from each service connection to 8-inch diameter sewer mains for gravity flow to the OWTS.

4.2 Screening and Equalization

Flow equalization will be provided prior to the OWTS to capture variable flows for controlled release into the OWTS. Primary screening will occur prior to the flow equalization tank to remove large items. Sizing of the equalization tank is based on the NSF 40 protocol for flow distribution over a 24 hour period with 35% of the daily flow occurring from 6AM to 9AM, 25% of the flow occurring from 11AM to 2PM and 40% of the flow occurring from 5PM to 8PM. A flow analysis is included in Appendix E that indicates up to 32,000 gallons of storage is required in the equalization tank based on a design flow of 75,000 gpd and a constant treatment flow of 52 gpm. The exact size of the equalization tank will be determined in coordination with the OWTS vendor and the peak flow rate that can be accommodated through the OWTS.

4.3 Packaged MBR Plant

A packaged MBR plant will be provided that includes an anaerobic zone, anoxic zone, and aerobic zone prior to membrane filtration. Sludge will be recycled and wasted from the membrane filtration zone as

needed to maintain mixed liquor suspended solids within the treatment system. Wasted sludge will be discharged to a holding tank for offsite disposal. No onsite sludge drying is proposed.

4.4 Disinfection

Filtered effluent from the MBR plant will be disinfected with ultraviolet light prior to final discharge.

4.5 Effluent Discharge

Disinfected effluent will be conveyed by piped gravity flow to the ultimate discharge location. The discharge pipe will be equipped with a sample port for compliance testing. The OWTS will be equipped with a flow measurement device to monitor flows.

4.6 Operation & Maintenance

The OWTS will be operated by a certified wastewater treatment plant operator meeting the training requirement contained at 6 NYCRR Part 650. Prior to startup of the OWTS, the following documentation must be available onsite:

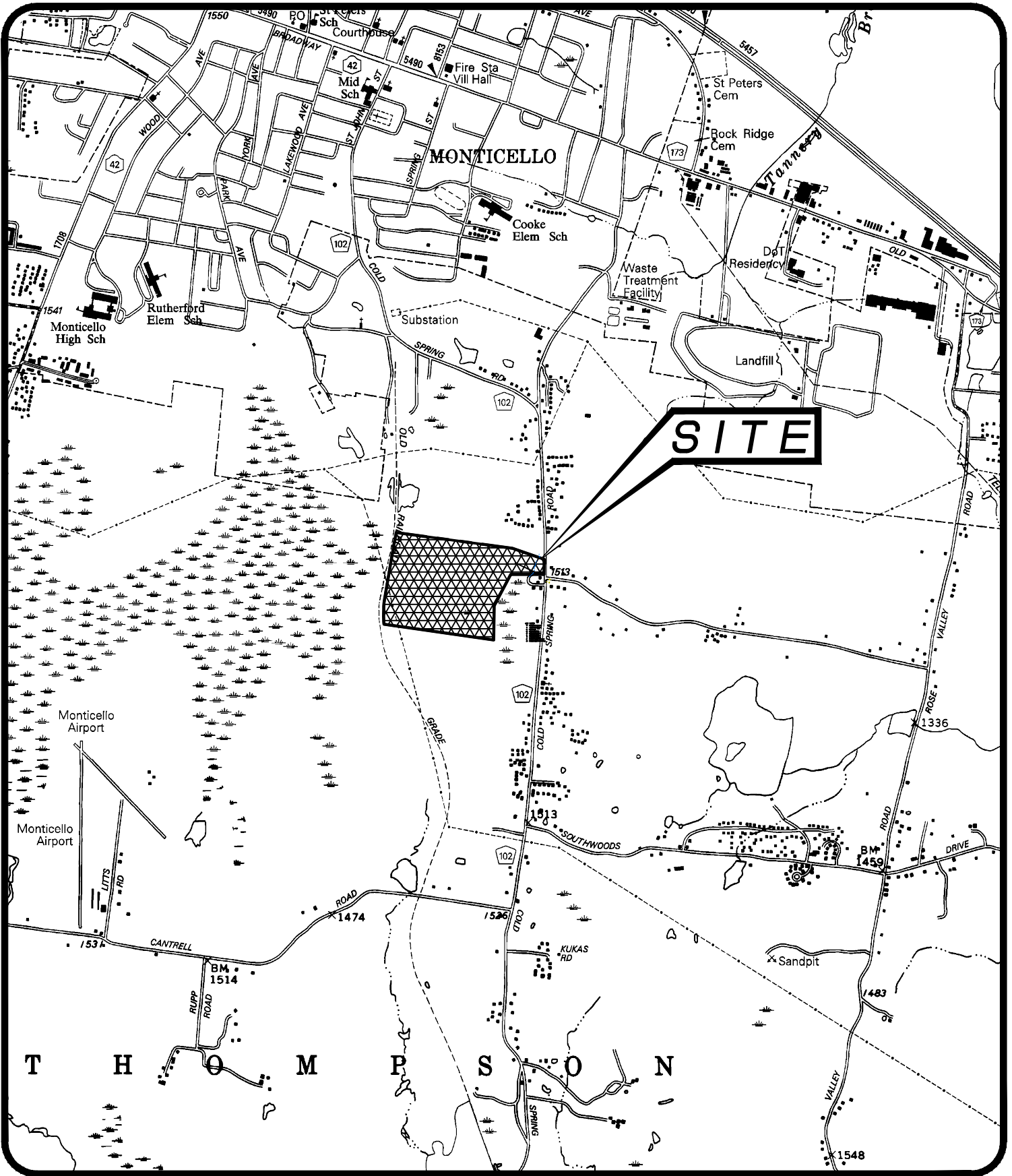
- OWTS and component Operation and Maintenance Manuals
- As-built Mechanical Drawings and Piping and Instrumentation Diagrams (P&ID).

4.7 Emergency Operation

The OWTS is not located in an area susceptible to flooding. The OWTS will be equipped with a backup powered emergency generator (e.g., propane or diesel) to allow continued operation in the event of a power outage.

FIGURES

\\sewmdc01\shared\Projects\2025 Projects\Blue Stone Estates - 2025-80\Drawings-Maps-Figures\ACAD\2025-80001 Site Conditions.dwg JADYN.BAIDOO-DAVIS 12/18/2025 9:47 AM



Sterling Environmental Engineering, P.C.
24 Wade Road • Latham, New York 12110

SITE LOCATION MAP
BLUE STONE ESTATES
COLD SPRINGS RD, PARCEL 29.-1-26.1

TOWN OF THOMPSON

SULLIVAN CO, NY

PROJ. No.: 2025-80	DATE: 12/18/2025	SCALE: 1"=2000'	DWG. NO. 202580.1	FIGURE 1
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S:\Sterling\Projects\2025 Projects\Blue Stone Estates - 2025-80\Drawings-Maps-Figures\ACAD\2025-80002 F2 Site Vicinity Map.dwg JADYN.BADDOO-DAVS 11/7/2025 12:38 PM



STERLING

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24 Wade Road • Latham, New York 12110

SITE LOCATION
BLUE STONE ESTATES
COLD SPRINGS RD, PARCEL 29.-1-26.1
TOWN OF THOMPSON SULLIVAN COUNTY, NY

PROJ. No.: 2025-80	DATE: 11/7/2025	SCALE: 1" = 200'	DWG. NO. 20258002	FIGURE 2
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APPENDIX A
FULL ENVIRONMENTAL ASSESSMENT FORM
&
LEAD AGENCY DESIGNATION

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Blue Stone Estates		
Project Location (describe, and attach a general location map): Cold Spring Road, Town of Thompson, Sullivan County		
Brief Description of Proposed Action (include purpose or need): Proposed Bungalow Colony consisting of fifty-three (53) two-unit bungalows, for a total unit count of 106 units, plus one (1) caretaker unit. The project will be served by a proposed onsite public water system (PWS) and wastewater treatment plant (WWTP). A proposed sewer outfall (Outfall 001) has been designated at the proposed discharge to the existing unnamed class B stream that outlets from NYSDEC Freshwater Wetland MO-64 as it crosses through the project site. The proposed water and sewer facilities will have a design flow rate of approximately 75,000 gallons per day (gpd). The site will access Cold Spring Road via a proposed access drive in the general vicinity of the existing woods road/driveway. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared to address the water quality (treatment) and quantity (detention) requirements as per the NYSDEC Construction General Permit (CGP).		
Name of Applicant/Sponsor: Cold Spring RD Estates, LLC	Telephone: E-Mail: yakovkasten@gmail.com	
Address: 5308 13th Avenue, Suite 164		
City/PO: Brooklyn	State: NY	Zip Code: 11219
Project Contact (if not same as sponsor; give name and title/role): JK Expediting Services (c/o Joel Kohn)	Telephone: (845) 796-9110 E-Mail: joel@jkexpediting.com	
Address: 390 Broadway - PO box 369		
City/PO: Monticello	State: NY	Zip Code: 12701
Property Owner (if not same as sponsor): Same as Sponsor	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, ☐ Yes ☐ No or Village Board of Trustees		
b. City, Town or Village ☒ Yes ☐ No Planning Board or Commission	Planning Board (Site Plan)	March 18, 2024
c. City, Town or ☐ Yes ☐ No Village Zoning Board of Appeals		
d. Other local agencies ☐ Yes ☐ No	Town	
e. County agencies ☒ Yes ☐ No	SCDPW (access)	April 2025
f. Regional agencies ☐ Yes ☐ No		
g. State agencies ☒ Yes ☐ No	NYSDOH (water, sewer); NYSDEC (water, sewer, stormwater)	January 2025; December 2024
h. Federal agencies ☐ Yes ☐ No		
i. Coastal Resources.		
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway?		☐ Yes ☒ No
ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program?		☐ Yes ☒ No
iii. Is the project site within a Coastal Erosion Hazard Area?		☐ Yes ☒ No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐ Yes ☒ No

- If Yes, complete sections C, F and G.
- If No, proceed to question C.2 and complete all remaining sections and questions in Part I

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☒ Yes ☐ No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐ Yes ☒ No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☒ Yes ☐ No

If Yes, identify the plan(s):

NYS Major Basins: Upper Delaware

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐ Yes ☒ No

If Yes, identify the plan(s):

C.3. Zoning	
a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. If Yes, what is the zoning classification(s) including any applicable overlay district? RR-1	☒ Yes ☐ No
b. Is the use permitted or allowed by a special or conditional use permit?	☒ Yes ☐ No
c. Is a zoning change requested as part of the proposed action? If Yes, i. What is the proposed new zoning for the site?	☐ Yes ☒ No
C.4. Existing community services.	
a. In what school district is the project site located?	Monticello Central School District
b. What police or other public protection forces serve the project site?	NYS Police, Sullivan County Sheriff's Office
c. Which fire protection and emergency medical services serve the project site?	Monticello Joint Fire District, Catskill Hatzolah
d. What parks serve the project site?	De Hoyos Memorial Park, Dillon Park & Pool, East Mongaup River Park, Neversink River Access

D. Project Details

D.1. Proposed and Potential Development	
a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Residential	
b. a. Total acreage of the site of the proposed action?	±60.2 acres
b. Total acreage to be physically disturbed?	±35 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?	±60.2 acres
c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☒ No	
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____	
d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☒ No	
If Yes, i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)	
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No	
iii. Number of lots proposed? _____	
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____	
e. Will the proposed action be constructed in multiple phases? ☐ Yes ☒ No	
i. If No, anticipated period of construction: _____ 24 months	
ii. If Yes:	
• Total number of phases anticipated _____	
• Anticipated commencement date of phase 1 (including demolition) _____ month _____ year	
• Anticipated completion date of final phase _____ month _____ year	
• Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____	

f. Does the project include new residential uses? ☒ Yes ☐ No				
If Yes, show numbers of units proposed.				
	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	1	53		
At completion of all phases	1	53		

g. Does the proposed action include new non-residential construction (including expansions)? ☒ Yes ☐ No	
If Yes,	
i. Total number of structures <u>1</u>	
ii. Dimensions (in feet) of largest proposed structure: <u><35'</u> height; <u>70'</u> width; and <u>100'</u> length	
iii. Approximate extent of building space to be heated or cooled: <u>7,000</u> square feet	

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☒ Yes ☐ No	
If Yes,	
i. Purpose of the impoundment: <u>Stormwater treatment & detention</u>	
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☒ Other specify: <u>Surface water runoff</u>	
iii. If other than water, identify the type of impounded/contained liquids and their source. <u>N/A</u>	
iv. Approximate size of the proposed impoundment. Volume: <u>±0.2</u> million gallons; surface area: <u>±2</u> acres	
v. Dimensions of the proposed dam or impounding structure: <u>±5</u> height; <u>±100</u> length	
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): <u>Earth fill</u>	

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☒ No	
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)	
If Yes:	
i. What is the purpose of the excavation or dredging? _____	
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?	
• Volume (specify tons or cubic yards): _____ • Over what duration of time? _____	
iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____ _____	
iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No	
If yes, describe. _____	
v. What is the total area to be dredged or excavated? _____ acres	
vi. What is the maximum area to be worked at any one time? _____ acres	
vii. What would be the maximum depth of excavation or dredging? _____ feet	
viii. Will the excavation require blasting? ☐ Yes ☐ No	
ix. Summarize site reclamation goals and plan: _____ _____ _____	

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☒ Yes ☐ No	
If Yes:	
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): <u>±3,000 s.f. stream buffer disturbance associated with proposed access drive</u> <u><0.1-acres of federal wetland disturbance associated with proposed grading & stormwater facilities.</u>	

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:
±3,000 s.f. stream buffer disturbance associated with proposed access drive
<0.1-acres of federal wetland disturbance associated with proposed grading & stormwater facilities.

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐ Yes ☒ No
 If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☒ No
 If Yes:
 • acres of aquatic vegetation proposed to be removed: _____
 • expected acreage of aquatic vegetation remaining after project completion: _____
 • purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____
 • proposed method of plant removal: _____
 • if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

c. Will the proposed action use, or create a new demand for water? ☒ Yes ☐ No
 If Yes:
 i. Total anticipated water usage/demand per day: _____ ±75,000 gallons/day
 ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☒ No
 If Yes:
 • Name of district or service area: _____
 • Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
 • Is the project site in the existing district? ☐ Yes ☐ No
 • Is expansion of the district needed? ☐ Yes ☐ No
 • Do existing lines serve the project site? ☐ Yes ☐ No
 iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☒ No
 If Yes:
 • Describe extensions or capacity expansions proposed to serve this project: _____
 • Source(s) of supply for the district: _____
 iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☒ No
 If, Yes:
 • Applicant/sponsor for new district: _____
 • Date application submitted or anticipated: _____
 • Proposed source(s) of supply for new district: _____
 v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

Proposed onsite water system

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: TBD gallons/minute.

d. Will the proposed action generate liquid wastes? ☒ Yes ☐ No
 If Yes:
 i. Total anticipated liquid waste generation per day: _____ ±75,000 gallons/day
 ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☒ No
 If Yes:
 • Name of wastewater treatment plant to be used: _____
 • Name of district: _____
 • Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
 • Is the project site in the existing district? ☐ Yes ☐ No
 • Is expansion of the district needed? ☐ Yes ☐ No

• Do existing sewer lines serve the project site? _____ • Will a line extension within an existing district be necessary to serve the project? _____ If Yes: • Describe extensions or capacity expansions proposed to serve this project: _____	☐ Yes ☐ No ☐ Yes ☐ No
iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? _____	
If Yes: • Applicant/sponsor for new district: _____ • Date application submitted or anticipated: _____ • What is the receiving water for the wastewater discharge? _____	
v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans): _____	
Proposed wastewater treatment plant (WWTP) discharging to the existing unnamed class B stream outlet from NYSDEC Freshwater Wetland MO-64 & tributary to Tannery Brook/Sheldrake Stream/Neversink River	
vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____	
N/A _____	
e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? _____	
☒ Yes ☐ No	
If Yes: i. How much impervious surface will the project create in relation to total size of project parcel? _____ _____ Square feet or _____ ±9.5 acres (impervious surface) _____ Square feet or _____ 60.2 acres (parcel size) ii. Describe types of new point sources. Roof leader discharge from proposed buildings. _____ iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)? _____	
Proposed onsite stormwater treatment & detention facilities _____	
• If to surface waters, identify receiving water bodies or wetlands: _____	
• Will stormwater runoff flow to adjacent properties? _____	
☐ Yes ☒ No	
iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? _____	
☒ Yes ☐ No	
f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? _____	
☒ Yes ☐ No	
If Yes, identify: i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles) Construction equipment, delivery vehicles ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers) Power generation iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation) HVAC, delivery vehicles	
g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? _____	
☐ Yes ☒ No	
If Yes: i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) _____ ii. In addition to emissions as calculated in the application, the project will generate: • _____ Tons/year (short tons) of Carbon Dioxide (CO₂) • _____ Tons/year (short tons) of Nitrous Oxide (N₂O) • _____ Tons/year (short tons) of Perfluorocarbons (PFCs) • _____ Tons/year (short tons) of Sulfur Hexafluoride (SF₆) • _____ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (HFCs) • _____ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)	
☐ Yes ☐ No	

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐ Yes ☒ No If Yes: i. Estimate methane generation in tons/year (metric): _____ ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____			
i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐ Yes ☒ No If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): _____			
j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐ Yes ☒ No If Yes: i. When is the peak traffic expected (Check all that apply): ☐ Morning ☐ Evening ☐ Weekend ☐ Randomly between hours of _____ to _____ ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____ iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____ iv. Does the proposed action include any shared use parking? ☐ Yes ☐ No v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: _____ vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐ Yes ☒ No vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐ Yes ☒ No viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐ Yes ☒ No			
k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐ Yes ☐ No If Yes: i. Estimate annual electricity demand during operation of the proposed action: _____ N/A (residential project) ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other): _____ N/A (residential project) iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐ Yes ☐ No			
l. Hours of operation. Answer all items which apply. <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> i. During Construction: • Monday - Friday: _____ 7:00 am - 6:00 pm • Saturday: _____ • Sunday: _____ 8:00 am - 5:00 pm • Holidays: _____ </td> <td style="width: 50%; vertical-align: top;"> ii. During Operations: • Monday - Friday: _____ 24-hr (residential) • Saturday: _____ 24-hr (residential) • Sunday: _____ 24-hr (residential) • Holidays: _____ 24-hr (residential) </td> </tr> </table>		i. During Construction: • Monday - Friday: _____ 7:00 am - 6:00 pm • Saturday: _____ • Sunday: _____ 8:00 am - 5:00 pm • Holidays: _____	ii. During Operations: • Monday - Friday: _____ 24-hr (residential) • Saturday: _____ 24-hr (residential) • Sunday: _____ 24-hr (residential) • Holidays: _____ 24-hr (residential)
i. During Construction: • Monday - Friday: _____ 7:00 am - 6:00 pm • Saturday: _____ • Sunday: _____ 8:00 am - 5:00 pm • Holidays: _____	ii. During Operations: • Monday - Friday: _____ 24-hr (residential) • Saturday: _____ 24-hr (residential) • Sunday: _____ 24-hr (residential) • Holidays: _____ 24-hr (residential)		

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☒ Yes ☐ No If yes: i. Provide details including sources, time of day and duration: Construction equipment during work hours. _____	
ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☒ Yes ☐ No Describe: <u>Existing vegetation along the property lines will be maintained to the maximum extent possible. Supplemental landscaping (trees, shrubs) is proposed within the site.</u>	
n. Will the proposed action have outdoor lighting? ☒ Yes ☐ No If yes: i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures: <u>Dark sky compliant lighting. Typical residential exterior doorway lighting.</u>	
ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☒ Yes ☐ No Describe: <u>Existing vegetation along the property lines will be maintained to the maximum extent possible. Supplemental landscaping (trees, shrubs) is proposed within the site.</u>	
o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☒ No If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____ _____ _____	
p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☒ No If Yes: i. Product(s) to be stored _____ ii. Volume(s) _____ per unit time _____ (e.g., month, year) iii. Generally, describe the proposed storage facilities: _____ _____	
q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☒ No If Yes: i. Describe proposed treatment(s): _____ _____ _____	
ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No	
r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☒ Yes ☐ No If Yes: i. Describe any solid waste(s) to be generated during construction or operation of the facility: • Construction: _____ 120 tons per _____ Construction Period (unit of time) • Operation : _____ 90 tons per _____ Year (unit of time) ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste: • Construction: <u>Effort will be made to recycle materials that can be recycled.</u> _____ • Operation: <u>Effort will be made to recycle materials that can be recycled.</u> _____ iii. Proposed disposal methods/facilities for solid waste generated on-site: • Construction: <u>Sullivan County Landfill</u> _____ • Operation: <u>Sullivan County Landfill</u> _____	

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☒ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☒ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: _____

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☐ Urban ☐ Industrial ☒ Commercial ☒ Residential (suburban) ☐ Rural (non-farm)

☒ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe: _____

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0.6	9.9	+9.3
• Forested	52.1	20.2	-31.9
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	5.0	2.7	-2.3
• Agricultural (includes active orchards, field, greenhouse etc.)	-	-	-
• Surface water features (lakes, ponds, streams, rivers, etc.)	-	-	-
• Wetlands (freshwater or tidal)	2.2	2.1	-0.1
• Non-vegetated (bare rock, earth or fill)	-	-	-
• Other Describe: <u>Grass / Lawn</u>	0.3	25.3	+25.0

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☒ No i. If Yes: explain: _____	
d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☒ No If Yes, i. Identify Facilities: _____ _____	
e. Does the project site contain an existing dam? ☐ Yes ☒ No If Yes: i. Dimensions of the dam and impoundment: • Dam height: _____ feet • Dam length: _____ feet • Surface area: _____ acres • Volume impounded: _____ gallons OR acre-feet ii. Dam's existing hazard classification: _____ iii. Provide date and summarize results of last inspection: _____ _____	
f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☒ No If Yes: i. Has the facility been formally closed? ☐ Yes ☐ No • If yes, cite sources/documentation: _____ ii. Describe the location of the project site relative to the boundaries of the solid waste management facility: _____ _____ iii. Describe any development constraints due to the prior solid waste activities: _____ _____	
g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☒ No If Yes: i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred: _____ _____	
h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☒ No If Yes: i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No ☐ Yes – Spills Incidents database ☐ Yes – Environmental Site Remediation database ☐ Neither database Provide DEC ID number(s): _____ Provide DEC ID number(s): _____ ii. If site has been subject of RCRA corrective activities, describe control measures: _____ _____ iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☒ No If yes, provide DEC ID number(s): _____ iv. If yes to (i), (ii) or (iii) above, describe current status of site(s): _____ _____	

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? _____ >5 feet

b. Are there bedrock outcroppings on the project site? ☒ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ ±1 %

c. Predominant soil type(s) present on project site:

Arnot-Oquaga complex	_____	50 %
Wellsboro & Wurtsboro soils	_____	35 %
Neversink loam	_____	13 %

d. What is the average depth to the water table on the project site? Average: _____ >5 feet

e. Drainage status of project site soils: ☒ Well Drained: _____ 50 % of site
☒ Moderately Well Drained: _____ 35 % of site
☒ Poorly Drained _____ 15 % of site

f. Approximate proportion of proposed action site with slopes: ☒ 0-10%: _____ 54 % of site
☒ 10-15%: _____ 20 % of site
☒ 15% or greater: _____ 26 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☒ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☒ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☒ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☒ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, NYS Wetland, Federal Waters Approximate Size NYS Wetland (in a...)
- Wetland No. (if regulated by DEC) MO-64 _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☒ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☒ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☒ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☒ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☒ Yes ☐ No

If Yes:

i. Name of aquifer: Principal Aquifer _____

m. Identify the predominant wildlife species that occupy or use the project site: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border-bottom: 1px solid black;">Whitetailed deer</td> <td style="width: 33%; border-bottom: 1px solid black;">Grey squirrel</td> <td style="width: 33%; border-bottom: 1px solid black;">Raccoon</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Black bear</td> <td style="border-bottom: 1px solid black;">Eastern chipmunk</td> <td style="border-bottom: 1px solid black;">Opossum</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Field Mouse</td> <td style="border-bottom: 1px solid black;">Various birds</td> <td style="border-bottom: 1px solid black;">Various amphibians</td> </tr> </table>			Whitetailed deer	Grey squirrel	Raccoon	Black bear	Eastern chipmunk	Opossum	Field Mouse	Various birds	Various amphibians
Whitetailed deer	Grey squirrel	Raccoon									
Black bear	Eastern chipmunk	Opossum									
Field Mouse	Various birds	Various amphibians									
n. Does the project site contain a designated significant natural community? ☐ Yes ☒ No If Yes: i. Describe the habitat/community (composition, function, and basis for designation): _____ ii. Source(s) of description or evaluation: _____ iii. Extent of community/habitat: • Currently: _____ acres • Following completion of project as proposed: _____ acres • Gain or loss (indicate + or -): _____ acres											
o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☒ No If Yes: i. Species and listing (endangered or threatened): _____ _____ _____											
p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☒ No If Yes: i. Species and listing: _____ _____											
q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☒ No If yes, give a brief description of how the proposed action may affect that use: _____ _____											
E.3. Designated Public Resources On or Near Project Site											
a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☒ No If Yes, provide county plus district name/number: _____											
b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☒ No i. If Yes: acreage(s) on project site? _____ ii. Source(s) of soil rating(s): _____											
c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☒ No If Yes: i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____ _____ _____											
d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☒ No If Yes: i. CEA name: _____ ii. Basis for designation: _____ iii. Designating agency and date: _____											

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☒ Yes ☐ No	
If Yes: i. Nature of historic/archaeological resource: ☐ Archaeological Site ☒ Historic Building or District	
ii. Name: <u>Chevra Abavat Zion Synagogue (USN: 10514.000073)</u>	
iii. Brief description of attributes on which listing is based: <u>NYS Cultural Resource Information System (CRIS) Mapper - resource located ±600' SE of project site.</u>	
f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☒ No	
g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☒ No	
If Yes: i. Describe possible resource(s): _____ ii. Basis for identification: _____	
h. Is the project site within five miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☒ No	
If Yes: i. Identify resource: _____ ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____ iii. Distance between project and resource: _____ miles.	
i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☒ No	
If Yes: i. Identify the name of the river and its designation: _____ ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No	

F. Additional Information

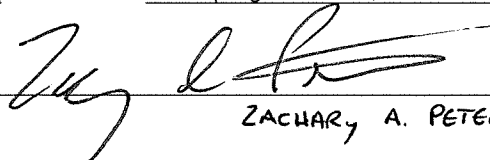
Attach any additional information which may be needed to clarify your project.

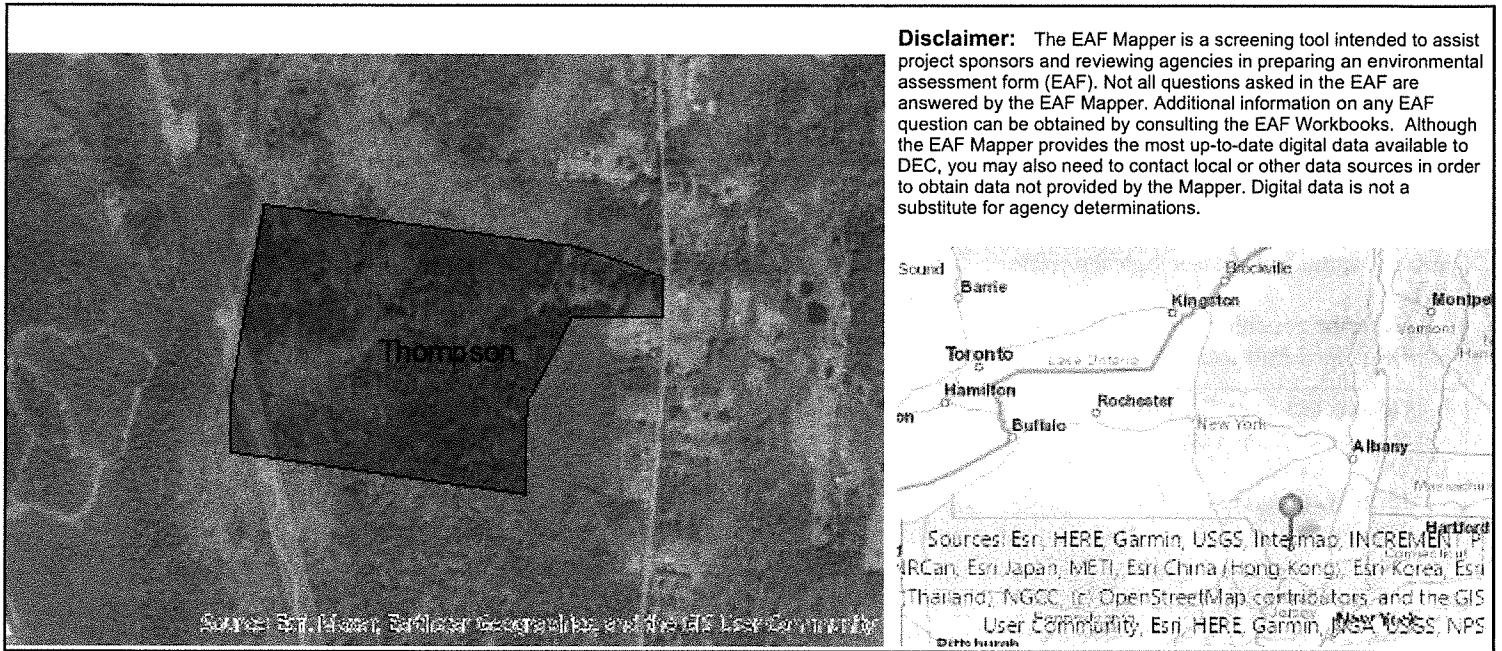
If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

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

Applicant/Sponsor Name Cold Spring Rd Estates, LLC Date March 24, 2025

Signature  Title Project Engineer
ZACHARY A. PETERS



B.i.i [Coastal or Waterfront Area]	No
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Major Basins:Upper Delaware
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):17.1
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	MO-64
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	No

E.2.R. [Soil Fertility Occupancy]	No
E.2.I. [Aquifers]	Yes
E.2.I. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	No
E.2.o. [Endangered or Threatened Species]	No
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No

COLD SPRING RD ESTATES, LLC
BLUE STONE ESTATES SITE PLAN
LEAD AGENCY DESIGNATION

The Town of Thompson Planning Board has received an application from the applicant dated March 18, 2024, NYS Full Environmental Assessment Form Part ,1 last revised March 20, 2025, and Project Plans, last revised March 19, 2025, and is reviewing the above-proposed request for Site Plan Approval for property located off Cold Spring Road. The project site being more particularly defined and designated upon the Town of Thompson Tax Roll as the following tax map parcel:

- Section 29, Block 1, Lot 26.1

The project involves the development of a Bungalow Colony at the site.

A tentative determination that the project is a Type 1 Action has been made for the project.

Please take note that within thirty (30) days of the date that this document is mailed to you, a Lead Agency for this project must be designated by agreement among the interested and involved agencies.

Under the applicable standards of Title 5 NYCRR Section 617.6(b), the Town of Thompson Planning Board concludes that it is the appropriate agency to serve as Lead Agency in the environmental review of the proposed action.

This notification is being sent to interested and involved agencies with the request that you consent to the Town of Thompson Planning Board serving as Lead Agency. In the event that you, as an interested or involved agency, do not agree with the Planning Board's designation as Lead Agency, you may follow procedures outlined in NYCRR 617.6(b) (5).

If you have any questions or comments, please contact Chair Kathleen Lara of the Town Planning Board, Town of Thompson, 4052 Route 42 N, Monticello, New York 12701; (845) 794-2500.

This notice is being mailed on March 26, 2025. Your agreement or disagreement with the Town Planning Board serving as Lead Agency is requested on or before April 26, 2025. Please send your response to Chair Kathleen Lara of the Town of Thompson Planning Board, at the above address.

If no response is received from your agency within thirty (30) days, it will be assumed that you are in agreement with the designation of the Town Planning Board as Lead Agency. You will continue to be notified of SEQR determinations and hearings and copies of all environmental documents will be made available to you.

Thank you for your cooperation.

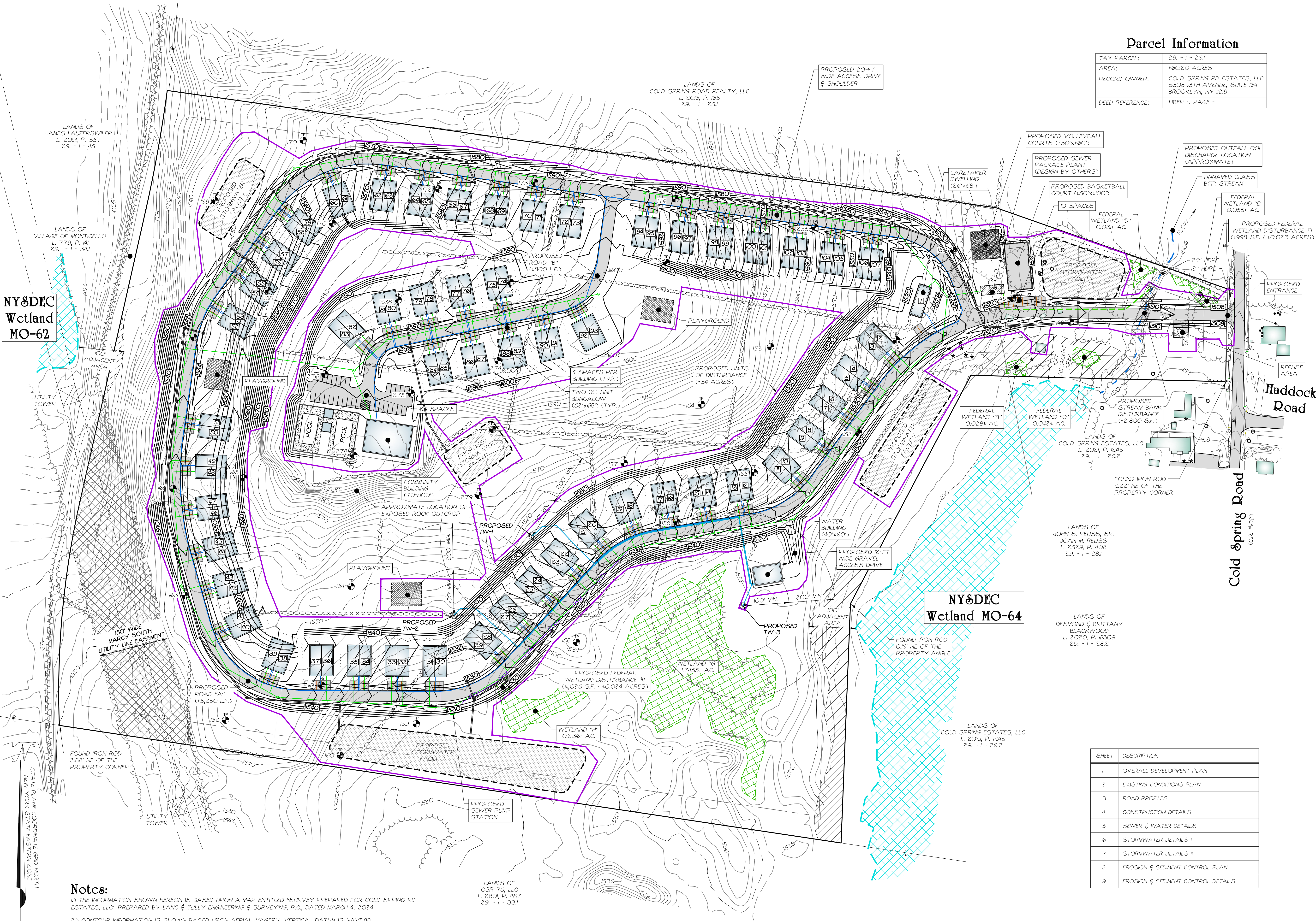
Town of Thompson Planning Board
Chair Kathleen Lara

Attachments:

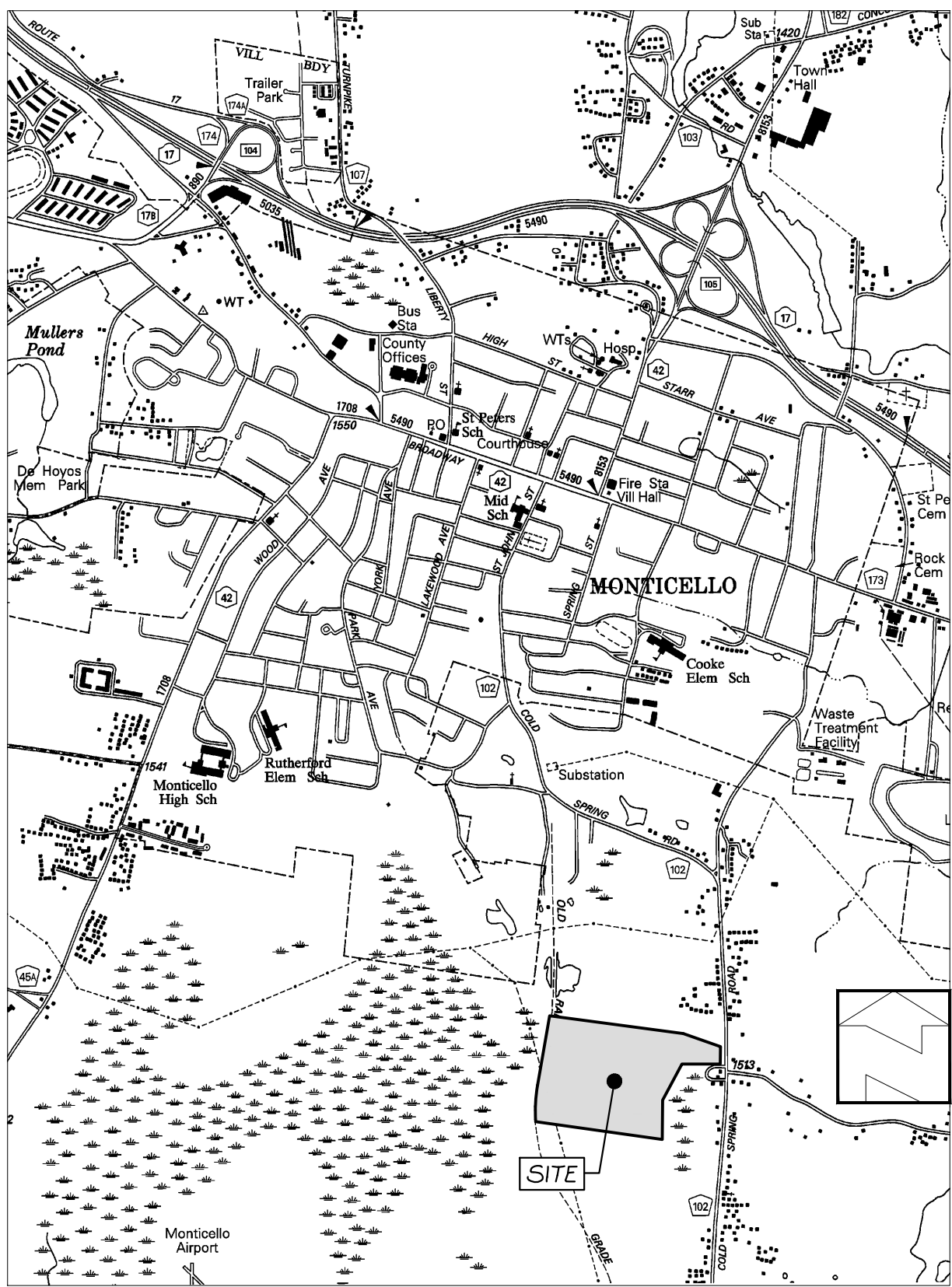
1. Project Site Plan
2. Full Environmental Assessment Form (EAF), Part 1

APPENDIX B

SITE PLAN DRAWING



Parcel Information	
TAX PARCEL:	29. - 1 - 261
AREA:	±60.20 ACRES
RECORD OWNER:	COLD SPRING RD ESTATES, LLC 5308 13TH AVENUE, SUITE 104 BROOKLYN, NY 11219
DEED REFERENCE:	LIBER -, PAGE -



Location Map
SCALE: 1" = 2,000'

Zoning Legend: RR-1

BUNGALOW COLONY	REQUIRED	PROVIDED
MINIMUM LOT AREA	10 ACRES	60.2 ACRES
MINIMUM LOT WIDTH (1)	400'	±217'
MINIMUM LOT DEPTH	400'	±2,362'
MINIMUM FRONT YARD	100'	±643'
MINIMUM REAR YARD	50'	±182'
MINIMUM SIDE YARD (ONE)	50'	±125'
MINIMUM SIDE YARD (BOTH)	100'	±203'
MINIMUM HABITABLE FLOOR AREA	600 S.F. / UNIT	600 S.F. / UNIT
MAXIMUM DENSITY PER ACRE	2.0	2.0
MAXIMUM LOT COVERAGE (2)	10%	±7.5%
MAXIMUM BUILDING HEIGHT	35'	<35'

- (1) LOT WIDTH MEASURED AT THE FRONT SETBACK LINE.
(2) LOT COVERAGE DEFINED AS THE PERCENTAGE OF THE AREA OF THE LOT COVERED BY A BUILDING OR BUILDINGS.

Density Calculations:

GROSS AREA	60.20 ACRES	
R.O.W.	2.10 ACRES	6.39 ACRES
WATERBODIES	0.11 ACRES	
WETLAND	4.15 ACRES	
NET AREA	53.81 ACRES	
MAXIMUM PERMITTED DENSITY	107 UNITS	

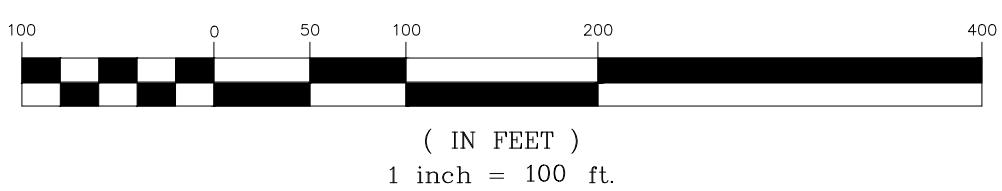
- (1) MAXIMUM PERMITTED DENSITY BASED UPON 2.0 UNITS PER ACRE OF GROSS LOT AREA, EXCLUDING LANDS UNDERWATER, WETLANDS, RIGHTS-OF-WAY, OR EASEMENTS.

Notes:

- THE INFORMATION SHOWN HEREON IS BASED UPON A MAP ENTITLED "SURVEY PREPARED FOR COLD SPRING RD ESTATES, LLC" PREPARED BY LANC & TULLY ENGINEERING & SURVEYING, P.C., DATED MARCH 4, 2024.
- CONTOUR INFORMATION IS SHOWN BASED UPON AERIAL IMAGERY. VERTICAL DATUM IS NAVD88.
- LIMITS OF STATE- AND FEDERAL WETLANDS BASED UPON A DELINEATION COMPLETED BY ECOLOGICAL ANALYSIS ON NOVEMBER 23, 2023.
- THE DELINEATED BOUNDARY OF NYSDEC WETLAND MO-64 WAS VALIDATED BY MICHAEL FRAATZ, OF THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) ON FEBRUARY 14, 2024.
- THE PROPOSED PROJECT INVOLVES THE CONSTRUCTION OF FIFTY-THREE (53) 2-UNIT BUILDINGS, FOR A TOTAL UNIT COUNT OF ONE-HUNDRED SIX (106) UNITS, PLUS ONE (1) CARETAKER UNIT.
- THE TOTAL PROPOSED DISTURBANCE IS APPROXIMATELY 34-ACRES.
- THE TOTAL PROPOSED FEDERAL WETLAND DISTURBANCE IS APPROXIMATELY 0.09-ACRES.



GRAPHIC SCALE



"UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S EMBOSSED SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW."
"ONLY COPIES FROM THE ORIGINAL TRACING OF THIS SURVEY MAP MARKED WITH THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED VALID, TRUE COPIES."
"CERTIFICATIONS INDICATED HEREON SIGNIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE EXISTING CODE OF PRACTICE FOR LAND SURVEYORS ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS. SAID CERTIFICATIONS SHALL RUN ONLY TO THOSE NAMED INDIVIDUALS AND/OR INSTITUTIONS FOR WHOM THE SURVEY WAS PREPARED. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INDIVIDUALS, INSTITUTIONS, THEIR SUCCESSORS AND/OR ASSIGNS, OR SUBSEQUENT OWNERS."

NO.	DATE	REVISION	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			

Overall Development Plan
for
Blue Stone Estates



THIS MAP IS INCOMPLETE AND INVALID WITHOUT ALL SHEETS IN THE PLAN SET.
TAX MAP PARCEL:
29. - 1 - 261
TOWN OF THOMPSON
COUNTY OF SULLIVAN
STATE OF NEW YORK
DRAFTED BY: ZAP
DATE: AUGUST 24, 2023
PROJECT: 4983
SHEET:
1 / x

APPENDIX C

USDA NRCS SOIL MAP



United States
Department of
Agriculture

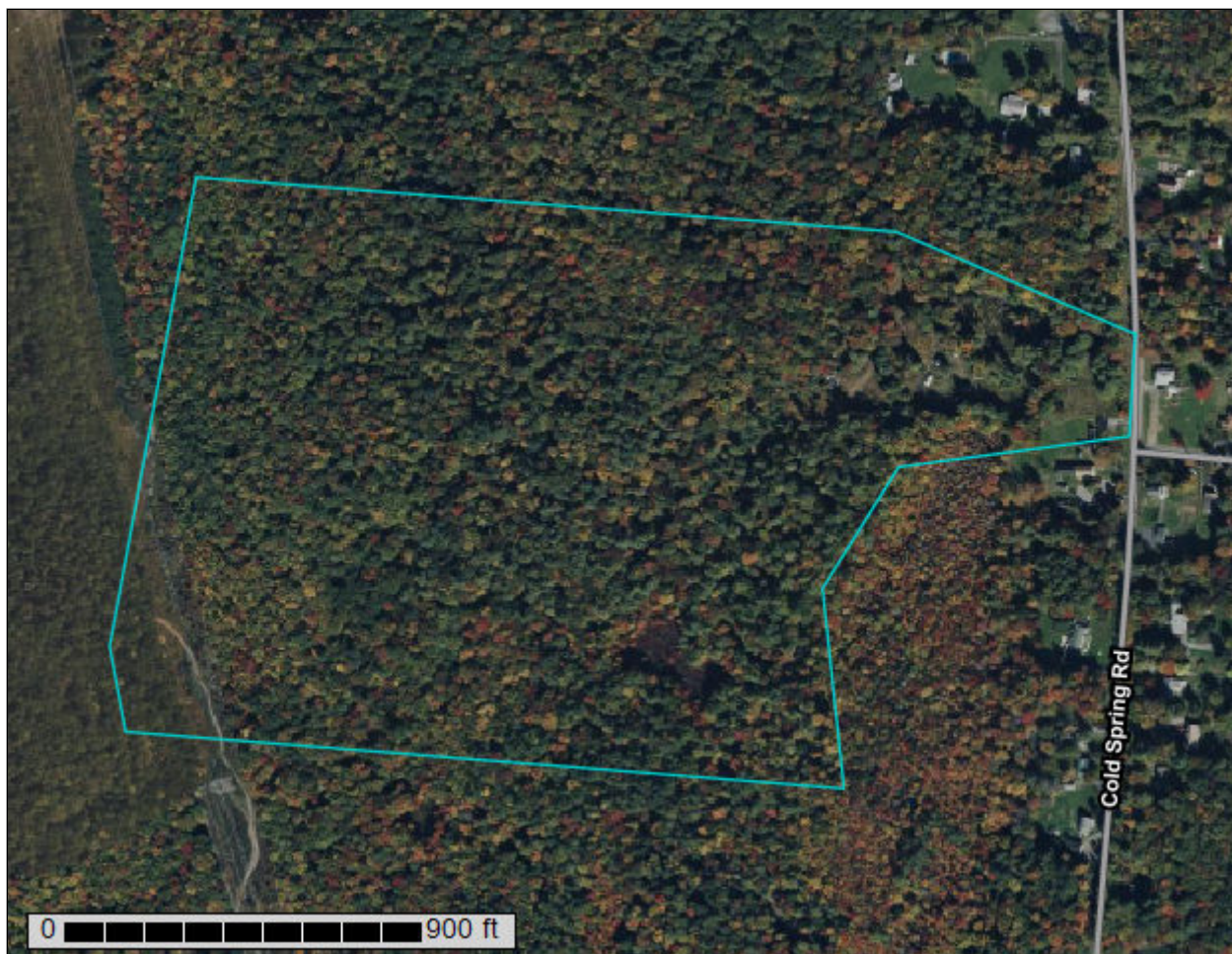
NRCS

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**

Blue Stone Estates LLC



November 5, 2025

Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

scientists classified and named the soils in the survey area, they compared the 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

Custom Soil Resource Report

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



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
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 24, Aug 27, 2025

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

Date(s) aerial images were photographed: May 31, 2022—Oct 27, 2022

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AoC	Arnot-Oquaga complex, 0 to 15 percent slopes, very rocky	17.8	27.4%
AoE	Arnot-Oquaga complex, 15 to 35 percent slopes, very rocky	13.2	20.4%
Ca	Carlisle muck	0.2	0.4%
Ne	Neversink loam	10.2	15.8%
Pa	Palms muck	0.1	0.1%
WIC	Wellsboro and Wurtsboro soils, strongly sloping, extremely stony	22.2	34.2%
WuA	Wurtsboro loam, 0 to 3 percent slopes, stony	1.1	1.7%
Totals for Area of Interest		64.9	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

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

Map Unit Setting

National map unit symbol: 2xp98
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Arnot, very stony, and similar soils: 45 percent
Oquaga and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arnot, Very Stony

Setting

Landform: Mountains, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Mountaintop, mountainflank, interfluve, nose slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Loamy till derived mainly from acid sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery loam
Bw1 - 3 to 12 inches: very channery loam
Bw2 - 12 to 17 inches: very channery loam
2R - 17 to 27 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.0 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): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: F140XY023NY - Shallow Till Uplands

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Hydric soil rating: No

Description of Oquaga

Setting

Landform: Mountains, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Mountaintop, upper third of mountainflank, interfluvium, nose slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Reddish loamy till derived from sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 5 inches: very channery highly organic silt loam

Bw1 - 5 to 15 inches: very channery silt loam

Bw2 - 15 to 24 inches: very channery silt loam

C - 24 to 30 inches: extremely channery loam

2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent

Surface area covered with cobbles, stones or boulders: 0.0 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): Moderately low to moderately high (0.14 to 1.42 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: F140XY027NY - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Wellsboro, very stony

Percent of map unit: 5 percent

Landform: Mountains, hills

Landform position (two-dimensional): Summit, shoulder

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

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Mountains, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Custom Soil Resource Report

Landform position (three-dimensional): Mountaintop, mountainflank, nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Tuller, somewhat poorly drained

Percent of map unit: 3 percent
Landform: Hills, benches, ridges
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cadosia, very stony

Percent of map unit: 2 percent
Landform: Ridges
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2xp99
Elevation: 330 to 2,460 feet
Mean annual precipitation: 31 to 70 inches
Mean annual air temperature: 39 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Arnot, extremely stony, and similar soils: 50 percent
Oquaga, very stony, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Arnot, Extremely Stony

Setting

Landform: Mountains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank, nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear

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

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: channery loam
Bw1 - 3 to 12 inches: very channery loam
Bw2 - 12 to 17 inches: very channery loam
2R - 17 to 27 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 7.0 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): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F140XY023NY - Shallow Till Uplands
Hydric soil rating: No

Description of Oquaga, Very Stony

Setting

Landform: Mountains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Upper third of mountainflank, nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Reddish loamy till derived from sandstone, siltstone, and shale

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 5 inches: very channery highly organic silt loam
Bw1 - 5 to 15 inches: very channery silt loam
Bw2 - 15 to 24 inches: very channery silt loam
C - 24 to 30 inches: extremely channery loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 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): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Ecological site: F140XY027NY - Well Drained Till Uplands

Hydric soil rating: No

Minor Components

Cadosia, extremely stony

Percent of map unit: 10 percent

Landform: Ridges

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Landform: Mountains, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Mountaintop, mountainflank, nose slope, side slope, crest

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Ca—Carlisle muck

Map Unit Setting

National map unit symbol: 9x0v

Elevation: 250 to 1,000 feet

Mean annual precipitation: 41 to 51 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 115 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Carlisle and similar soils: 85 percent

Minor components: 15 percent

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

Description of Carlisle

Setting

Landform: Marshes, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Deep organic material

Typical profile

H1 - 0 to 60 inches: muck

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 5.95 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F140XY011NY - Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Palms

Percent of map unit: 5 percent
Landform: Swamps, marshes
Hydric soil rating: Yes

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Neversink

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Alden

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

Red hook

Percent of map unit: 1 percent
Hydric soil rating: No

Ne—Neversink loam

Map Unit Setting

National map unit symbol: 9x26
Elevation: 330 to 2,460 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

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

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
H1 - 2 to 7 inches: loam
H2 - 7 to 23 inches: gravelly loam
H3 - 23 to 60 inches: gravelly sandy loam

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 supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Ecological site: F140XY016NY - Mineral Wetlands
Hydric soil rating: Yes

Minor Components

Alden

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Scriba

Percent of map unit: 5 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 4 percent

Landform: Depressions

Hydric soil rating: Yes

Wallington

Percent of map unit: 3 percent

Hydric soil rating: No

Wellsboro

Percent of map unit: 1 percent

Hydric soil rating: No

Morris

Percent of map unit: 1 percent

Hydric soil rating: No

Wurtsboro

Percent of map unit: 1 percent

Hydric soil rating: No

Pa—Palms muck

Map Unit Setting

National map unit symbol: 9x2n

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

Farmland classification: Not prime farmland

Map Unit Composition

Palms and similar soils: 85 percent

Minor components: 15 percent

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

Description of Palms

Setting

Landform: Marshes, swamps

Landform position (two-dimensional): Toeslope

Custom Soil Resource Report

Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material over loamy glacial drift

Typical profile

H1 - 0 to 12 inches: muck
H2 - 12 to 22 inches: muck
H3 - 22 to 60 inches: loam

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: Frequent
Calcium carbonate, maximum content: 20 percent
Available water supply, 0 to 60 inches: Very high (about 15.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F140XY011NY - Rich Organic Wetlands
Hydric soil rating: Yes

Minor Components

Alden

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

Carlisle

Percent of map unit: 5 percent
Landform: Marshes, swamps
Hydric soil rating: Yes

Wayland

Percent of map unit: 3 percent
Landform: Flood plains
Hydric soil rating: Yes

Neversink

Percent of map unit: 2 percent
Landform: Depressions
Hydric soil rating: Yes

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

Map Unit Setting

National map unit symbol: 9x46
Elevation: 330 to 2,460 feet
Mean annual precipitation: 41 to 51 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 115 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Wellsboro, extremely stony, and similar soils: 41 percent
Wurtsboro, extremely stony, and similar soils: 39 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wellsboro, Extremely Stony

Setting

Landform: Till plains, hills, drumlinoid ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till derived mainly from reddish sandstone, siltstone, and shale

Typical profile

H1 - 0 to 7 inches: gravelly loam
H2 - 7 to 23 inches: gravelly loam
H3 - 23 to 60 inches: gravelly loam

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 supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F140XY024NY - Moist Dense Till
Hydric soil rating: No

Description of Wurtsboro, Extremely Stony

Setting

Landform: Till plains, hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from acid quartzite, conglomerate, and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

H1 - 2 to 4 inches: loam

H2 - 4 to 28 inches: loam

H3 - 28 to 60 inches: gravelly fine sandy loam

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 supply, 0 to 60 inches: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C/D

Ecological site: F140XY024NY - Moist Dense Till

Hydric soil rating: No

Minor Components

Scriba

Percent of map unit: 5 percent

Hydric soil rating: No

Swartswood

Percent of map unit: 5 percent

Hydric soil rating: No

Lackawanna

Percent of map unit: 3 percent

Hydric soil rating: No

Morris

Percent of map unit: 3 percent

Hydric soil rating: No

Oquaga

Percent of map unit: 2 percent

Hydric soil rating: No

Lordstown

Percent of map unit: 2 percent

Hydric soil rating: No

WuA—Wurtsboro loam, 0 to 3 percent slopes, stony

Map Unit Setting

National map unit symbol: 9x4c

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

Farmland classification: Farmland of statewide importance

Map Unit Composition

Wurtsboro, stony, and similar soils: 85 percent

Minor components: 15 percent

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

Description of Wurtsboro, Stony

Setting

Landform: Till plains, hills

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Crest

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till derived mainly from acid quartzite, conglomerate, and sandstone

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

H1 - 2 to 4 inches: loam

H2 - 4 to 28 inches: loam

H3 - 28 to 60 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 3 percent

Surface area covered with cobbles, stones or boulders: 0.1 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 supply, 0 to 60 inches: Low (about 3.8 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: C/D

Ecological site: F140XY024NY - Moist Dense Till

Hydric soil rating: No

Minor Components

Swartswood

Percent of map unit: 5 percent

Hydric soil rating: No

Scriba

Percent of map unit: 5 percent

Hydric soil rating: No

Lackawanna

Percent of map unit: 2 percent

Hydric soil rating: No

Morris

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 1 percent

Hydric soil rating: No

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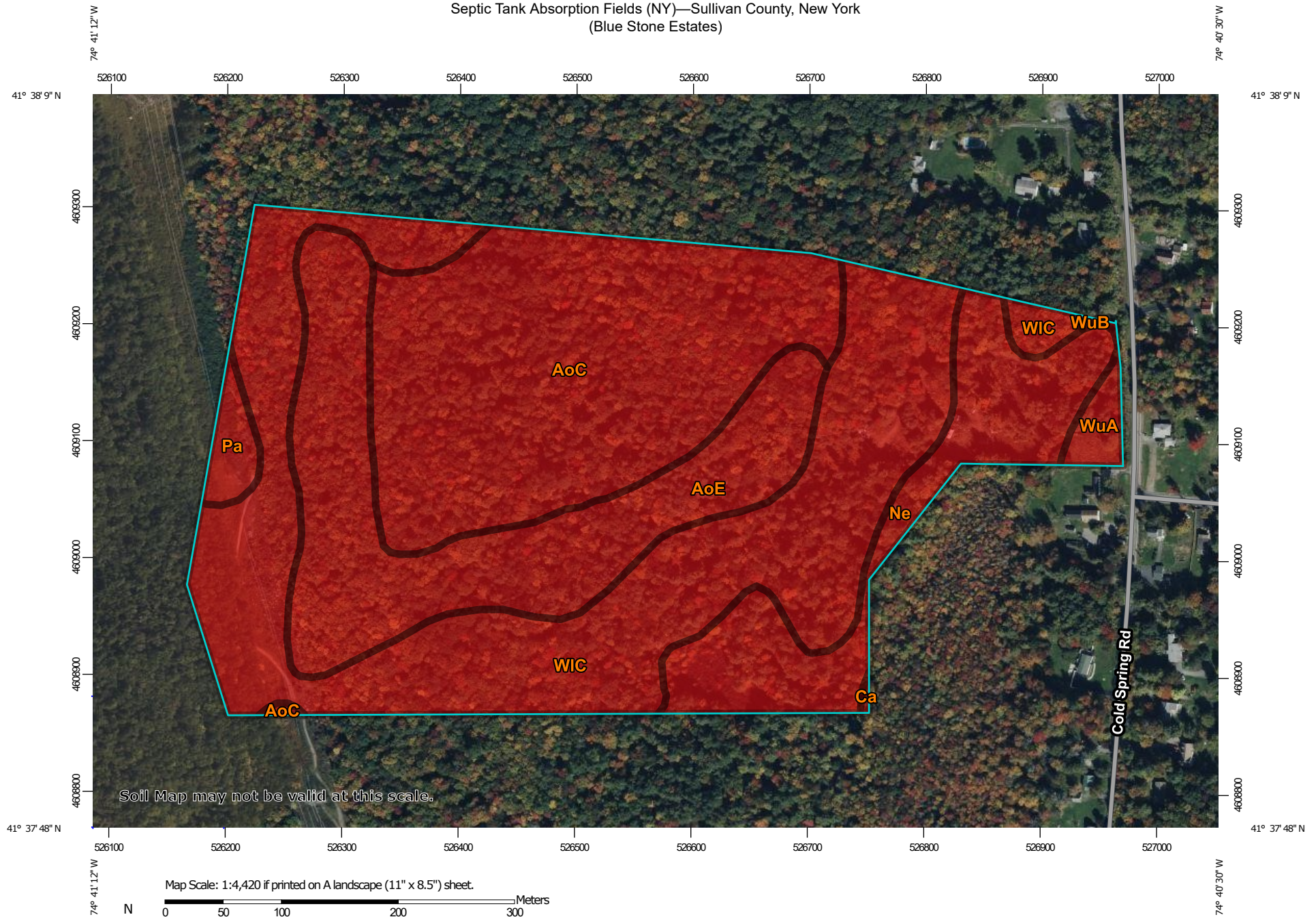
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Septic Tank Absorption Fields (NY)—Sullivan County, New York (Blue Stone Estates)



Soil Map may not be valid at this scale.

Map Scale: 1:4,420 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 200 400 800 1200 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

11/21/2025
Page 1 of 7

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Background

 Aerial Photography

Soils

Soil Rating Polygons

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Soil Rating Lines

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Soil Rating Points

-  Very limited
-  Somewhat limited
-  Not limited
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

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

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
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 24, Aug 27, 2025

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

Date(s) aerial images were photographed: May 31, 2022—Oct 27, 2022

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.

Septic Tank Absorption Fields (NY)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
AoC	Arnot-Oquaga complex, 0 to 15 percent slopes, very rocky	Very limited	Arnot, very stony (45%)	Depth to bedrock (1.00)	19.6	29.6%
				Surface rock fragments (0.60)		
				Slope (0.20)		
				Restricted permeability (0.20)		
			Tuller, somewhat poorly drained (3%)	Depth to bedrock (1.00)		
				Depth to saturated zone (1.00)		
				Restricted permeability (0.99)		
			Cadosia, very stony (2%)	Slope (1.00)		
				Surface rock fragments (0.30)		
				Restricted permeability (0.20)		
				Content of large stones (0.13)		
AoE	Arnot-Oquaga complex, 15 to 35 percent slopes, very rocky	Very limited	Arnot, extremely stony (50%)	Depth to bedrock (1.00)	13.5	20.4%
				Slope (1.00)		
				Surface rock fragments (0.80)		
				Restricted permeability (0.20)		
			Oquaga, very stony (35%)	Slope (1.00)		
				Depth to bedrock (0.75)		
				Surface rock fragments (0.60)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Restricted permeability (0.20)		
				Content of large stones (0.04)		
			Cadosia, extremely stony (10%)	Slope (1.00)		
				Surface rock fragments (0.40)		
				Restricted permeability (0.20)		
				Content of large stones (0.13)		
Ca	Carlisle muck	Very limited	Carlisle (85%)	Depth to saturated zone (1.00)	0.0	0.1%
				Ponding (1.00)		
Ne	Neversink loam	Very limited	Neversink (80%)	Depth to saturated zone (1.00)	7.5	11.4%
				Restricted permeability (1.00)		
Pa	Palms muck	Very limited	Palms (85%)	Depth to saturated zone (1.00)	0.9	1.4%
				Ponding (1.00)		
				Restricted permeability (0.35)		
WIC	Wellsboro and Wurtsboro soils, strongly sloping, extremely stony	Very limited	Wellsboro, extremely stony (41%)	Depth to saturated zone (1.00)	23.8	35.9%
				Depth to dense material (0.95)		
				Surface rock fragments (0.80)		
				Restricted permeability (0.31)		
				Slope (0.20)		
			Wurtsboro, extremely stony (39%)	Depth to saturated zone (1.00)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Surface rock fragments (0.80)		
				Depth to dense material (0.76)		
				Restricted permeability (0.31)		
				Slope (0.20)		
WuA	Wurtsboro loam, 0 to 3 percent slopes, stony	Very limited	Wurtsboro, stony (85%)	Depth to saturated zone (1.00)	0.8	1.1%
				Depth to dense material (0.76)		
				Restricted permeability (0.31)		
WuB	Wurtsboro loam, 3 to 8 percent slopes, stony	Very limited	Wurtsboro, stony (85%)	Depth to saturated zone (1.00)	0.1	0.1%
				Depth to dense material (0.76)		
				Restricted permeability (0.31)		
Totals for Area of Interest					66.2	100.0%

Rating	Acres in AOI	Percent of AOI
Very limited	66.2	100.0%
Totals for Area of Interest	66.2	100.0%

Description

Septic tank absorption fields are subsurface systems of perforated pipe or similar devices that distribute effluent from a septic tank into the soil. New York State Department of Health regulations allow installation of septic system absorption fields of varying designs, depending upon the depth of suitable soil material above any limitation in the natural soil at a site (New York State Department of Health, 1990). Where necessary, imported fill material may be used to elevate absorption trenches to at least the minimum distance of 24 inches above limiting soil horizons. The depth ranges of suitable material and corresponding types of absorption systems allowed are as follows:

Less than 12 inches-no system allowed

12 to 24 inches-alternative raised trench

24 to 48 inches-conventional shallow trench

More than 48 inches-conventional system

The ratings in this interpretation are based on evaluation of the soil between depths of 12 and 48 inches. In addition, the bottom layer of the soil is evaluated for risk of seepage. This interpretation does not evaluate bedrock below the soil. The soil properties and site features considered are those that affect absorption of the effluent, construction and maintenance of the system, and public health.

The soil properties and qualities that affect the absorption and effective treatment of wastewater effluent are saturated hydraulic conductivity (Ksat), depth to a seasonal high water table, depth to bedrock, depth to dense material, and susceptibility to flooding. Stones and boulders and a shallow depth to bedrock or dense material interfere with installation. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas. In addition, the hazards of erosion and sedimentation increase as slope increases.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 2 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, ground water may be contaminated.

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

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

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen, which is displayed on the report. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the Selected Soil Interpretations report with this interpretation included from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

The information in this interpretation is based on criteria developed specifically for soils in New York. The information is not site specific and does not eliminate the need for onsite investigation of the soils.

Reference:

New York State Department of Health. 1990. Appendix 75-A of Part 75, Section 201(1)(1) of New York Public Health Law. Nassau and Suffolk Counties have a waiver from this portion of New York State Department of Health regulations.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX D

PRELIMINARY EFFLUENT LIMITS

Water Quality Based effluent limits for Conventional Pollutants

TO: Aparna Roy, R3

Facility: Blue Stone Estates

Facility	Blue Stone Estate
Q-wst	75,000 gpd
Q-stm	<0.01 CFS - Intermittent Stream, Head water of the un-named tributary of Tannery Brook
Dilution	1:1
Receiving Waters	Un-named tributary of Tannery Brook/Sheldrake Stream/Neversink River
Basin	1402
Water Class	B
PARTITEM	
MAP	

Parameter	Effluent Limit, mg/l		Unit	TYPE	WQ-STD	Note
	Summer	Winter				
pH	6.5-8.5	6.5-8.5	SU	Grab	6.5-8.5	PART 703.3
UOD	-	-	mg/l	Daily Max.	-	PART 703.3 (DO as surrogate standard)
BOD5	16.7	30.0	mg/l	WQ-Daily Max	DO= 7.0 min	
Suspended Solids	16.7	30/45	mg/l	WQ-Daily Max	Narrative Std.	PART 703.2, TOGS 1.3.1
Dissolved Oxygen,	4.0	4.0	mg/l	Min.		PART 703.3
Settleable Solids	Apply TBEL		ml/l	Daily Max	Narrative Std.	PART 703.4
Total Ammonia Nitrogen (TAN), NH3N	1.24	1.82	mg/l	Monthly Avg.	1.24/1.82	TOGS 1.1.1; pH=7.5, SUM-T=25°C, WIN-T=10°C
Total Residual Chlorine	30⁺	30⁺	ug/l	WQ-Daily Max	ML= 30 5.0	TOGS 1.1.1
Fecal Coliforms, number/100 ml**	Apply TBEL		#/ 100 ml	-	200*-MGM	PART 703.4
Nitrogen, Total	Monitor		mg/l	-	Effluent limits for TN and TP are not required due to low flow of the facility. However, Monitoring of the same is required per Chesapeake Bay TMDL.	
Phosphorus, Total	Monitor		mg/l	-		
DRBC Requirements	Required. Flow is >10000 GPD				Request for eff. Limits will be sent to DRBC after receiving factsheet.	

Note:

Summer: June 1 – Oct-31

Winter : Nov 1 – May-31

*** - 5 Examinations; MMV – Monthly median value - MMV/20%-Samples; MGM – Monthly geometric mean**

**** - Coliforms: Recommend TBEL limit: 200/ 400 #/100 ml -30Day/7Day consecutive geometric mean (TOGS 1.3.3).**

TBEL is stringent than WQBEL.

+TRC: Recommend an effluent of 0.03 mg/l, equal to the analytical minimum level of most sensitive method approved in 40CFR136

APPENDIX E

WASTEWATER EQUALIZATION TANK SIZING

Wastewater Treatment Plant Equalization Tank Sizing for 75,000 GPD

