Project Summary Sheet

Thurston Ridge Solar, LLC
June 2021

Project Description

Thurston Ridge Solar, LLC is the subsidiary under Nexamp/Green Eagle Solar VI that will build, own and operate a 5 MW community solar farm at 3905 Lewis Road in the Town of Thurston. Approximately 30 acres of the 407-acre parcel will be leased for the project. The land sits as vacant farmland now. Electricity will be sold under the community solar model, whereby local residents who live in NYSEG's territory will be given the option to purchase it to save on their electricity bills.

Total Project Investment	$8,971,755
Jobs Retained	0
Job Created	0 **Short-term job potential**: approximately 32 construction jobs will be created **Long-term job potential**: various professions will be hired on a part-time, contract basis as needed during the life of the project, such as electrical workers and lawncare professionals
Benefit to Cost Ratio	11:1
Estimated PILOT Savings	$0 (Per the CBA)
Estimated Mortgage Tax Savings	$0
Estimated Sales Tax Savings	$186,584
Total Savings	$186,584
Comments	The project would put into use vacant land and generate $668,000 in additional property tax revenue over 20 years for the taxing jurisdictions based on the PILOT schedule.
Estimated Project Start Date	Spring 2022
Estimated Project Completion Date	Winter 2022

Evaluative Criteria for Energy Projects

1. Private Sector Investment – The project will result in $9 million private sector investment, create construction jobs and induce local spending for lodging, restaurants and gas stations during the construction period.
2. Advances State Renewable Energy Production Goals – This project will assist in meeting Gov. Cuomo's goal in reducing greenhouse gases 85% by 2050.

No. _____

Application To

STEUBEN COUNTY INDUSTRIAL DEVELOPMENT AGENCY/
STEUBEN AREA ECONOMIC DEVELOPMENT CORPORATION
For
FINANCIAL ASSISTANCE**

Section I: Applicant Information

Please answer all questions. Use "None" or "Not Applicable" where necessary.

A) Applicant Information-company receiving benefit:

Applicant Name: Thurston Ridge Solar, LLC
Applicant Address: 101 Summer St, 3rd Floor, Boston, MA 02110
Phone: 8607531053 Fax: _____
Website: nexamp.com E-mail: rmccune@nexamp.com
Federal ID#: _____ NAICS: _____
Will a Real Estate Holding Company be utilized to own the Project property/facility? ■ Yes or ☐ No
What is the name of the Real Estate Holding Company: Green Eagle Solar VI, LLC
Federal ID#: 83-4201921

B) Authorized Signatory:

Name: Chris Clark
Title: SVP, Business Development
Address: 101 Summer St, Flr 2 Boston, MA 02110
Phone: 978.237.5772 Fax: _____
E-Mail: CClark@Nexamp.com

C) Corporate Contact (if different from individual completing application):

Name: Ryan McCune
Title: Business Development Manager
Address: 101 Summer St, Flr 2, Boston MA 02110
Phone: 607 592 5648 Fax: _____
E-Mail: RMcCune@Nexamp.com

D) Company Counsel:

Name of Attorney: Joshua Sabo / Alita Guida

Firm Name: Couch White, LLP

Address: 540 Broadway

Phone: 518-320-3443 / 518-320-3414 Fax: _____

E-mail: JSabo@couchwhite.com / AGuida@couchwhite.com

E) Identify the assistance being requested of the Agency (select all that apply):

1. Exemption from Sales Tax ■ Yes or ☐ No
2. Exemption from Mortgage Tax ☐ Yes or ■ No
3. Exemption from Real Property Tax ■ Yes or ☐ No
4. Tax Exempt Financing * ☐ Yes or ■ No

* (typically for not-for-profits & small qualified manufacturers)

F) Business Organization (check appropriate category):

Corporation	☐	Partnership	☐
Public Corporation	☐	Joint Venture	☐
Sole Proprietorship	☐	Limited Liability Company	■

Other (please specify) _____

Year Established: 2019

State in which Organization is established: Delaware

G) List all stockholders, members, or partners with % of ownership greater than 20%:

Name	% of ownership
Green Eagle Solar VI, LLC	100%

H) Applicant Business Description:

Describe in detail company background, products, customers, goods and services. Description is critical in determining eligibility: Green Eagle Solar, VI is a wholly owned subsidiary of Nexamp Solar, LLC, Incorporated in 2007, Nexamp develops, designs, builds, owns, finances, and operates commercial-scale solar systems.

Nexamp works with NY's major utility companies to deliver clean, renewable energy to community solar customers (homeowners, small businesses, etc.)

With over 750 solar projects live and 300 MW of generating capacity across 14 states, Nexamp has the knowledge and experience to make this project a success.

Estimated % of sales within County/City/Town/Village: N/A

Estimated % of sales outside County/City/Town/Village. but within New York State: 100

Estimated % of sales outside New York State but within the U.S.: 0

Estimated % of sales outside the U.S. 0

(*Percentage to equal 100%)

I) What percentage of your total annual supplies, raw materials and vendor services are purchased from firms in County/City/Town Village. Up to 100% of routine maintenance

Section II: Project Description & Details

A) Project Location:

Municipality or Municipalities of current operations: Town of Thurston

Provide the property address of the Proposed Project:

3905 Lewis Rd, Thurston, NY 14821

Tax ID: 277.00-01-010.000

Will the Project result in the abandonment of one or more plants or facilities of the Project occupant located within the state?

☐ **Yes or** ■ **No**

If Yes, explain how, notwithstanding the aforementioned closing or activity reduction, the Agency's Financial Assistance is required to prevent the Project from relocating out of the State, or is reasonably necessary to preserve the Project occupant's competitive position in its respective industry: _____

What are the current real estate taxes on the proposed Project Site? _____

If amount of current taxes is not available, provide assessed value for each:

Land: $10,000(2021) Buildings(s): $_____

Are Real Property Taxes current? ■ Yes or ☐ No. If no, please explain _____

Town/City/Village: Thurston School District: Addison

Does the Applicant or any related entity currently hold fee title to the Project site? ☐ Yes or ■ No
If No, indicate name of present owner of the Project Site: Aquillas J & Sallie A Peachy

Does Applicant or related entity have an option/contract to purchase the Project site? ☐ Yes or ■ No

Describe the present use of the proposed Project site: Abandoned Farmland

B) Please provide narrative of project and the purpose of the project (new build, renovations, and/or equipment purchases). Identify specific uses occurring within the project. Describe any and all tenants and any/all end users: (This information is critical in determining project eligibility): Thurston Ridge Solar is proposing to construct and operate a 5 MW (AC) ground mounted solar energy facility. The facility will connect to the local NYSEG infrastructure via three phase lines located on Lewis Rd in the Town of Thurston. The total facilities footprint will encompass 22-acres of farmland located on the 407-acre parcel. Operating as a Community Distributed Generation (CDG) facility, the energy produced at the facility will be pumped back into the grid,

Describe the reasons why the Agency's Financial Assistance is necessary, and the effect the Project will have on the Applicant's business or operations. Focus on competitiveness issues, project shortfalls, etc… Your eligibility determination will be based in part on your answer (attach additional pages if necessary): Without a PILOT Agreement, Thurston Ridge Solar would likely not move forward with this project. A PILOT Agreement provides Thurston Ridge Solar and its lender(s) with a long-term tax agreement, a critical component of ensuring a solar project economic viability. Through a PILOT, this project will add to Nexamp's expanding portfolio of projects across many of New York States utility territories.

Please confirm by checking the box, below, if there is likelihood that the Project would not be undertaken but for the Financial Assistance provided by the Agency?

■ **Yes or** ☐ **No**

If the Project could be undertaken without Financial Assistance provided by the Agency, then provide a statement in the space provided below indicating why the Project should be undertaken by the Agency: Thurston Ridge Solar clearly meets the goals set out by NYS and the mandate given to the IDA through the state's municipal law and the County's UTEP. By promoting renewable energy development, the agency can increase local energy resiliency, spur infrastructure investment, increase local tax bases, help the state meet its energy goals, and fulfill its goal of promoting development in Steuben County

If the Applicant is unable to obtain Financial Assistance for the Project, what will be the impact on the Applicant and County/City/Town/Village? The taxing jurisdictions will lose an opportunity to receive more revenue than fallow farmland provides. The landowner will lose an opportunity to earn rental income on private land. Additionally, the county will lose the ability to affordably attract more than $8.4 million in infrastructure investment.

C) Will Project include leasing any equipment ☐ Yes or ■ No

If Yes, please describe:

D) Site Characteristics:

Describe the present zoning/land use: 105 - Vacant Farmland

Will the Project meet zoning/land use requirements at the proposed location? ■ Yes or ☐ No

If not, please describe required zoning/land use:

If a change in zoning/land use is required, please provide details/status of any request for change of zoning/land use requirements:

Is the proposed project located on a site where the known or potential presence of contaminants is complicating the development/use of the property? If yes, please explain: No

E) Provide any additional site information or details that may be applicable to the proposed project:

F) Select Project Type for **all** end users at project site (you may check more than one):

Industrial	☐	Back Office	☐
Acquisition of Existing Facility	☐	Retail	☐
Housing	☐	Mixed Use	☐
Equipment Purchase	☐	Facility for Aging	☐
Multi-Tenant	☐	Civic Facility (not for profit)	☐
Commercial	☐	Other Solar DG Facility	■

Will customers personally visit the Project site for either of the following economic activities? If yes with respect to either economic activity indicated below, complete the Retail Questionnaire contained in Section III of the Application.

Retail Sales*: ☐ Yes or ■ No Services*: ☐ Yes or ■ No

*For purposes of this question, the term "retail sales" means (i) sales by a registered vendor under Article 28 of the Tax Law of the State of New York (the "Tax Law") primarily engaged in the retail sale of tangible personal property (as defined in Section 1101(b)(4)(i) of the Tax Law), or (ii) sales of a service to customers who personally visit the Project.

G) Project Information:

Estimated costs in connection with Project:

1. Land and/or Building Acquisition: $_____
   _____ acres _____ square feet
2. New Building Construction: _____ square feet $ 1,605,428.16
3. New Building Addition(s): _____ square feet $_____
4. Reconstruction/Renovation: _____ square feet $ _____
5. Infrastructure Work: $ 1,360,798.08
6. Manufacturing Equipment: $ 4,633,411.68
7. Non-Manufacturing Equipment (furniture, fixtures, etc.): $ 77,996.16
8. Soft Costs: (professional services, etc.): $ 418,561.14
9. Other, Specify: interconnection $ 875,560.00

TOTAL Capital Costs: $ 8,971,755.22

Project refinancing; estimated amount
(for refinancing of existing debt only) $_____

Sources of Funds for Project Costs:

1. Bank Financing: $_____
2. Equity (excluding equity that is attributed to grants/tax credits): $ 8,971,755.22
3. Tax Exempt Bond Issuance (if applicable): $ _____
4. Taxable Bond Issuance (if applicable): $ _____
5. Public Sources (Include sum total of all state and federal grants and tax credits): $ _____

   Identify each state and federal grant/credit:

   Federal Investment Tax Credit* $ 1,494,557.63

   NYSERDA* $ 672,870

   _____ $ _____

   _____ $ _____

*100% of equity is required up-front- incentives and tax credits, when realized, are used to pay back equity investments at a later date.

Total Sources of Funds for Project Costs: $ 8,971,755.22

Have any of the above costs been paid or incurred as of the date of this Application? ■ Yes or ☐ No

If Yes, describe particulars: 25% of interconnection costs have been paid at the time of this application

Mortgage Recording Tax Exemption Benefit: Amount of mortgage that would be subject to mortgage recording tax:

Mortgage Amount (include sum total of construction/permanent): $ _____

Estimated Mortgage Recording Tax Exemption Benefit (product of Mortgage Amount as indicated above multiplied by 1.25%): $ _____

Sales and Use Tax: Gross amount of costs for goods and services that are subject to State and local Sales and Use Tax - said amount to benefit from the Agency's Sales and Use Tax exemption benefit:

$ 2,332,305.125

Estimated State and local Sales and Use Tax Benefit (product of 8% multiplied by the figure above):

$ 186,584.41

******** *Note that the estimate provided above will be provided to the New York State Department of Taxation and Finance. The Applicant acknowledges that the transaction documents may include a covenant by the Applicant to undertake the total amount of investment as proposed within this Application, and that the estimate, above, represents the maximum amount of sales and use tax benefit that the Agency may authorize with respect to this Application. The Agency may utilize the estimate, above, as well as the proposed total Project Costs as contained within this Application, to determine the Financial Assistance that will be offered.*

Real Property Tax Benefit:

IDA PILOT Benefit: Agency staff will indicate the amount of PILOT Benefit based on estimated Project Costs as contained herein and anticipated tax rates and assessed valuation, including the annual PILOT Benefit abatement amount for each year of the PILOT benefit year and the sum total of PILOT Benefit abatement amount for the term of the PILOT as depicted in Section IV of the Application.

Percentage of Project Costs financed from Public Sector sources: Agency staff will calculate the percentage of Project Costs financed from Public Sector sources based upon Sources of Funds for Project Costs as depicted above in Section II(G) of the Application.

H) What is your Project timetable (provide dates):

1. Start date – acquisition of equipment or construction of facilities: TBD
2. Estimated completion date of Project: Q4 2022
3. Project occupancy – estimated starting date of operations: Q1 2023
4. Have construction contracts been signed? ☐ Yes or ■ No
5. Has financing been finalized? ☐ Yes or ■ No

I) Have site plans been submitted to the appropriate planning department?

■ Yes or ☐ No

If yes, has the Project received site plan approval from the planning department?

■ Yes or ☐ No.

If yes, please provide the Agency with a copy of the related State Environmental Quality Review Act ("SEQRA") determination that may have been required to be submitted along with a copy of the approved site plans.

See Appendix A

Please provide the Agency with the status of any required planning department or other approval:
SEQR Neg Dec Approved - 3/10/21

No Local Zoning - No Site Plan Approval Needed

J) Is the Project necessary to retain existing employment: ☐ Yes or ■ No

Is the Project necessary to expand employment: ☐ Yes or ■ No

K) Employment Plan (Specific to the proposed Project location):

	Current # of jobs at proposed project location or to be relocated to project location	IF FINANCIAL ASSISTANCE IS GRANTED – project the number of jobs to be RETAINED	IF FINANCIAL ASSISTANCE IS GRANTED – project the number of jobs to be CREATED upon THREE Years after Project completion	Estimate number of residents of the Labor Market Area in which the Project is located that will fill the jobs to be created upon THREE Years after Project Completion*
Full Time	0	N/A	0	UNK
Part Time	0	N/A	0	UNK
Total FTEs	0**	N/A	0	UNK

** 32 Construction jobs are temporary

*For purposes of this question, please estimate the number of FT and PT jobs that will be filled, as indicated in the third column, by residents of the Labor Marker Area, in the fourth column. The Labor Marker Area includes Steuben, Schuyler, Chemung, Yates, Allegany, and Livingston Counties.

~~Salary and Fringe Benefits for Jobs to be Retained and/or Created:~~

Category of Jobs to be Retained and Created	**Average Salary or Range of Salary**	**Average Fringe Benefits or Range of Fringe Benefits**
Management		
Professional		
Administrative		
Production		
Independent Contractor		
Other		

Employment at other locations in the state: (provide address and number of employees at each location):

	Address	Address	Address
Full time			
Part Time			
Total FTEs			

***Please note**: The Agency may utilize the foregoing employment projections, among other items, to determine the Financial Assistance that will be offered by the Agency to the Applicant. The Applicant acknowledges that the transaction documents may include a covenant by the Applicant to retain the number of jobs and create the number of jobs with respect to the Project as set forth in this Application.*

Section III Retail Questionnaire

To ensure compliance with Section 862 of the New York General Municipal Law, the Agency requires additional information if the proposed Project is one where customers personally visit the Project site to undertake either a retail sale transaction or to purchase services.

Please answer the following:

A. Will any portion of the project (including that portion of the cost to be financed from equity or other sources) consist of facilities or property that are or will be primarily used in making sales of goods or services to customers who personally visit the project site?

☐ Yes or ■ No. If the answer is yes, please continue. If no, proceed to section IV.

For purposes of Question A, the term "retail sales" means (i) sales by a registered vendor under Article 28 of the Tax Law of the State of New York (the "Tax Law") primarily engaged in the retail sale of tangible personal property (as defined in Section 1101(b)(4)(i) of the Tax Law), or (ii) sales of a service to customers who personally visit the Project.

B. What percentage of the cost of the Project will be expended on such facilities or property primarily used in making sales of goods or services to customers who personally visit the project? _____ _____ %. **If the answer is less than 33% do not complete the remainder of the retail determination and proceed to section IV.**

If the answer to A is Yes AND the answer to Question B is greater than 33.33%, please answer the questions below:

1. Will the project be operated by a not-for-profit corporation ☐ Yes or ☐ No.

2. Is the Project location or facility likely to attract a significant number of visitors from outside the economic development region in which the project will be located?

☐ Yes or ☐ No

If yes, please provide a third-party market analysis or other documentation supporting your response.

3. Is the predominant purpose of the project to make available goods or services which would not, but for the project, be reasonably accessible to the residents of the municipality within which the proposed project would be located because of a lack of reasonably accessible retail trade facilities offering such goods or services?

☐ Yes or ☐ No

If yes, please provide a third party market analysis or other documentation supporting your response.

4. Will the project preserve permanent, private sector jobs or increase the overall number of permanent, private sector jobs in the State of New York?

☐ Yes or ☐ No.

If yes, explain _____

_____

5. Is the project located in a Highly Distressed Area, as defined by the US Census Bureau?

☐ Yes or ☐ No

Section IV: Estimate of Real Property Tax Abatement Benefits and Percentage of Project Costs financed from Public Sector sources

Section IV of this Application will be: (i) completed by IDA Staff based upon information contained within the Application, and (ii) provided to the Applicant for ultimate inclusion as part of this completed Application.

Estimates provided are based on current property tax rates and assessed values.

PILOT Estimate Table

Dollar Value of New Construction and Renovation Costs	Estimated New Assessed Value of Property*	County Tax Rate/1,000	Local (town/village/city) Tax Rate/1,000	School Tax Rate/1,000
$8,971,755.22	$244,658.70			

*Apply equalization rate to value **New assessed value calculated using DCF valuation

Abatement Year	Current Taxes	New Without PILOT	Total Tax Liability	Proposed PILOT New	Total PILOT New + Existing	PILOT Savings
Total						

Section V Representations, Certifications and Indemnification

This Section of the Application <u>can only</u> be completed upon the Applicant receiving, and <u>must be completed</u> after the Applicant receives, IDA Staff confirmation that Section I through Section IV of the Application are complete.

_____ (name of CEO or other authorized representative of Applicant) confirms and says that he/she is the _____(title) of _____(name of corporation or other entity) named in the attached Application (the "Applicant"), that he/she has read the foregoing Application and knows the contents thereof, and hereby represents, understands, and otherwise agrees with the Agency and as follows:

A. Job Listings: In accordance with Section 858-b(2) of the New York General Municipal Law, the Applicant understands and agrees that, if the Project receives any Financial Assistance from the Agency, except as otherwise provided by collective bargaining agreements, new employment opportunities created as a result of the Project will be listed with the New York State Department of Labor Community Services Division (the "DOL") and with the administrative entity (collectively with the DOL, the "JTPA Entities") of the service delivery area created by the federal job training partnership act (Public Law 97-300) ("JTPA") in which the Project is located.

B. First Consideration for Employment: In accordance with Section 858-b(2) of the New York General Municipal Law, the Applicant understands and agrees that, if the Project receives any Financial Assistance from the Agency, except as otherwise provided by collective bargaining agreements, where practicable, the Applicant will first consider persons eligible to participate in JTPA programs who shall be referred by the JTPA Entities for new employment opportunities created as a result of the Project.

C. Annual Sales Tax Filings: In accordance with Section 874(8) of the New York General Municipal Law, the Applicant understands and agrees that, if the Project receives any sales tax exemptions as part of the Financial Assistance from the Agency, in accordance with Section 874(8) of the General Municipal Law, the Applicant agrees to file, or cause to be filed, with the New York State Department of Taxation and Finance, the annual form prescribed by the Department of Taxation and Finance, describing the value of all sales tax exemptions claimed by the Applicant and all consultants or subcontractors retained by the Applicant. Copies of all filings shall be provided to the Agency.

D. Employment Reports: The Applicant understands and agrees that, if the Project receives any Financial Assistance from the Agency, the Applicant agrees to file, or cause to be filed, with the Agency, at least annually or as otherwise required by the Agency, reports regarding the number of people employed at the project site, salary levels, contractor utilization and such other information (collectively, "Employment Reports") that may be required from time to time on such appropriate forms as designated by the Agency. Failure to provide Employment Reports within 30 days of an Agency request shall be an Event of Default under the PILOT Agreement between the Agency and Applicant and, if applicable, an Event of Default under the Agent Agreement between the Agency and Applicant. In addition, a Notice of Failure to provide the Agency with an Employment Report may be reported to Agency board members, said report being an agenda item subject to the Open Meetings Law.

E. The Applicant acknowledges that certain environmental representations will be required at closing. The Applicant shall provide with this Representation, Certification and Indemnification Form copies of any known environmental reports, including any existing Phase I Environmental Site Assessment Report(s) and/or Phase II Environmental Investigations. The Agency may require the Company and/or owner of the premises to prepare and submit an environmental assessment and audit report, including but not necessarily limited to, a Phase I Environmental Site Assessment Report and a Phase II Environmental Investigation, with respect to the Premises at the sole cost and expense of the owner and/or the Applicant. All environmental assessment and audit reports shall be completed in accordance with ASTM Standard Practice E1527-05, and shall be conformed over to the Agency so that the Agency is authorized to use and rely on the reports. The Agency, however, does not adopt, ratify, confirm or assume any representation made within reports required herein.

F. The Applicant and/or the owner, and their successors and assigns, hereby release, defend and indemnify the Agency from any and all suits, causes of action, litigations, damages, losses, liabilities, obligations, penalties, claims, demands, judgments, costs, disbursements, fees or expenses of any kind or nature whatsoever (including, without limitation, attorneys', consultants' and experts' fees) which may at any time be imposed upon, incurred by or asserted or awarded against the Agency, resulting from or arising out of any inquiries and/or environmental assessments, investigations and audits performed on behalf of the Applicant and/or the owner pursuant hereto, including the scope, level of detail, contents or accuracy of any environmental assessment, audit, inspection or investigation report completed hereunder and/or the selection of the environmental consultant, engineer or other qualified person to perform such assessments, investigations, and audits.

G. Hold Harmless Provision: The Applicant acknowledges and agrees that the Applicant shall be and is responsible for all costs of the Agency incurred in connection with any actions required to be taken by the Agency in furtherance of the Application including the Agency's costs of general counsel and/or the Agency's bond/transaction counsel whether or not the Application, the proposed Project it describes, the attendant negotiations, or the issue of bonds or other transaction or agreement are ultimately ever carried to successful conclusion and agrees that the Agency shall not be liable for and agrees to indemnify, defend, and hold the Agency harmless from and against any and all liability arising from or expense incurred by: (i) the Agency's examination and processing of, and action pursuant to or upon, the Application, regardless of whether or not the Application or the proposed Project described herein or the tax exemptions and other assistance requested herein are favorably acted upon by the Agency; (ii) the Agency's acquisition, construction and/or installation of the proposed Project described herein; and (iii) any further action taken by the Agency with respect to the proposed Project including, without limiting the generality of the foregoing, all causes of action and attorney's fees and any other expenses incurred in defending any suits or actions which may arise as a result of any of the foregoing. Applicant hereby understands and agrees, in accordance with Section 875(3) of the New York General Municipal Law and the policies of the Agency that any New York State and local sales and use tax exemption claimed by the Applicant and approved by the Agency, any mortgage recording tax exemption claimed by the Applicant and approved by the Agency, and/or any real property tax abatement claimed by the Applicant and approved by the Agency, in connection with the Project, may be subject to recapture and/or termination by the Agency under such terms and conditions as will be established by the Agency and set forth in transaction documents to be entered into by and between the Agency and the Applicant. The Applicant further represents and warrants that the information contained in this Application, including without limitation information regarding the amount of the New York State and local sales and use tax exemption benefit, the amount of the mortgage recording

tax exemption benefit, and the amount of the real property tax abatement, if and as applicable, to the best of the Applicant's knowledge, is true, accurate and complete.

H. This obligation includes an obligation to submit an Agency Fee Payment to the Agency in accordance with the Agency Fee policy effective as of the date of this Application

I. By executing and submitting this Application, the Applicant covenants and agrees to pay the following fees to the Agency and the Agency's general counsel and/or the Agency's bond/transaction counsel, the same to be paid at the times indicated:

(i) a non-refundable $750 application and publication fee (the "Application Fee");

(ii) an amount equal to one percent (1%) of the total project costs, unless otherwise agreed to by the Agency; and

(iii) all fees, costs and expenses incurred by the Agency for (1) legal services, including but not limited to those provided by the Agency's general counsel and/or the Agency's bond/transaction counsel, thus note that the Applicant is entitled to receive a written estimate of fees and costs of the Agency's general counsel and the Agency's bond/transaction counsel; and (2) other consultants retained by the Agency in connection with the proposed project, with all such charges to be paid by the Applicant at the closing.

J. If the Applicant fails to conclude or consummate the necessary negotiations, or fails, within a reasonable or specified period of time, to take reasonable proper or requested action, or withdraws, abandons, cancels, or neglects the Application, or if the Applicant is unable to find buyers willing to purchase the bond issue requested, or if the Applicant is unable to facilitate the sale/leaseback or lease/leaseback transaction, then, upon the presentation of an invoice, Applicant shall pay to the Agency, its agents, or assigns all actual costs incurred by the Agency in furtherance of the Application, up to that date and time, including but not necessarily limited to, fees of the Agency's general counsel and/or the Agency's bond/transaction counsel.

K. The Applicant acknowledges and agrees that all payment liabilities to the Agency and the Agency's general counsel and/or the Agency's bond and/or transaction counsel as expressed in Sections H and I are obligations that are not dependent on final documentation of the transaction contemplated by this Application.

L. The cost incurred by the Agency and paid by the Applicant, the Agency's general counsel and/or bond/transaction counsel fees and the processing fees, may be considered as a cost of the Project and included in the financing of costs of the proposed Project, except as limited by the applicable provisions of the Internal Revenue Code with respect to tax-exempt bond financing.

M. The Applicant acknowledges that the Agency is subject to New York State's Freedom of Information Law (FOIL). **Applicant understands that all Project information and records related to this application are potentially subject to disclosure under FOIL subject to limited statutory exclusions**.

N. The Applicant acknowledges that it has been provided with a copy of the Agency's Policy for Termination of Agency Benefits and Recapture of Agency Benefits Previously Granted (the "Termination and Recapture Policy"). The Applicant covenants and agrees that it fully understands that the Termination and Recapture Policy is applicable to the Project that is the subject of this Application, and that the Agency will implement the Termination and Recapture

Policy if and when it is so required to do so. The Applicant further covenants and agrees that its Project is potentially subject to termination of Agency financial assistance and/or recapture of Agency financial assistance so provided and/or previously granted.

O. The Applicant understands and agrees that the provisions of Section 862(1) of the New York General Municipal Law, as provided below, will not be violated if Financial Assistance is provided for the proposed Project:

§ 862. Restrictions on funds of the agency. (1) No funds of the agency shall be used in respect of any project if the completion thereof would result in the removal of an industrial or manufacturing plant of the project occupant from one area of the state to another area of the state or in the abandonment of one or more plants or facilities of the project occupant located within the state, provided, however, that neither restriction shall apply if the agency shall determine on the basis of the application before it that the project is reasonably necessary to discourage the project occupant from removing such other plant or facility to a location outside the state or is reasonably necessary to preserve the competitive position of the project occupant in its respective industry.

P. The Applicant confirms and acknowledges that the owner, occupant, or operator receiving Financial Assistance for the proposed Project is in substantial compliance with applicable local, state and federal tax, worker protection and environmental laws, rules and regulations.

Q. The Applicant confirms and acknowledges that the submission of any knowingly false or knowingly misleading information may lead to the immediate termination of any Financial Assistance and the reimbursement of an amount equal to all or part of any tax exemption claimed by reason of the Agency's involvement the Project.

R. The Applicant confirms and hereby acknowledges that as of the date of this Application, the Applicant is in substantial compliance with all provisions of Article 18-A of the New York General Municipal Law, including, but not limited to, the provision of Section 859-a and Section 862(1) of the New York General Municipal Law.

S. The Applicant and the individual executing this Application on behalf of Applicant acknowledge that the Agency and its counsel will rely on the representations and covenants made in this Application when acting hereon and hereby represents that the statements made herein do not contain any untrue statement of a material fact and do not omit to state a material fact necessary to make the statements contained herein not misleading.

STATE OF ~~NEW YORK~~ Massachusetts)
COUNTY OF Suffolk) ss.:

Chris Clark, being first duly sworn, deposes and says:

1. That I am the SVP (Corporate Office) of Thurston Ridge Solar, LLC (Applicant) and that I am duly authorized on behalf of the Applicant to bind the Applicant.

2. That I have read the attached Application, I know the contents thereof, and that to the best of my knowledge and belief, this Application and the contents of this Application are true, accurate and complete.

(Signature of Officer)

Subscribed and affirmed to me under penalties of perjury
this 15th day of June, 2021.

Brianna Rainville
(Notary Public)

BRIANNA RAINVILLE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
February 3, 2028

Thurston Ridge - Nexamp

Steuben County IDA PILOT Assessment

3905 Lewis Road, Thurston

			Distribution Rate
Thurston Tax Rate/$1,000	$252.07		26.39%
County Tax Rate/$1,000	$163.35		17.10%
School District Tax Rate/$1,000	$539.72		56.51%
Total Tax Rate/$1000	$955.14	(equalization rate of 3.15%)	
Per MW PILOT Rate	$5,500.00	plus 2% annually	
Rated Megawatts	5		
Total PILOT payment over 20 years	$685,583		

Abatement Year	Taxes on 30 acres of land	Total PILOT Payment	Town Payment w/ PILOT and 30 acres	County Payment w/ PILOT and 30 acres	School Payment w/ PILOT and 30 acres	Total Taxes w/ PILOT and 30 acres
Year 1	$716	$27,500	$7,447	$4,826	$15,944	$28,216
Year 2	$731	$28,050	$7,595	$4,922	$16,263	$28,781
Year 3	$745	$28,611	$7,747	$5,021	$16,588	$29,356
Year 4	$760	$29,183	$7,902	$5,121	$16,920	$29,943
Year 5	$775	$29,767	$8,060	$5,223	$17,259	$30,542
Year 6	$791	$30,362	$8,222	$5,328	$17,604	$31,153
Year 7	$807	$30,969	$8,386	$5,434	$17,956	$31,776
Year 8	$823	$31,589	$8,554	$5,543	$18,315	$32,412
Year 9	$839	$32,221	$8,725	$5,654	$18,681	$33,060
Year 10	$856	$32,865	$8,899	$5,767	$19,055	$33,721
Year 11	$873	$33,522	$9,077	$5,882	$19,436	$34,396
Year 12	$891	$34,193	$9,259	$6,000	$19,825	$35,083
Year 13	$909	$34,877	$9,444	$6,120	$20,221	$35,785
Year 14	$927	$35,574	$9,633	$6,242	$20,626	$36,501
Year 15	$945	$36,286	$9,826	$6,367	$21,038	$37,231
Year 16	$964	$37,011	$10,022	$6,495	$21,459	$37,975
Year 17	$983	$37,752	$10,223	$6,625	$21,888	$38,735
Year 18	$1,003	$38,507	$10,427	$6,757	$22,326	$39,510
Year 19	$1,023	$39,277	$10,636	$6,892	$22,772	$40,300
Year 20	$1,044	$40,062	$10,848	$7,030	$23,228	$41,106
	$17,406	$668,178	$180,932	$117,250	$387,402	$685,583

Cost-Benefit Analysis for Thurston Ridge Solar, LLC

Prepared by Steuben County IDA using InformAnalytics

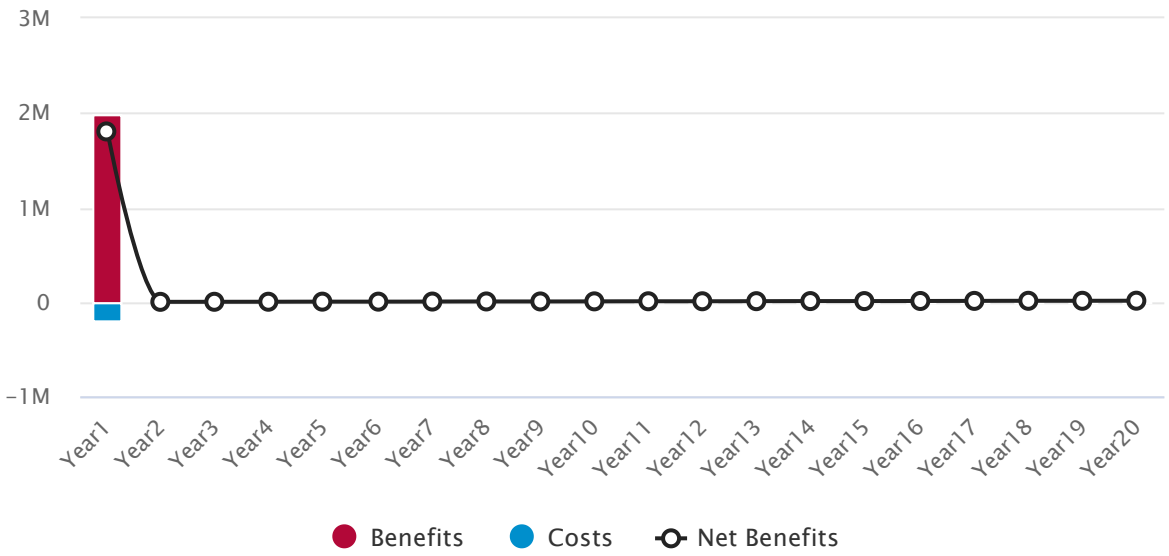
Executive Summary

INVESTOR	TOTAL JOBS	TOTAL INVESTED	LOCATION	TIMELINE
Thurston Ridge Solar, LLC	**0 Ongoing; 29 Temporary**	**$9.0 Million**	**3905 Lewis Road, Thurston, NY**	**20 Years**

F1 FIGURE 1

Discounted* Net Benefits for Thurston Ridge Solar, LLC by Year

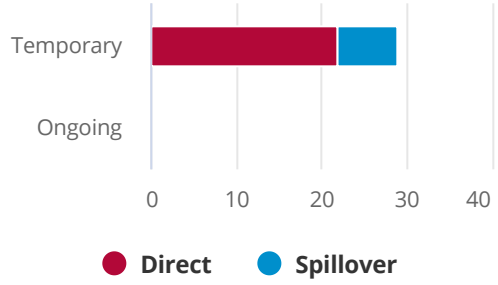
Total Net Benefits: **$1,912,000**



Discounted at 2%

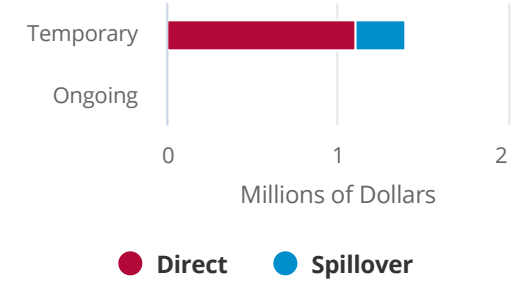
F2 FIGURE 2

Total Jobs



F3 FIGURE 3

Total Payroll



Proposed Investment

Thurston Ridge Solar, LLC proposes to invest $9.0 million at 3905 Lewis Road, Thurston, NY over 20 years. Steuben County IDA staff summarize the proposed with the following: Thurston Ridge Solar is a 5 MW community solar project in the Town of Thurston.

T1 TABLE 1

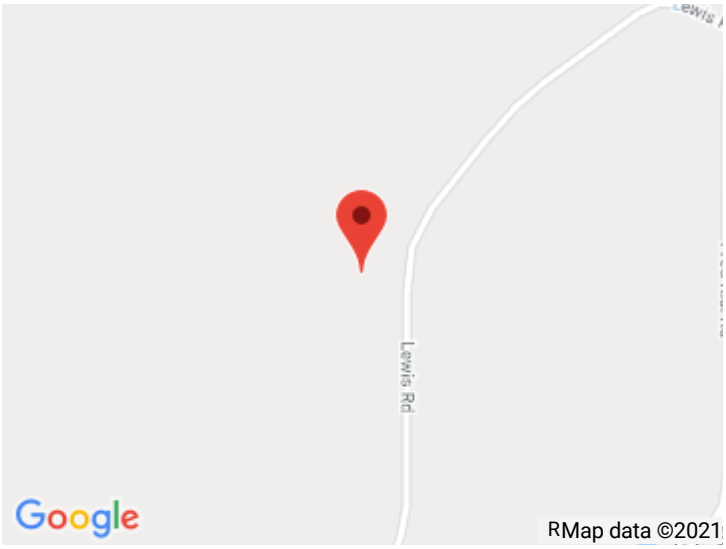
Proposed Investments

Description	Amount
CONSTRUCTION SPENDING	
Thurston Ridge Solar	$2,966,000
OTHER SPENDING	
Manufacturing Equipment	$4,633,000
FF&E	$78,000
Interconnection	$876,000
Soft Costs	$419,000
Total Investments	**$8,972,000**
Discounted Total (2%)	**$8,972,000**

May not sum to total due to rounding.

F4 FIGURE 4

Location of Investment



Cost-Benefit Analysis

A cost-benefit analysis of this proposed investment was conducted using InformAnalytics, an economic impact model developed by CGR. The report estimates the impact that a potential project will have on the local economy based on information provided by Steuben County IDA. The report calculates the costs and benefits for specified local taxing districts over the first 20 years, with future returns discounted at a 2% rate.

T2 TABLE 2

Estimated Costs or Incentives

Steuben County IDA is considering the following incentive package for Thurston Ridge Solar, LLC.

Description	Nominal Value	Discounted Value*
Sales Tax Exemption	$187,000	$187,000
Total Costs	**$187,000**	**$187,000**

May not sum to total due to rounding.
* Discounted at 2%

T3 TABLE 3

State & Regional Impact (Life of Project)

The following table estimates the total benefits from the project over its lifetime.

Description	Direct	Spillover	Total
REGIONAL BENEFITS	**$1,425,000**	**$350,000**	**$1,774,000**
To Private Individuals	$1,094,000	$346,000	$1,440,000
Temporary Payroll	$1,094,000	$346,000	$1,440,000
To the Public	$331,000	$4,000	$334,000
Property Tax Revenue	$108,000	N/A	$108,000
Temporary Sales Tax Revenue	$12,000	$4,000	$16,000
Purchases Sales Tax Revenue	$210,000	N/A	$210,000
STATE BENEFITS	**$303,000**	**$21,000**	**$324,000**
To the Public	$303,000	$21,000	$324,000
Temporary Income Tax Revenue	$49,000	$17,000	$66,000
Temporary Sales Tax Revenue	$14,000	$4,000	$18,000
Purchases Sales Tax Revenue	$240,000	N/A	$240,000
Total Benefits to State & Region	$1,728,000	$371,000	$2,098,000
Discounted Total Benefits (2%)	$1,728,000	$371,000	$2,098,000

May not sum to total due to rounding.

T4 TABLE 4

Benefit to Cost Ratio

The following benefit to cost ratios were calculated using the discounted totals.

Description	Benefit*	Cost*	Ratio
Region	$1,774,000	$87,000	20:1
State	$324,000	$100,000	3:1
Grand Total	$2,098,000	$187,000	11:1

May not sum to total due to rounding.
* Discounted at 2%

March 12, 2021

To: Involved and Interested Agencies (via email)

RE: SEQR Documentation- Parts 1-3
Thurston Ridge Solar, LLC
Town of Thurston, Steuben County, New York
CHA File No.: 067354

The New York State Energy Research and Development Authority (NYSERDA) is the State Environmental Quality Review Act (SEQR) Lead Agency and has issued a Negative Declaration for the proposed 5MWac solar facility located at 3905 Lewis Road in the Town of Thurston, NY.

The proposed project entails the installation of solar arrays on approximately 21.6 acres of a 407-acre parcel. The facility will be enclosed by a 7-foot tall fence. Access will be from the extension of an existing farm road located south of the proposed facility. Additionally, the project will include clearing of approximately 15 acres of planted evergreen trees.

The enclosed SEQR documentation includes the following:

- SEQR Part 1
- SEQR Part 2
- SEQR Part 3
  - Attachment A-Wetland Delineation Report
  - Attachment B- USFWS IPaC
  - Attachment C- Agricultural Resources Documentation
  - Attachment D-Cultural Resources Documentation

If you have any questions, please contact me at 518-453-4505 or at ceinstein@chacompanies.com.

Sincerely,

Christopher R. Einstein, PWS
Principal Scientist

Encl.
CC (via email): Candace Rossi, NYSERDA

III Winners Circle, PO Box 5269, Albany, NY 12205-0269
T 518.453.4500 • F 518.458.1735 • www.chacompanies.com

List of Involved Agencies

Mr. Andrew Steiner
Andrew.Steiner@agriculture.ny.gov
NYS Department of Agriculture and Markets
12235, 10B Airline Dr
Albany, NY 12205

List of Interested Agencies

Mr. Matt Sousa, Director
msousa@steubencony.gov
Steuben County Planning Department
3 East Pulteney Square
Bath, NY 14810

Ms. Wendy Lozo
townofthurston@stny.rr.com
Supervisor
Town of Thurston
7578 County Route 333
Campbell, NY 14821

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 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Thurston Ridge Solar Farm		
Project Location (describe, and attach a general location map): Lewis Road, Thurston, NY, 14821, approximately 0.8 mile west of of Fred Rial Road		
Brief Description of Proposed Action (include purpose or need): Construction of a 5.0 mW (AC) Solar farm on a 407.25 acre parcel of land in the Town of Thurston (Tax Parcel I.D.: 277.00-01-010.000). The proposed solar farm will be constructed on approximately 21.6+/- acres (fenced area).		
Name of Applicant/Sponsor: Thurston Ridge Solar, LLC	Telephone: 607 592-5648 E-Mail: rmccune@nexamp.com	
Address: 101 Summer Street, 2nd Floor		
City/PO: Boston	State: MA	Zip Code: 02110
Project Contact (if not same as sponsor; give name and title/role):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Aquillas J. Peachey & Sallie A Peachey	Telephone: E-Mail:	
Address: 2806 E Valley Road		
City/PO: Loganton	State: PA	Zip Code: 17747

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, or Village Board of Trustees ☐Yes ☑No		
b. City, Town or Village Planning Board or Commission ☐Yes ☑No		
c. City, Town or Village Zoning Board of Appeals ☐Yes ☑No		
d. Other local agencies ☑Yes ☐No	Town of Thurston Highway Department, Curb Cut Permit	January, 2020
e. County agencies ☐Yes ☑No		
f. Regional agencies ☐Yes ☑No		
g. State agencies ☑Yes ☐No	NYSERDA (funding)	November, 2020
h. Federal agencies ☑Yes ☐No	USACE (Wetlands)	January, 2020

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 1

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 Susquehanna

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):

Steuben County Agricultural and Farmland Protection Plan

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☐ Yes ☑ No
If Yes, what is the zoning classification(s) including any applicable overlay district?

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? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? Addison

b. What police or other public protection forces serve the project site?
Addison Police Department/New York State Police

c. Which fire protection and emergency medical services serve the project site?
Thurston Fire District (FD 661)

d. What parks serve the project site?
None

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)? Commercial - power generation

b. a. Total acreage of the site of the proposed action? 407.25 +/- acres
b. Total acreage to be physically disturbed? 25.0 +/- acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 407.25 +/- 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: 6 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.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑ Yes ☐ No

If Yes,

i. Total number of structures 1 Solar Array

ii. Dimensions (in feet) of largest proposed structure: 14 height; 600 width; and 2000 length

iii. Approximate extent of building space to be heated or cooled: N/A 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: Stormwater Management Area as described in Stormwater Narrative

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☑ Other specify: Stormwater

iii. If other than water, identify the type of impounded/contained liquids and their source.

iv. Approximate size of the proposed impoundment. Volume: TBD million gallons; surface area: TBD acres

v. Dimensions of the proposed dam or impounding structure: 1.5 height; TBD length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): Earth Fill

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): Overall there are approximately 16 acres of wetland on the 407 acre site; approximately 2.1 acres of isolated non-jurisdictional wetland exist within the solar panel area; the project will result in the permanent loss of 0.2 acre of isolated wetland associated with the access road, stormwater basin and transformer pad; approximately 0.1 acre of wetland will be temporarily impacted during construction.

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:
Post mounted solar panels, perimeter fencing, one stormwater management area, and a portion of site access road will be placed in the isolated, non-jurisdictional wetland areas.

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: _____
N/A

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: _____ 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: _____

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

d. Will the proposed action generate liquid wastes? ☐Yes ☑No
If Yes:

i. Total anticipated liquid waste generation per day: _____ 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): _____

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? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

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):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

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 1.3 acres (impervious surface)

_____ Square feet or 407.2 acres (parcel size)

ii. Describe types of new point sources. Pad mounted electrical equipment & construction of gravel access roads within the project.

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)?

On-site stormwater management facilities as described in the project stormwater narrative and SWPPP.

- If to surface waters, identify receiving water bodies or wetlands: Stormwater management facilities are designed to attenuate runoff with extreme storm overflows to the ground surface. There are no defined water bodies within the proximity of the stormwater discharge areas.
- 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)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

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) ☐Yes ☑No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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: _____

_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

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.

i. During Construction:

- Monday - Friday: 7AM - 5PM
- Saturday: 7AM - 5PM
- Sunday: TBD (As needed)
- Holidays: TBD (As needed)

ii. During Operations:

- Monday - Friday: Daylight Solar Generation
- Saturday: Daylight Solar Generation
- Sunday: Daylight Solar Generation
- Holidays: Daylight Solar Generation

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:

Typical site construction equipment during construction time frame (earth moving equipment and pile driving equipment for the solar panel posts and fences posts). Combined electrical equipment noise of 82 +/- db (at the equipment) or less during periods of energy production.

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

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:

Minimal security lighting at the project entrance may be considered; if so, downlighting will be used.

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

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):

Vegetation to be controlled through mechanical mowing and trimming.

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: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

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:

N/A

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:

General mix of rural residences, farms and forested areas

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	+/-1.5	+/-2.5	+1.0
• Forested	+/-87.2	+/-72.2	-15.0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	+/-202.5	+/-226.7	+24.2
• Agricultural (includes active orchards, field, greenhouse etc.)	+/-100.0	+/-90.0	-10.0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.0	0.0	0.0
• Wetlands (freshwater or tidal)	+/-16.0	+/-15.8	-0.2
• Non-vegetated (bare rock, earth or fill)	0.0	0.0	0.0
• Other Describe: _____	0.0	0.00	0.0

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 Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

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? ~1.5 feet to >7 feet

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

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

Channery Silty Loam	77 %
Arnot Complex	23 %
	%

d. What is the average depth to the water table on the project site? Average: ~3' feet

e. Drainage status of project site soils:

☐	Well Drained:	% of site
☑	Moderately Well Drained:	77 % of site
☑	Poorly Drained	23 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	25 % of site
☑	10-15%:	50 % of site
☑	15% or greater:	25 % 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) RB-5

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: _____

m. Identify the predominant wildlife species that occupy or use the project site:

Squirrels | Opossums | Deer
Chipmunks | Rabbits | Mice
Various Birds

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: STEU006

b. Are agricultural lands consisting of highly productive soils present? ☑ Yes ☐ No

i. If Yes: acreage(s) on project site? ~265+/- acres are considered farmland of statewide importance

ii. Source(s) of soil rating(s): USDA Web Soil Survey

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: _____

iii. Brief description of attributes on which listing is based:

_____

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 fives 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.

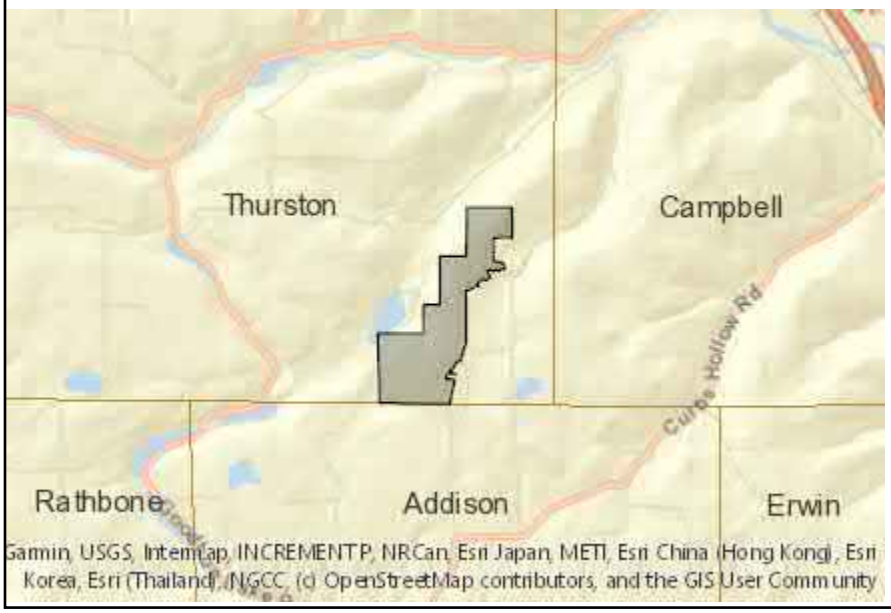
Applicant/Sponsor Name Chris Clark Date 12/30/2020

Signature _____ Title SVP, Business Development

PRINT FORM

EAF Mapper Summary Report

Monday, November 9, 2020 12:17 PM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

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 Susquehanna
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):26.5
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	RB-5
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.

E.2.j. [100 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.k. [500 Year Floodplain]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.l. [Aquifers]	No
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]	Yes
E.3.a. [Agricultural District]	STEU006
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]	Yes
E.3.i. [Designated River Corridor]	No

CIVIL PERMIT PLANS
FOR
THURSTON RIDGE SOLAR
5.0 MW AC
LOCATED AT
Lewis Road
Thurston, New York, 14821

TOWN OF THURSTON PLANNING BOARD

APPLICANT/PROJECT OWNER
THURSTON RIDGE SOLAR, LLC
101 SUMMER STREET, 2ND FLOOR
BOSTON, MA 02110

CIVIL ENGINEER
THE ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
900 ROUTE 146
CLIFTON PARK, NY 12065
(518) 371-7621

SURVEYOR
THE ENVIRONMENTAL DESIGN PARTNERSHIP, LLP
900 ROUTE 146
CLIFTON PARK, NY 12065
(518) 371-7621

SOLAR CONSULTANT
NEXAMP, INC.
101 SUMMER STREET, 2ND FLOOR
BOSTON, MA 02110
CONTACT: KELSEY SHUKIS, E.I.T.
PHONE: (860) 333-3270

LOCATION MAP
(NOT TO SCALE)

Sheet List Table

SHEET NUMBER	SHEET TITLE
C-100	COVER SHEET
C-200	EXISTING CONDITIONS AND DEMOLITION PLAN
C-300	EROSION AND SEDIMENT CONTROL PLAN
C-301	EROSION AND SEDIMENT CONTROL DETAILS
C-400	SITE, GRADING, AND DRAINAGE PLAN
C-500	SITE DETAILS
L-100	LANDSCAPING PLAN

SITE INFORMATION

PARCEL ZONING
N.A.

PROJECT DESCRIPTION
5.0 MW AC TRACKER PV SYSTEM

BENCHMARKS

BENCHMARKS:
tbd

RECORD OF SUBMITTALS	DATE	BY

PLANS PREPARED BY :
ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.
900 Route 146 Clifton Park, New York 12065
(518) 371-7621 edpllp.com

nexamp
101 Summer Street, Boston, MA 02110
Tel: (617) 431-1440 Fax: (978) 416-2525 Web: nexamp.com

Rev	Issued For	Date
A	Civil Set	10/5/2020
B	Civil Set	10/13/2020
C	Civil Set	11/6/2020
D	ADDED WETLANDS	1/7/2021

P.E. seal/Consultant:

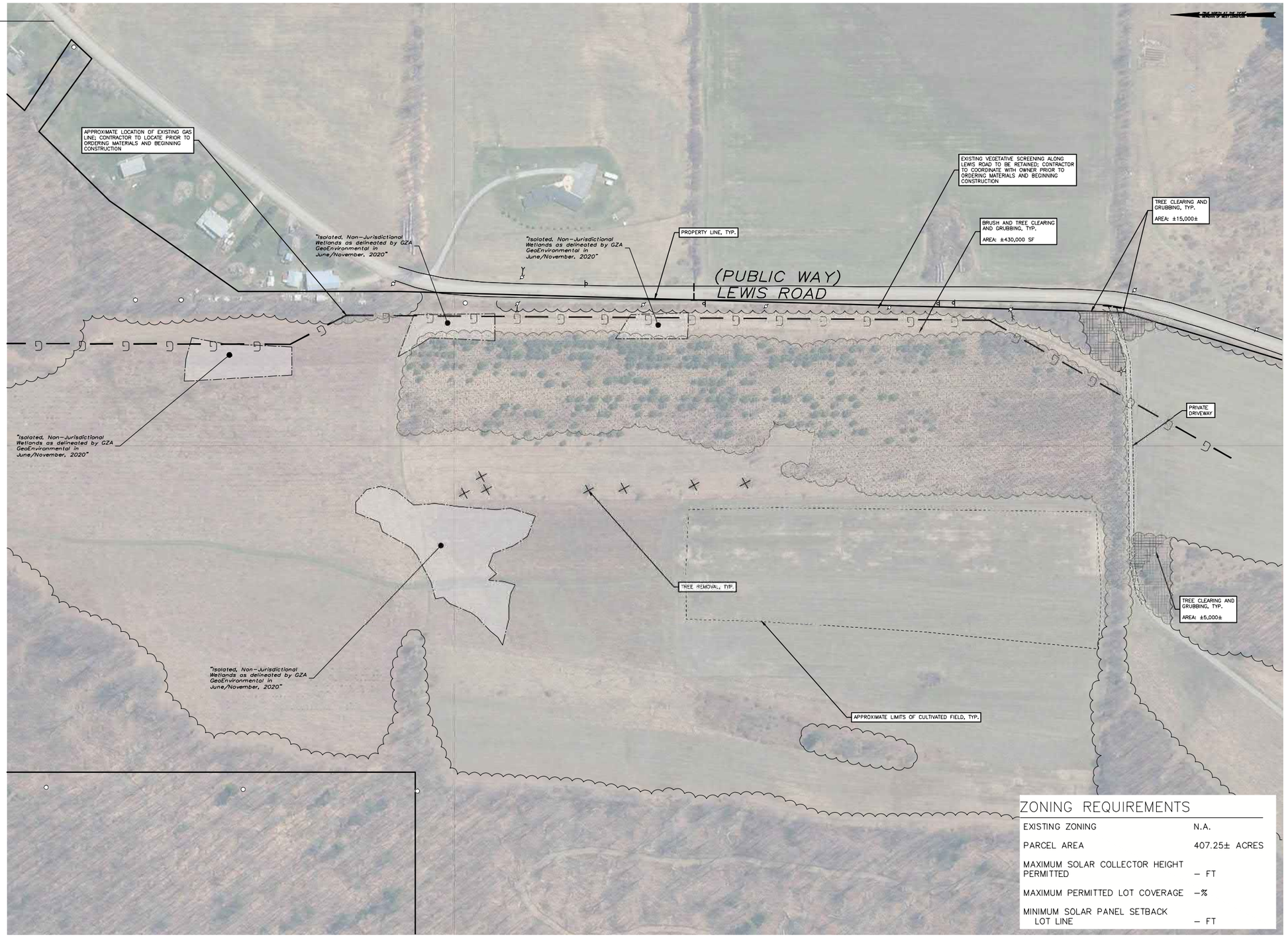
Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

Drawing Title:
COVER SHEET
Drawn by: STA
Approved by: TJM

Dwg No: C-100 | Size: D | Sheet Rev: D

REMOVALS LEGEND:

- DENOTES TREE CLEARING AND GRUBBING AREA
- DENOTES BRUSH/TREE CLEARING AND GRUBBING AREA
- DENOTES TREE TO BE REMOVED



ZONING REQUIREMENTS

EXISTING ZONING	N.A.
PARCEL AREA	407.25± ACRES
MAXIMUM SOLAR COLLECTOR HEIGHT PERMITTED	– FT
MAXIMUM PERMITTED LOT COVERAGE	–%
MINIMUM SOLAR PANEL SETBACK LOT LINE	– FT

GRAPHIC SCALE

100 80 60 40 20 0 50 100 200 400
(IN FEET)
1 INCH = 100 FT.

PLANS PREPARED BY :

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D	ADDED WETLANDS	1/7/2021

P.E. seal/Consultant:

Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

Drawing Title:
EXISTING CONDITIONS AND DEMOLITION PLAN

Drawn by: STA
Approved by: TJM

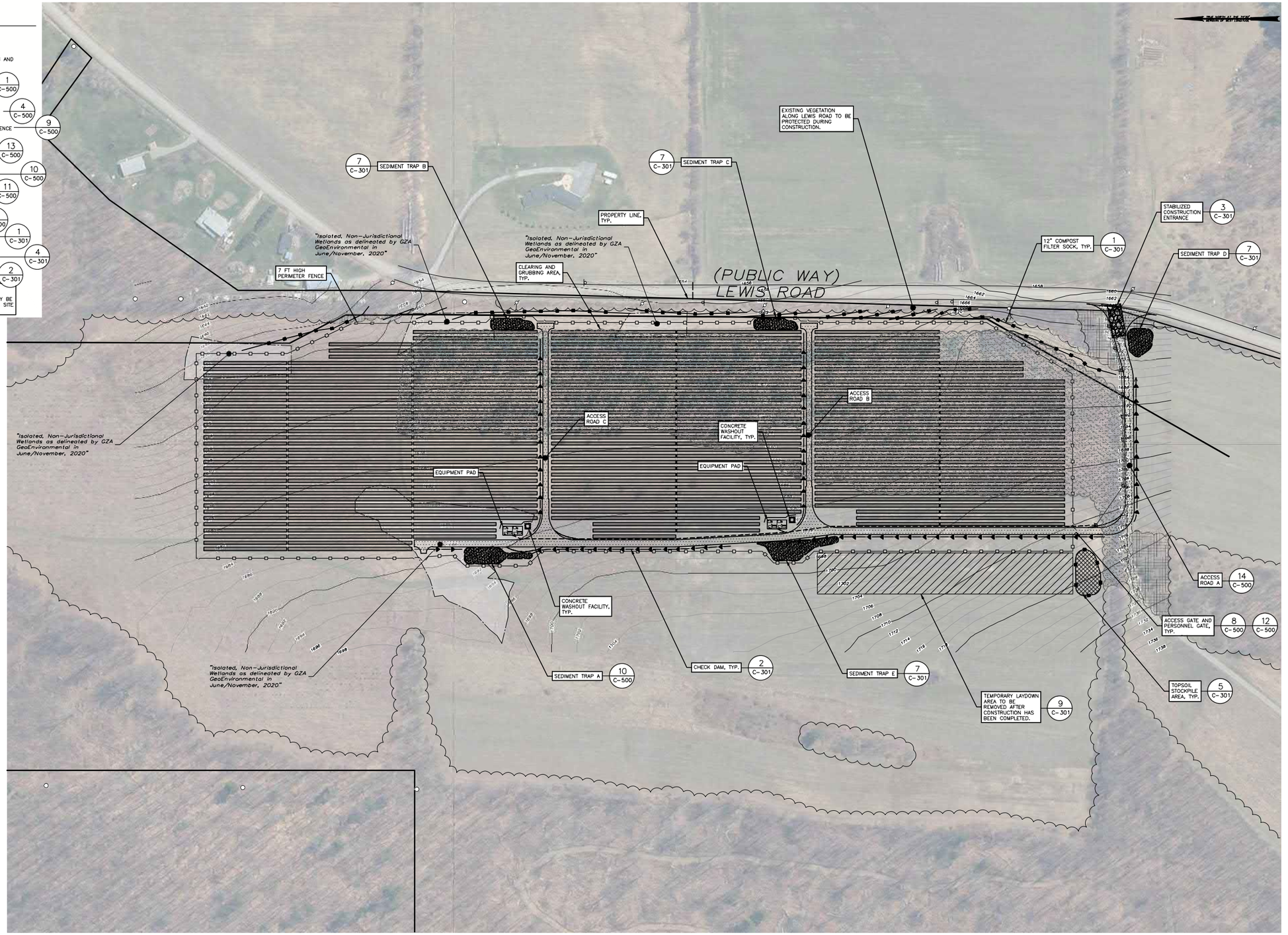
Dwg No: C-200 | Size: D | Sheet Rev: D

EROSION AND SEDIMENT CONTROL PLAN LEGEND

- DENOTES EXISTING GRADE
- DENOTES TREE AND BRUSH CLEARING AND GRUBBING AREA
- DENOTES GRAVEL ACCESS ROAD — 1 / C-500
- DENOTES RIP-RAP OVERFLOW/INLET/OUTLET PROTECTION — 4 / C-500
- DENOTES WIRE MESH/WOOD/METAL FENCE — 9 / C-500
- DENOTES SOLAR PANEL TRACKER — 13 / C-500
- DENOTES MEDIUM VOLTAGE TRENCH — 10 / C-500
- DENOTES FLARED END SECTION — 11 / C-500
- DENOTES PROPOSED CONTOUR
- DENOTES LEVEL SPREADER — 5 / C-500
- DENOTES PROPOSED 12" COMPOST FILTER SOCK — 1 / C-301
- DENOTES CONCRETE WASHOUT AREA — 4 / C-301
- DENOTES CHECK DAM — 2 / C-301

NOTES:

ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE NECESSARY DURING CONSTRUCTION DEPENDING ON SITE CONDITIONS.



GRAPHIC SCALE

100 80 60 40 20 0 50 100 200 400

(IN FEET)
1 INCH = 100 FT.

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Rev	Issued For	Date
A	Civil Set	10/5/2020
B	Civil Set	10/13/2020
C	Civil Set	11/6/2020
D	ADDED WETLANDS	1/7/2021

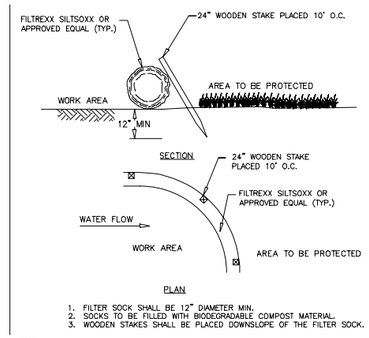
P.E. and Consultant:

Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

Drawing Title:
EROSION AND SEDIMENT CONTROL PLAN

Drawn by: STA
Approved by: TJM

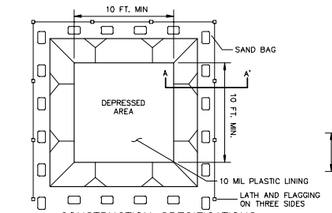
Dwg No: C-300 | Size: D | Sheet Rev: D



1. FILTER SOCK SHALL BE 12" DIAMETER MIN.
2. SOCKS TO BE FILLED WITH BIODEGRADABLE COMPOST MATERIAL.
3. WOODEN STAKES SHALL BE PLACED DOWNSLOPE OF THE FILTER SOCK.

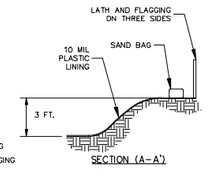
1 C-301 12 IN. FILTER SOCK

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. CONCRETE WASHOUT FACILITY SHALL BE LOCATED A MINIMUM OF FIFTY FEET (50') FROM SENSITIVE AREAS.
2. THE BASIN DIMENSIONS DEPICTED ABOVE ARE REQUIRED MINIMUMS. CONCRETE WASHOUT FACILITY SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE ENERATED BY WASHOUT OPERATIONS. (APPROXIMATELY 60 GALLONS OF WASTE AND WATER PER TRUCK).
3. PLASTIC LINING MATERIAL SHALL BE A MINIMUM 10 MIN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
4. WASHOUT FACILITY MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.



MAINTENANCE AND CLEANING

1. DO NOT DISCHARGE LIQUID OR SLURRY TO WATERWAYS, STORM DRAINS OR DIRECTLY ONTO GROUND.
2. DO NOT USE SANITARY SEWER WITHOUT LOCAL APPROVAL.
3. PLACE A SECURE NON COLLAPSING, NON-WATER COLLECTING COVER OVER THE FACILITY PRIOR TO PREDICTED WET WEATHER TO PREVENT ACCUMULATION AND OVERFLOW.
4. REMOVE AND DISPOSE OF HARDEN CONCRETE AND RETURN THE STRUCTURE TO A FUNCTIONAL STATE.
5. INSPECT THE WASHOUT FACILITY FOR SIGNS OF WEAKENING OR DAMAGE AND REPAIR AS NESSESARY(RELINE THE STRUCTURE WITH NEW POLY SHEETING AFTER EACH CLEANING).

4 C-301 CONCRETE WASHOUT FACILITY

NOT TO SCALE

SOIL RESTORATION PROCEDURE:

AS PER CHAPTER 4 OF THE 2016 NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL IS REQUIRED ON THIS SITE IN ALL NON-IMPERVIOUS AREAS ONCE FINAL SUBGRADE ELEVATION IS ACHIEVED. IN AREAS OF CUT OR FILL THE SOILS SHALL BE AERATED AND 6 INCHES OF TOPSOIL SHALL BE APPLIED. IN AREAS OF HEAVY CONSTRUCTION TRAFFIC (ESPECIALLY IN AREAS 5 TO 25 FEET FROM BUILDING, BUT NOT WITHIN 5 FEET OF FOUNDATION WALLS) AND AREAS WHERE EXISTING IMPERVIOUS OR VEHICLE TRAFFIC/PARKING AREAS WILL BE CONVERTED TO PERVIOUS AREAS THE FOLLOWING RESTORATION MUST BE APPLIED:

1. APPLY 3 INCHES OF COMPOST OVER SUBSOIL. THE COMPOST SHALL BE WELL DECOMPOSED (MATURED AT LEAST 3 MONTHS), WEED-FREE, ORGANIC MATTER. IT SHALL BE AEROBICALLY COMPOSTED, POSSESS NO OBJECTIONABLE ODORS, AND CONTAIN LESS THAN 1%, BY DRY WEIGHT, OF MAN-MADE FOREIGN MATTER. THE PHYSICAL PARAMETERS OF THE COMPOST SHALL MEET THE STANDARDS LISTED IN COMPOST STANDARDS TABLE.
2. TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES USING A CAT-MOUNTED RIPPER, TRACTOR MOUNTED DISC, OR TILLER, TO MIX AND CIRCULATE AIR AND COMPOST INTO THE SUBSOIL.
3. ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF FOUR INCHES AND LARGER SIZE ARE CLEANED OFF THE SITE.
4. APPLY TOPSOIL TO A DEPTH OF 6 INCHES.
5. VEGETATE AS REQUIRED BY THE SEEDING PLAN. USE APPROPRIATE GROUND COVER WITH DEEP ROOTS TO MAINTAIN THE SOIL STRUCTURE.
6. TOPSOIL MAY BE MANUFACTURED AS A MIXTURE OR A MINERAL COMPONENT AND ORGANIC MATERIAL SUCH AS COMPOST.

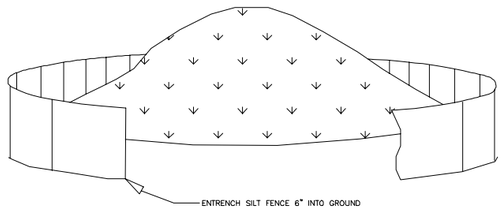
AT THE END OF THE PROJECT AN INSPECTOR SHOULD BE ABLE TO PUSH A 3/8" METAL BAR 12 INCHES INTO THE SOIL JUST WITH BODY WEIGHT. THIS SHOULD NOT BE PERFORMED WITHIN THE DRIP LINE OF ANY EXISTING TREES OR OVER UTILITY INSTALLATIONS THAT ARE WITHIN 24 INCHES OF THE SURFACE.

COMPOST STANDARDS TABLE	
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT)
ORGANIC PORTION	FIBROUS AND ELONGATED
pH	6.0 - 8.0
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	100% PASSING, 2" SCREEN & 10% - 50% PASSING $\frac{3}{4}$" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

8 C-301 SOIL RESTORATION

NOT TO SCALE

NOTE: CHOOSE DRY AND STABLE AREA FOR STOCKPILE. SHAPE AND STABILIZE STOCK PILE; ALLOW TEMPORARY SEEDING.



5 C-301 SOIL STOCKPILE AREA

NOT TO SCALE

EROSION AND SEDIMENT CONTROL AND STABILIZATION MEASURES, MAINTENANCE AND INSPECTION PRACTICES:

1. THE FOLLOWING IS A LIST OF EROSION AND SEDIMENT CONTROLS TO BE USED ON THIS SITE DURING CONSTRUCTION:

   A. STABILIZATION PRACTICES FOR THIS SITE INCLUDE:
   - LAND CLEARING ACTIVITIES SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND SHALL PROGRESS AS EARTHWORK IS NEEDED
   - WATERING OF EXCAVATION AND FILL AREAS TO MINIMIZE WIND EROSION DURING CONSTRUCTION AS NEEDED.
   - USE OF STABILIZATION FABRIC FOR ALL SLOPES HAVING A SLOPE OF 1V:2H OR GREATER AND FILL SLOPES 1V:3H OR GREATER.
   - PERMANENT SEEDING AND PLANTING OF ALL UNPAVED AREAS USING THE HYDROMULCHING GRASS SEEDING TECHNIQUE.

   B. STRUCTURAL PRACTICES FOR THIS SITE INCLUDE:
   - PERIMETER PROTECTION USING COMPOST FILTER SOCKS
   - STABILIZED CONSTRUCTION EXIT POINTS
   - SEDIMENT TRAPS
   - CHECK DAMS
   - STABILIZED CONSTRUCTION EXIT POINTS

2. THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS AND STABILIZATION MEASURES.

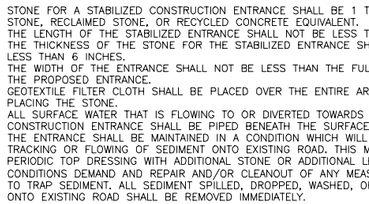
   A. ALL CONTROL MEASURES WILL BE INSPECTED ONCE EVERY SEVEN (7) DAYS BY A QUALIFIED INSPECTOR AS DESCRIBED IN PART IV, SECTION C OF THE SPDES PERMIT FOR CONSTRUCTION ACTIVITY NO. GP-0-20-001. SITES THAT HAVE A WAIVER TO DISTURB GREATER THAN FIVE (5) ACRES REQUIRE (2) INSPECTIONS EVERY SEVEN (7) DAYS WITH AT LEAST TWO (2) DAYS BETWEEN INSPECTIONS.
   B. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIRS ARE FOUND TO BE NECESSARY, THEY WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
   C. BUILT UP SEDIMENT WILL BE REMOVED FROM FILTER SOCKS WHEN IT HAS REACHED ONE-HALF THE HEIGHT OF THE SOCK. AN ADDITIONAL FILTER SOCK MAY BE INSTALLED ON TOP OF THE ORIGINAL TO INCREASE SEDIMENT STORAGE CAPACITY/PREVENT SEDIMENT DISTURBANCE.
   E. FILTER SOCKS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, DISLODGEMENT, BREAKS, TEARS, ETC. DAMAGED OR DISLODGED FILTER SOCKS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
   F. TEMPORARY AND PERMANENT SEEDING AND ALL OTHER STABILIZATION MEASURES WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
   G. SEDIMENT TRAPS WILL BE INSPECTED FOR DEPTH OF SEDIMENT. BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 50 PERCENT OF THE CAPACITY.
   H. CHECK DAMS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, WASHOUT, ETC. BUILT UP SEDIMENT WILL BE REMOVED FROM THE CHECK DAM WHEN IT REACHES ONE-THIRD OF THE HEIGHT OF THE CHECK DAM.
   I. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. COPIES OF THE REPORT FORMS TO BE COMPLETED BY THE INSPECTOR ARE INCLUDED IN THIS SWPPP. UPON COMPLETION, COPIES OF THE REPORTS SHALL BE SUBMITTED TO THE TOWN OF CAMDEN.
   J. THE JOB SITE SUPERINTENDENT WILL BE RESPONSIBLE FOR SELECTING AND TRAINING THE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR THESE INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT INSPECTION AND MAINTENANCE REPORTS. ALL PERSONNEL PERFORMING INSPECTIONS MUST MEET THE REQUIREMENTS DESCRIBED IN PART IV, SECTION C OF THE SPDES PERMIT FOR CONSTRUCTION ACTIVITY NO. GP-0-20-001.
   K. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE APPROPRIATE INSTRUCTION FROM THE JOB SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS THAT WILL ENDANGER PUBLIC HEALTH OR THE ENVIRONMENT. FOLLOW UP WITH A WRITTEN REPORT WITHIN 5 DAYS OF THE NONCOMPLIANCE EVENT.
   L. DISTURBED AREAS AND MATERIAL STORAGE AREAS WILL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING STORMWATER SYSTEMS.
   M. REPORT TO THE NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION WITHIN 24 HOURS ANY NONCOMPLIANCE WITH THE SWPPP THAT WILL ENDANGER PUBLIC HEALTH OR THE ENVIRONMENT. FOLLOW UP WITH A WRITTEN REPORT WITHIN 5 DAYS OF THE NONCOMPLIANCE EVENT.

ADDITIONAL EROSION CONTROL AND GRADING NOTES:

1. MINIMAL EROSION CONTROL DEVICES ARE ILLUSTRATED ON SITE PLAN IN A SCHEMATIC MANNER BASED ON NY STATE GUIDELINES FOR EROSION AND SEDIMENT CONTROL. IT WILL BE NECESSARY TO ADJUST THE ACTUAL LOCATION AND QUANTITY OF EROSION CONTROL DEVICES DEPENDING UPON FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THESE MEASURES AS REQUIRED TO PROTECT THE SITE.
2. SLOPES SHALL TYPICALLY BE GRADED AT A MAXIMUM OF 3:1 (3 HORIZ. 1 VERT.) WITHIN ALL CUT OR FILL AREAS, UNLESS OTHERWISE DESIGNATED ON PLANS.
3. TEMPORARY SEED SHALL BE A COMMERCIALLY AVAILABLE MIXTURE OF PERENNIAL RYE AND UTILITY GRADE FESCUE; PERCENTAGE OF PERENNIAL RYE SHALL NOT EXCEED 50%. PERMANENT SEED SHALL BE AS SPECIFIED ON THE PLANTING PLANS.
4. SEEDED AREAS SHALL BE FULLY COVERED WITH A LEAN STRAW OR MULCH MATERIAL. IF ORDERED BY THE ENGINEER OR MUNICIPALITY, A BIODEGRADABLE NETTING (E.G., EXCELSIOR BLANKET, COIR GEOTEXTILE) SHALL BE ANCHORED OVER SEEDED AREAS WHICH DEMONSTRATE "RILLING" OR OTHER EROSION PROCESSES.
5. TOPSOIL AND SEED SHALL BE REAPPLIED TO ANY AREAS WHICH FAIL TO ESTABLISH AS A RESULT OF INITIAL APPLICATION.
6. FILTER SOCK BARRIERS SHALL BE PLACED WITHIN ALL AREAS OF EXPOSED SLOPES TO CONTROL SOIL EROSION DURING AND AFTER CONSTRUCTION.
7. EROSION CONTROL (ERO-MAT) OR APPROVED EQUAL, SHALL BE INSTALLED ON ALL 2:1 SLOPES: AN ORGANIC FIBER PROTECTIVE MAT, HALF INCH LAYER OF CHOPPED STRAW, KNITTED INTO A RUGGED MAT WITH A THIN NETTING OF PHOTODEGRADABLE POLYPROPYLENE. SECURE MAT TO SLOPE WITH 6" STEEL U-SHAPED STABLES, 2 STAPLES PER SQUARE YARD, OR AS PER MANUFACTURER'S INSTRUCTIONS.
8. STREAM REACHES ON-SITE AND DOWNSTREAM OF CONSTRUCTION SHALL NOT HAVE SUBSTANTIAL VISIBLE CONTRAST RELATIVE TO COLOR, TASTE, ODOR, TURBIDITY AND SEDIMENT DEPOSITION FROM THE REACHES UPSTREAM OF THE CONSTRUCTION ACTIVITY.
9. VEHICULAR ACCESS POINTS SHALL BE MONITORED AND INSPECTED AT THE SAME FREQUENCY AS EROSION CONTROL FEATURES TO INSURE THAT DEPOSITS OF SAND, SILT OR OTHER MATERIAL IS NOT BEING DEPOSITED ON PUBLIC ROADWAYS. IN THE EVENT ANY SIGNIFICANT DEPOSITS OCCUR THEY SHALL BE CLEANED UP IMMEDIATELY.

SEQUENCE OF CONSTRUCTION ACTIVITIES:

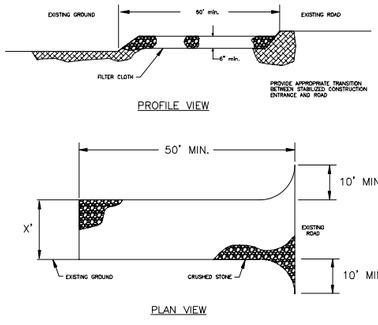
1. CONSTRUCT TEMPORARY CONSTRUCTION EXITS AT LOCATIONS SHOWN ON THE SWPPP PLAN SHEET. INSTALL GRAVEL ACCESS ROADS AS NEEDED.
2. INSTALL PERIMETER FILTER SOCKS, SEDIMENT BASINS AND OTHER NECESSARY EROSION CONTROL FEATURES.
3. BEGIN CLEARING AND GRUBBING OPERATIONS. CLEARING AND GRUBBING SHALL BE DONE ONLY IN AREAS WHERE EARTHWORK WILL BE PERFORMED AND ONLY IN AREAS WHERE CONSTRUCTION IS PLANNED TO COMMENCE WITHIN 7 DAYS AFTER CLEARING AND GRUBBING. CLEARING AND GRUBBING OPERATIONS SHALL BE LIMITED SO THAT NO MORE THAN 5 ACRES OF DISTURBED SOIL EXISTS AT ANY ONE TIME WITHOUT PRIOR WRITTEN APPROVAL FROM THE NYS DEC.
4. WATERING OF THE EXCAVATION AND FILL AREAS SHALL BE DONE TO MINIMIZE WIND EROSION AS NEEDED.
5. COMMENCE SITE GRADING AND INSTALLATION OF STORM WATER MANAGEMENT FEATURES.
6. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 7 DAYS SHOULD BE TEMPORARILY SEEDED AND WATERED.
7. TRENCHING FOR UNDERGROUND CONDUITS.
8. CONSTRUCTION OF INSTALLATION OF EQUIPMENT PAD.
9. PILE INSTALLATION OF SOLAR RACKING SYSTEM AND SOLAR PANELS.
10. INSTALLATION OF ABOVE-GROUND WIRING.
11. TOPSOIL REPLACEMENT, FINAL GRADING AND SEEDING AND PLANTING.
12. INSTALLATION OF FENCING AND REQUIRED SIGNAGE.
13. REMOVAL OF FILTER SOCKS AND STABILIZED CONSTRUCTION ENTRANCES



1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOW OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LONER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA 2 ACRES.

2 C-301 CHECK DAM

NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE PROPOSED ENTRANCE.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE SURFACE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO EXISTING ROAD. THIS MANY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO EXISTING ROAD SHALL BE REMOVED IMMEDIATELY.

3 C-301 STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

6 C-301 EROSION CONTROL BLANKET

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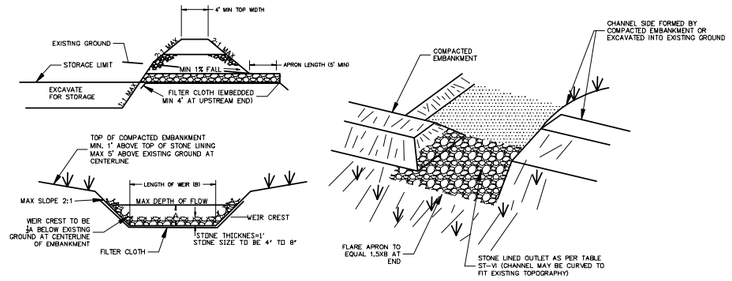

CONSTRUCTION SPECIFICATIONS

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE 5 FEE1, MEASURED AT CENTERLINE OF EMBANKMENT.
3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER. CUT SLOPES 1:1 OR FLATTER
4. EXCAVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF THE EMBANKMENT
5. STORAGE AREA PROVIDED SHALL BE TIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE LEVEL WEIR CREST
6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO TO PLACEMENT IN STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST 1 FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OUTLET CHANNELS
7. STONE USED UN THE OUTLET CHANNEL SHALL BE 4 TO 8 INCH RIP-RAP, TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED 1 FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OUTLET CHANNEL.
8. SEDIMENT SHALL BE REMOVED AND TRAP RESGTRED TO ITS ORIGINAL DIMMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ½ THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH AN MANNER IT WILL NOT ERODE.
9. THE STRUCTURE SHALL BE REPAIRED AFTER EACH RAIN AND REPAIRED AS NEEDED
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER EROSION AND WATER POLLUTION ARE MINIMIZED
11. THE STRUCTURE SHALL BE REMOVED AND THE SREA STABILIZED WHEN DRAINAGE AREA HAS BENN PROPERLY STABILIZED
12. DRAINAGE FOR THIS AREA IS LIMITED TO 15 ACRES OR LESS
13. IF LOCATED IN THE SAME LOCATION AS A PROPOSED INFILTRATION BASIN THE BOTTOM OF THE SEDIMENT SHALL BE A MINIMUM OF 1' ABOVE THE BOTTOM OF THE PROPOSED INFILTRATION BASIN.

DESIGN CALCULATIONS SMA X

CONTRIBUTING AREA = X.XX ACRES
MIN SIZE = 3,600 CF/ACRE
MIN SIZE = X,XXX CF

CONTRIBUTING AREA (ACRES)	DEPTH OF CHANNEL (A) (FT)	LENGTH OF WEIR (B) (FT)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0

DESIGN CALCULATIONS SMA X

CONTRIBUTING AREA = X.XX ACRES
MIN SIZE = 3,600 CF/ACRE
MIN SIZE = X,XXX CF

7 C-301 STONE OUTLET SEDIMENT TRAP

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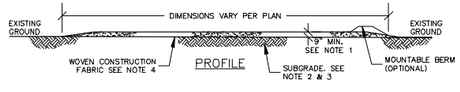

NOTES:

1. CONSTRUCTION STAGING ARE TO BE 9" GRAVEL COURSE, WELL GRADED, WELL COMPACTED, TO CONFORM TO NYS DOT ITEM NO. 304.05 TYPE. MIN. COMPACTION 95% MODIFIED PROCTOR OR 9" CRUSHED STONE COURSE, WELL GRADED WELL COMPACTED, TO CONFORM TO NYS DOT ITEM NO. 304.03 TYPE 2 MIN. COMPACTION 95% MODIFIED PROCTOR
2. SUBGRADE MUST BE PROOF-ROLLED PRIOR TO PLACEMENT OF CRUSHED STONE.
3. WELL COMPACTED SUBGRADE MIN. COMPACTION 90% MODIFIED PROCTOR
4. WOVEN CONSTRUCTION FABRIC TO BE A.O.B.E. PROPEX GEOTEXT 315ST OR EQUAL
5. TEMPORARY STAGING AREA TO BE INSTALLED WITHOUT DISTURBANCE TO EXISTING GROUND

9 C-301 TEMPORARY STAGING AREA

NOT TO SCALE

PLANS PREPARED BY :

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Rev	Issued For	Date
A	Civil Set	10/5/2020
B	Civil Set	10/13/2020
C	Civil Set	11/6/2020
D	ADDED WETLANDS	1/7/2021

P.E. seal/Consultant:

Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

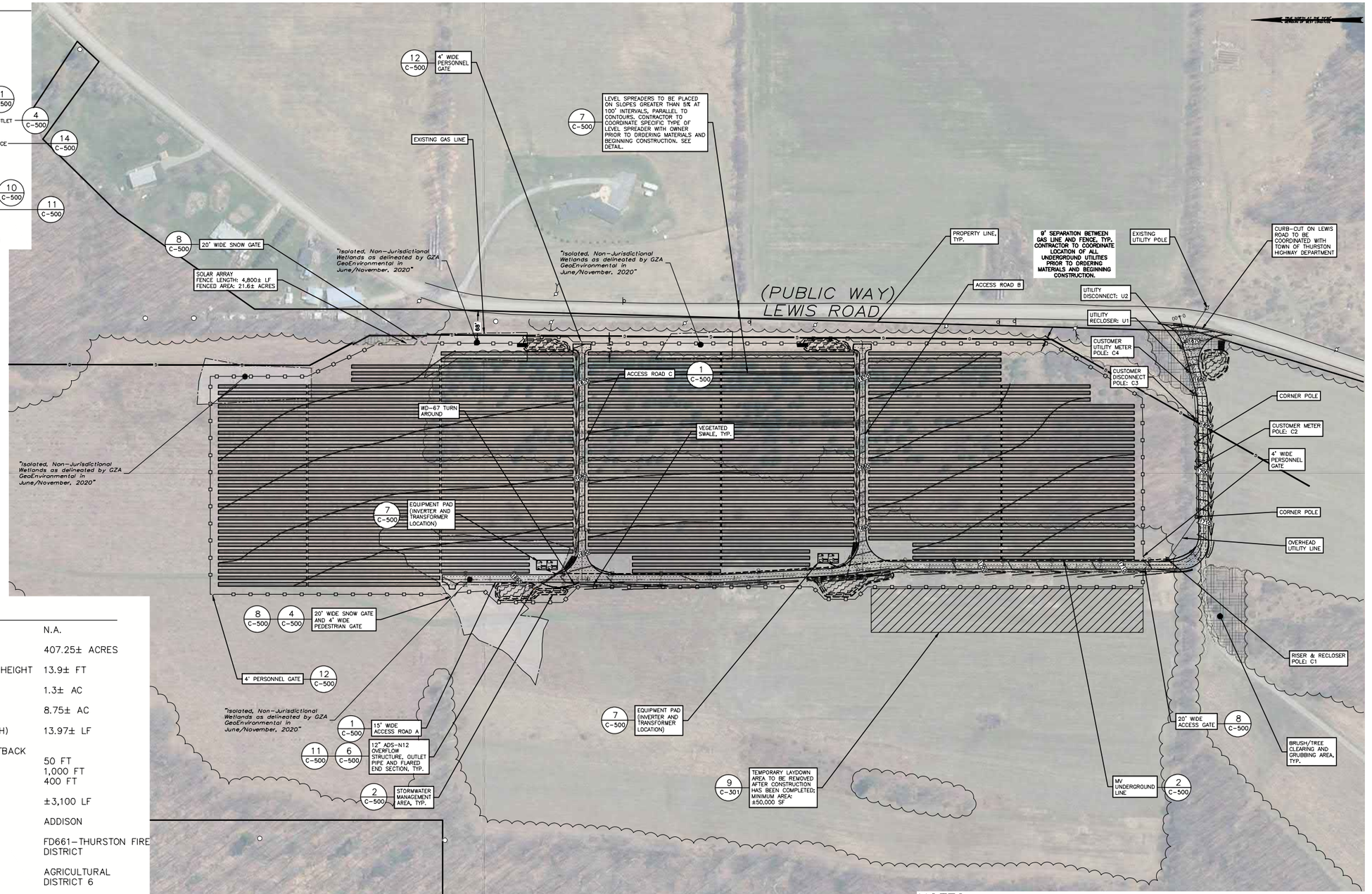
Drawing Title:
EROSION AND SEDIMENT CONTROL DETAILS

Approved by: TJM
Drawn by: STA

Dwg No: C-301 | Size: D | Sheet Rev: D

LEGEND:

- DENOTES EXISTING GRADE
- DENOTES BRUSH/TREE CLEARING AND GRUBBING AREA
- DENOTES TREE CLEARING AND GRUBBING AREA
- DENOTES GRAVEL ACCESS ROAD — 1 C-500
- DENOTES RIP-RAP OVERFLOW/INLET/OUTLET PROTECTION — 4 C-500, 14 C-500
- DENOTES WIRE MESH/WOOD/METAL FENCE
- DENOTES SOLAR PANEL TRACKER
- DENOTES MEDIUM VOLTAGE TRENCH — 10 C-500
- DENOTES FLARED END SECTION — 11 C-500
- DENOTES PROPOSED CONTOUR
- DENOTES LEVEL SPREADER — 5 C-500



SITE STATISTICS

EXISTING ZONING	N.A.
PARCEL AREA	407.25± ACRES
MAXIMUM SOLAR COLLECTOR HEIGHT	13.9± FT
IMPERVIOUS AREA	1.3± AC
SOLAR PANEL AREA	8.75± AC
SOLAR PANEL SPACING (PITCH)	13.97± LF
PROPOSED SOLAR PANEL SETBACK	
FRONT YARD	50 FT
SIDE YARD	1,000 FT
REAR YARD	400 FT
ACCESS ROAD LENGTH	±3,100 LF
SCHOOL DISTRICT	ADDISON
FIRE DISTRICT	FD661–THURSTON FIRE DISTRICT
AGRICULTURAL DISTRICT	AGRICULTURAL DISTRICT 6
PROPOSED GROUND DISTURBANCE	
ACCESS ROAD, ELECTRICAL TRENCHES, EQUIPMENT PADS, TREE AND BRUSH CLEARING & GRUBBING, GROUND DISTURBANCE	±15.00 AC
TREE CLEARING AND GRUBBING*	±0.50 AC
TREE CLEARING ONLY (NO STUMPING)	±0.50 AC
BRUSH CLEARING AND GRUBBING*	±10.00 AC
PROPOSED FENCED AREA	±21.60 AC

*VALUES ARE INCLUDED IN GROUND DISTURBANCE TOTALS

NOTES:

1. BRUSH/TREE CLEARING AND GRUBBING TO TAKE PLACE TO 10 FT OUTSIDE OF FENCED AREAS, UNLESS NOTED OTHERWISE. CONTRACTOR TO COORDINATE LIMITS OF CLEARING AND GRUBBING WITH OWNER PRIOR TO BEGINNING CONSTRUCTION.
2. IN TREE/BRUSH CLEARING AREAS (OUTSIDE OF THE FENCED AREA), STUMPS ARE TO REMAIN IN PLACE.
3. PANEL/ELECTRICAL LAYOUT BY OTHERS.

GRAPHIC SCALE
100 80 60 40 20 0 50 100 200 400
(IN FEET)
1 INCH = 100 FT.

PLANS PREPARED BY :

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Rev	Issued For	Date
A	Civil Set	10/5/2020
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D	ADDED WETLANDS	1/7/2021

P.E. seal/Consultant:

Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

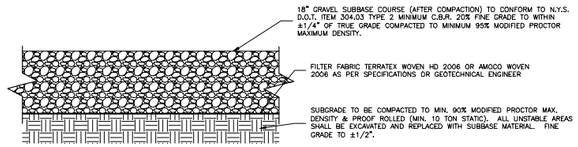
Drawing Title:
SITE, GRADING AND DRAINAGE PLAN

Approved by: TJM
Drawn by: STA

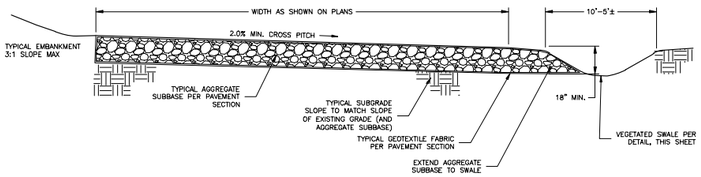
Dwg No: C-400 | Size: D | Sheet Rev: D

NOTES:

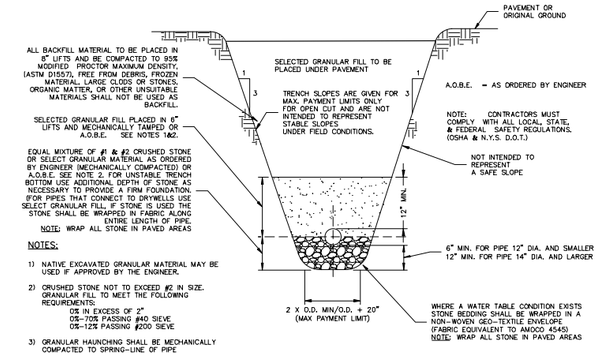
1. 6" UNSTABLE SUBGRADE IS ENCOUNTERED DURING CONSTRUCTION ENGINEER MUST BE NOTIFIED IMMEDIATELY.
2. SUBGRADE MUST BE PROOF-ROLLED PRIOR TO PLACEMENT OF CRUSHED STONE.



PAVEMENT SECTION



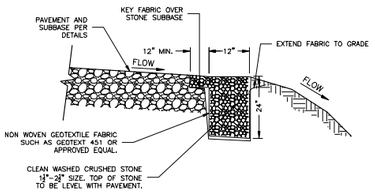
1 GRAVEL ACCESS DRIVE SECTION
C-500 NOT TO SCALE



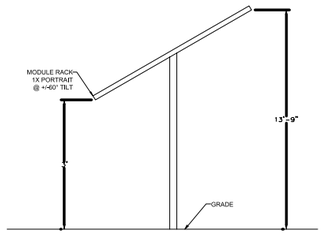
NOTES:

1) NATIVE EXCAVATED GRANULAR MATERIAL MAY BE USED IF APPROVED BY THE ENGINEER.
2) CRUSHED STONE NOT TO EXCEED #2 IN SIZE. GRANULAR FILL TO MEET THE FOLLOWING REQUIREMENTS:
   0% IN EXCESS OF 2"
   0%-70% PASSING #40 SIEVE
   0%-12% PASSING #200 SIEVE
3) GRANULAR HAUNCHING SHALL BE MECHANICALLY COMPACTED TO SPRING-LINE OF PIPE

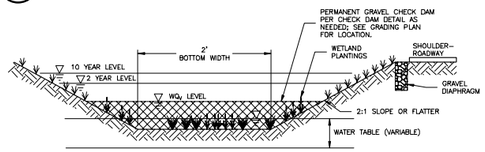
6 STORM TRENCH
C-500 NOT TO SCALE



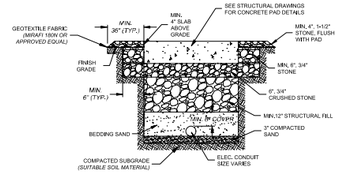
9 GRAVEL DIAPHRAGM
C-500 NOT TO SCALE



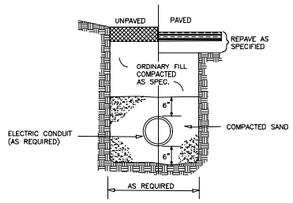
SOLAR ARRAY RACK DETAIL
13 C-500 NOT TO SCALE



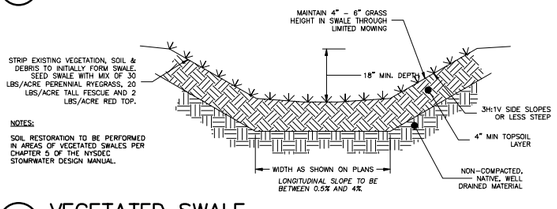
2 WET SWALE
C-500 NOT TO SCALE



SUBSOIL EQUIPMENT FOUNDATION DETAIL
7 C-500 NOT TO SCALE



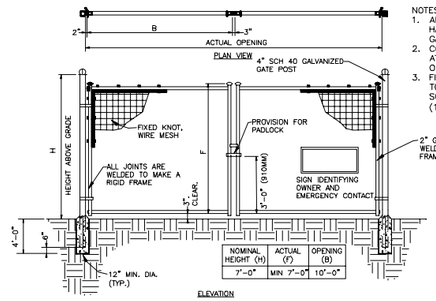
10 ELECTRIC CONDUIT TRENCH
C-500 NOT TO SCALE



NOTES:

SOIL RESTORATION TO BE PERFORMED IN AREAS OF VEGETATED SWALES PER CHAPTER 5 OF THE NYSDEC STORMWATER DESIGN MANUAL.

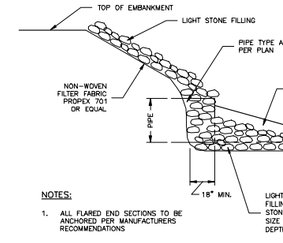
3 VEGETATED SWALE
C-500 NOT TO SCALE



NOTES

1. ALL FENCING AND HARDWARE SHALL BE GALVANIZED.
2. CONCRETE ENCASEMENT AT END AND GATE POSTS ONLY
3. FIXED KNOT WIRE MESH TO BE BAKAERT SOLIDLOCK PRO (15/84/6) OR EQUIVALENT

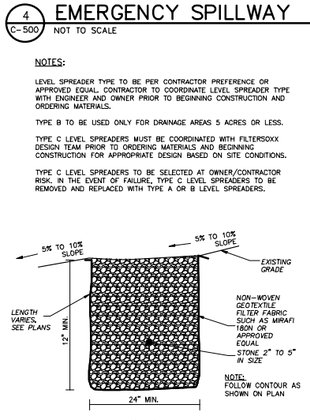
8 FIXED KNOT FARM FENCE – DOUBLE GATE
C-500 NOT TO SCALE



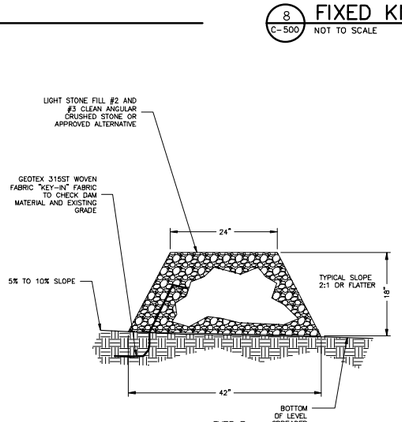
NOTES:

1. ALL FLARED END SECTIONS TO BE ANCHORED PER MANUFACTURERS RECOMMENDATIONS

11 FLARED END SECTION
C-500 NOT TO SCALE



TYPE A



TYPE B

5 LEVEL SPREADER
C-500 NOT TO SCALE

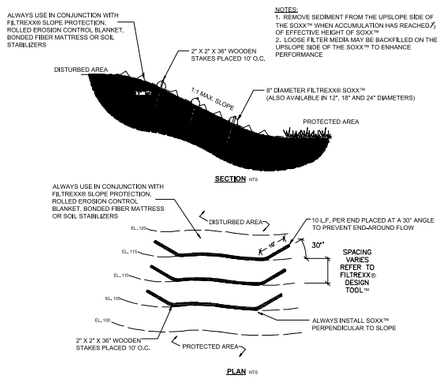
NOTES:

LEVEL SPREADER TYPE TO BE PER CONTRACTOR PREFERENCE OR APPROVED EQUAL. CONTRACTOR TO COORDINATE LEVEL SPREADER TYPE WITH ENGINEER AND OWNER PRIOR TO BEGINNING CONSTRUCTION AND ORDERING MATERIALS.

TYPE B TO BE USED ONLY FOR DRAINAGE AREAS 5 ACRES OR LESS.

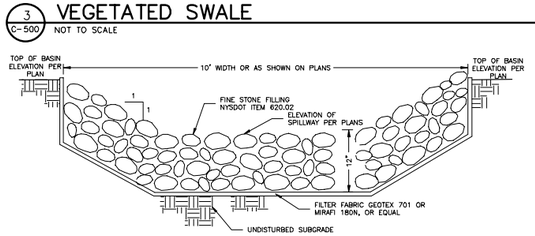
TYPE C LEVEL SPREADERS MUST BE COORDINATED WITH FILTERSOXX DESIGN TEAM PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION FOR APPROPRIATE DESIGN BASED ON SITE CONDITIONS.

TYPE C LEVEL SPREADERS TO BE SELECTED AT OWNER/CONTRACTOR RISK. IN THE EVENT OF FAILURE, TYPE C LEVEL SPREADERS TO BE REMOVED AND REPLACED WITH TYPE A OR B LEVEL SPREADERS.

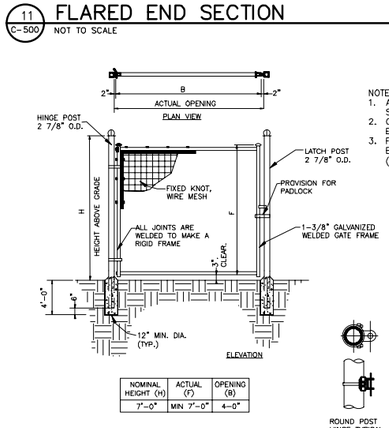


TYPE C

4 EMERGENCY SPILLWAY
C-500 NOT TO SCALE

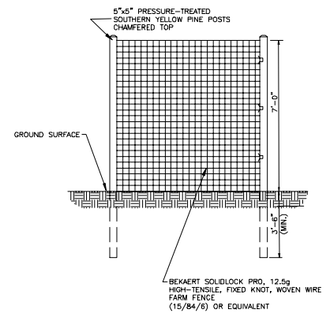


12 FIXED KNOT FARM FENCE – PERSONNEL GATE
C-500 NOT TO SCALE



NOTES

1. ALL FENCING AND HARDWARE SHALL BE GALVANIZED.
2. CONCRETE ENCASEMENT AT END AND GATE POSTS ONLY
3. FIXED KNOT WIRE MESH TO BE BAKAERT SOLIDLOCK PRO (15/84/6) OR EQUIVALENT



14 FIXED KNOT FARM FENCE
C-500 NOT TO SCALE

PLANS PREPARED BY :

ENVIRONMENTAL DESIGN PARTNERSHIP, LLP.
900 Route 146 Clifton Park, New York, 12065
(518) 371-7621 edpllp.com

nexamp
101 Summer Street, Boston, MA 02110
Tel: (617) 431-1440 Fax: (978) 416-2525 Web: nexamp.com

Rev	Issued For	Date
A	Civil Set	10/5/2020
B	Civil Set	10/13/2020
C	Civil Set	11/6/2020
D	ADDED WETLANDS	1/7/2021

P.E. seal/Consultant:

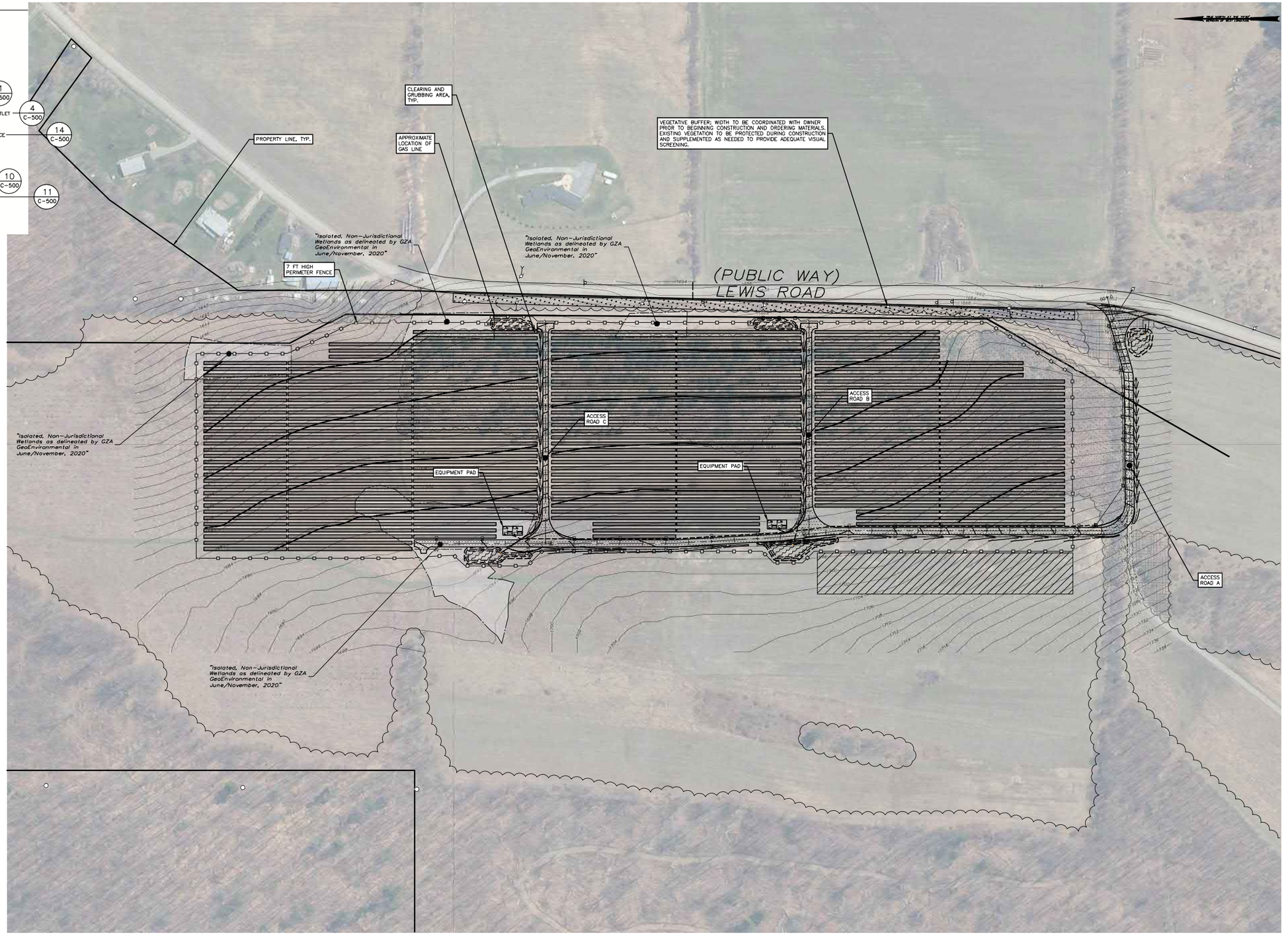
Project: Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

Drawing Title: SITE DETAILS
Approved by: TJM
Drawn by: STA

Dwg No: C-500 | Size: D | Sheet Rev: D

LEGEND:

- DENOTES EXISTING GRADE
- DENOTES BRUSH/TREE CLEARING AND GRUBBING AREA
- DENOTES TREE CLEARING AND GRUBBING AREA
- DENOTES GRAVEL ACCESS ROAD — 1 C-500
- DENOTES RIP-RAP OVERFLOW/INLET/OUTLET PROTECTION — 4 C-500
- DENOTES WIRE MESH/WOOD/METAL FENCE — 14 C-500
- DENOTES SOLAR PANEL TRACKER
- DENOTES MEDIUM VOLTAGE TRENCH — 10 C-500
- DENOTES FLARED END SECTION — 11 C-500
- DENOTES PROPOSED CONTOUR
- DENOTES LEVEL SPREADER — 5 C-500



GRAPHIC SCALE

100 80 60 40 20 0 50 100 200 400

(IN FEET)
1 INCH = 100 FT.

PLANS PREPARED BY :

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Rev	Issued For	Date
A	Civil Set	10/5/2020
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D	ADDED WETLANDS	1/7/2021

P.E. Seal/Consultant:

Project:
Thurston Ridge Solar
Lewis Road
Thurston, New York 14821

Drawing Title:
LANDSCAPING PLAN
Drawn by: STA
Approved by: TJM

Dwg No: L-100 | Size: D | Sheet Rev: A

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

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

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: N/A		☑	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: N/A		☑	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source:	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts:		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☑	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☑	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☑	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☑	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☑	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☑	☐

g. Other impacts: N/A		☑	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☑	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☑	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☑	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☑	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☑	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☑	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☑	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: Approximately 15 acres of forested area will be cleared or topped in the area and vicinity of the solar array. This area will be converted to meadow. Once the lease parcel agreement has terminated and the solar infrastructure is removed, the land will return to it's original state.	E1b	☐	☑
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☑	☐
j. Other impacts: N/A		☑	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☐ NO ☑ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☑
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☑	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☑
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☑
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☑	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☑	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☑	☐
h. Other impacts: _____		☑	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☑	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☑	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☑ ☑
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☑	☑ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☑	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile 250kwac Solar project exists roughly .5 miles north on lewis road ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☑	☐
g. Other impacts: _____		☑	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☐ NO ☑ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical 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.	E3e	☑	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: N/A	E3g	☑	☐

d. Other impacts: _____		☑	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____		☐	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. ☐ NO ☑ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☑
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☑	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☑	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☑	☐
e. Other Impacts: _____		☐	☐

15. Impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☐ NO ☑ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☑	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☑	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☑	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☑	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☑	☐
f. Other impacts: Typical site construction equipment during construction time frame (earth moving equipment and pile driving equipment for the solar panel posts)		☑	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts:			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☑	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☑	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☑	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☑	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☑	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☑	☐
g. Other impacts: Proposed solar facility is not an agricultural use, however, facility will be adequately screened from Lewis Road		☑	☐

PRINT FULL FORM

Agency Use Only [IfApplicable]

Project :

Date :

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See attached.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
Wetland Delineation Report, USFWS IPaC, NYS Department of Agriculture and Markets Notice of Intent filing and response, Phase 1A/1B Cultural Resources Survey, NYSOPRHP effect finding

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
New York State Energy Research and Development Authority as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Thurston Ridge Solar Farm

Name of Lead Agency: New York State Energy Research and Development Authority

Name of Responsible Officer in Lead Agency: Candace Rossi

Title of Responsible Officer: Project Manager

Signature of Responsible Officer in Lead Agency: Candace Rossi Date: 3/10/21

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Candace Rossi

Address: 17 Columbia Circle, Albany, NY 12203

Telephone Number: 866.697.3732

E-mail: Candace.Rossi@nyserda.ny.gov

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form
Part 3

The potential of the project to impact environmental and social-cultural resources was evaluated in Part 2 of the Full EAF. This evaluation also estimates the potential magnitude of the impact based on a series of examples and thresholds. Most of the data and research used in this evaluation was provided by the Applicant, Thurston Ridge Solar, LLC. The following provides more detailed information to evaluate the significance of each potential impact relative to the setting, probability of occurrence, duration, irreversibility, its geographic scope, magnitude, and the number of people affected.

Several environmental issues listed in Part 2 were determined unlikely to be impacted by this project. Each of these are mentioned briefly, indicating the reason for dismissing impacts.

- Geological Features – There are no unusual landforms or other geological features present at the project site that would be impacted by the project. Additionally, the project involves limited ground disturbance and generally shallow excavations.
- Groundwater – The project site is not located over a principal, primary or sole source aquifer and does not include activities that would store petroleum or hazardous chemicals or materials and does not include equipment or activities likely to intersect or contaminate groundwater resources.
- Air Resources – The project will not produce air pollutants or odors during operation that would impact air quality.
- Open Space and Recreation – The project is located on a private parcel of land that is not available to the public for recreation, fishing, hunting or public use of any kind. Additionally, the land is not designated as open space or identified in local plans for recreational uses.
- Critical Environmental Area – The project site is not located in a designated Critical Environmental Area.
- Transportation – The project is located in a rural area accessed by a low volume rural road. Although there will be some increase in traffic during construction, this is not expected to create any traffic issues. There will be no road closures or detours required. During operation, the site will not generate daily traffic. It will require periodic inspection and maintenance involving only one or two vehicles.
- Human Health – Solar facilities pose no real hazards or threats to people. The project site is not located within a high traffic area and is not located on public lands. Additionally, the site will be surrounded by security fence.
- Consistency with Community Plans – The Town of Thurston does not have zoning and there are no community plans that address this area or this type of use. It is recognized that the land use is different or inconsistent with the typical land uses of rural areas and it is recognized that the project will convert agricultural lands to non-agricultural uses on a temporary basis. Both of these issues/potential impacts are addressed separately in this Part 3 support documentation.

The following environmental/social-cultural issues may be impacted by the proposed project to some degree. This evaluation includes the potential for both small impacts and those identified as moderate to large in Part 2.

Impact on Land

The proposed project entails the construction of a solar farm on 21.6 acres of a 407.25-acre parcel of land. The site currently consists of a combination of open meadows and wooded areas with limited agricultural activities.

According to the Natural Resources Conservation Service, Steuben County Soil Survey, the water table is less than three feet in most of the project area, in some areas bedrock may be within 5 feet of the existing ground surface and there are areas with slopes of 15% or greater. Additionally, the project involves vegetation removal, which could result in an increase in erosion.

A stormwater analysis and Stormwater Pollution Prevention Plan (SWPPP) will be completed for the project prior to construction. The proposed grading and planned erosion control measures will prevent substantial erosion from occurring during construction and after completion of the project. Adherence to the soil and erosion control plan as required in the SWPPP will mitigate potential impacts. Therefore, no significant impacts to land are anticipated.

Impact on Surface Water

A wetland delineation was completed by GZA GeoEnvironmental of New York (GZA) in June and November 2020 (Attachment A). Approximately 2.1 acres of isolated non-jurisdictional wetland exist within the solar panel project area. The project will result in the permanent loss of 0.2 acres of isolated wetlands associated with the access road, stormwater basin and transformer pad. Additionally, 0.1 acres of wetland will be temporarily impacted during construction. The remaining wetland will be occupied by solar panels that will likely shadow and impact the vegetative communities in some manner. The applicant has indicated that preliminary discussions with the U.S. Army Corps of Engineers (USACE) suggests that the wetlands will be determined to be isolated and non-jurisdictional. However, the applicant had not received a jurisdictional determination from USACE as of the date of this SEQR process. Construction will not begin until the jurisdictional determination has been received. Should this determination indicate that the wetlands are federally jurisdictional, the applicant must obtain a permit for the impacts from USACE before construction can begin. There are no State regulated wetlands or regulated Adjacent Area within the project area.

The contractor will be responsible for identifying suitable areas for staging that are outside of the wetland areas. New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) permit rules, regulations and guidelines pertaining to solar facilities were considered in the preparation of a SWPPP and a Notice of Intent for Stormwater Discharges Associated with Construction Activity will be filed with the NYSDEC prior to construction. Therefore, the project will have no significant impact on surface water.

Impact on Flooding

Based on review of the Federal Emergency Management Agency (FEMA) Flood Map Service Center (https://msc.fema.gov/portal/home), there is no digital data available for the site.

The project will result in increased runoff from impermeable surfaces and will modify existing drainage patterns, however, erosion and sedimentation controls will mitigate potential impacts. Therefore, there will be no significant impact on flooding.

Impact on Plants and Animals

No state threatened or endangered species are mapped within the project area. The United States Fish & Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) database was also reviewed. The database indicates that the Northern long-eared bat (*Myotis septentrionalis*), a threatened species, could potentially be affected by activities in the project location. No critical habitats have been identified (Attachment B).

The project is expected to remove approximately 15 acres of forest within the project area. The trees to be removed primarily consist of conifers that are greater than 3" dbh. The Northern Long-Eared Bat 4(d) Rule allows for tree clearing during any time of the year. However, the USFWS has established best management practices (BMP) to further prevent impacts to the bat. The most commonly employed BMP is a time of year tree cutting restriction where cutting is limited to November 1 thru March 31 to prevent any direct impact to bats by cutting during the hibernation period, or restricting cutting during the pup season (June 1 to July 31), when new bats are being reared. With these BMP's, no significant adverse impacts to northern long-eared bat are anticipated.

The impact to forested area is mitigated by the relatively small acreage of forest being converted to meadow within the solar farm relative to the overall size of the parcel (407 acres) and vast areas of surrounding forested areas. Moreover, the area of forest being converted consists of successional species planted by the landowner within the last 15 years. Forested habitat in the project vicinity will remain available. Additionally, once the lease parcel agreement has terminated and the solar infrastructure is removed, the land can return to its original state or used for other purposes allowed by the Town, such as cropland.

While the proposed project will result in the removal of existing vegetation, a significant portion of the site is being retained in its natural state. The project will not have substantial interference with the movement of any resident or migratory fish or wildlife species, impacts on a significant habitat area; substantial adverse impacts on a threatened or endangered species of animal or plant, or the habitat of such a species; or other significant adverse impacts to natural resources. Therefore, there should be no significant impact to plants and animals.

Impact on Agricultural Resources - The project is located in an agricultural district (STEU006). Of the roughly 21 acres to be occupied by the proposed solar farm, approximately 13.5 acres has not been actively farmed for at least the last five years based on the woody successional vegetation present on the site. The remaining 7.5 acres of more recently farmed land is designated as

Farmland of Statewide Importance. However, the solar farm is temporary in nature with a definable lease term and decommissioning plan that will allow the impacted areas to be converted back to agricultural uses in the future.

The proposed action may result in the excavation or compaction of soil profile of active agricultural land. Of the roughly 7.5 acres of active agricultural land that will be occupied by the solar farm, a very limited portion of which will involve excavation or compaction of the soil profile. These impacted areas are limited to access roads and equipment pads accounting for less than 2 acres of active agricultural land. This minimal impact is further mitigated by the fact that the project will comply with the NYS Department of Agriculture and Markets Guidelines for Construction Mitigation for Agricultural Lands relative to soil restoration techniques.

As previously noted, the proposed 21-acre project will occupy less than 7.5 acres of active agricultural land and the entire project will comply with the NYS Department of Agriculture and Markets Guidelines for Construction Mitigation for Agricultural Lands. Additionally, given the limited lease term and required decommissioning plan, the proposed occupation of agricultural land is not considered irreversible.

A Notice of Intent (NOI) was required in accordance with the Agricultural Districts Law and Notice of Intent process. The project required approval by the NYS Department of Agriculture and Markets. An NOI was submitted on January 6, 2021.

The NYS Department of Agriculture and Markets reviewed the NOI and indicated in a letter dated February 16, 2021 (Attachment D), that they have determined that "the proposed action would not have an unreasonable adverse effect on the continuing viability of farm enterprises within the district or State environmental plans, policies and objectives." The letter indicates that this determination is due to NYSERDA's commitment to comply with the agreed upon mitigation that is represented in the NOI filing.

Based on the limited term agreement, a restoration plan for the land, approval of the NOI from the NYS Department of Agriculture and Markets, and the proposed best management practices, the project will have no significant impact on agricultural resources.

Impact on Aesthetic Resources

Land uses on and surrounding the project site include a mix of rural residences, farms, and forested areas. The project area will be converted from open and wooded areas to a solar farm. The project area may be visible from publicly accessible vantage points along Lewis Road (both seasonally and year-round) by residents travelling to and from work. The combination of the low-volume rural roadway, existing roadside vegetation to remain in place and very limited viewing distance of less than half a mile, mitigates this concern. Additionally, solar panels are present approximately 0.5 miles north on Lewis Road. Although this is not what is typically thought of as a rural use and could be considered in conflict with the rural character, the size of the project is small and these uses are becoming more prevalent in rural areas. These projects are also generally best suited to the large open parcels available in agricultural areas. Additionally, the use is not in conflict with Town plans or zoning. Therefore, there should be no significant impact to aesthetic resources.

Impact on Historic and Archeological Resources

A Phase 1A/1B Cultural Resources Survey was completed by Birchwood Archaeological Services, Inc. in February 2021 (Attachment D). The results of the study indicate that no archeological resources were identified and no additional archaeological studies appear necessary. The survey was submitted to the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP).

The NYSOPRHP reviewed the project and indicated in a letter dated February 11, 2021, that no properties, including archeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by the project (Attachment D). Therefore, there will be no significant impact to Historic and Archeological Resources.

Impact on Energy

The solar facility will connect to the existing overhead electric grid on Lewis Road. The project will not create a major change in the use of either the quantity or type of energy. However, the project does require an upgrade to an existing substation. The upgrade is not the result of an increased power demand, but rather the result of supplying power to the existing power grid from the proposed solar facility. The project sponsor is actively working with the local utility provider to complete the necessary upgrades. There should be no significant impact on energy.

Impact on Noise and Light

The equipment proposed on site generates very little noise and is placed far enough away from any property lines that it will not substantially increase ambient noise levels.

There will be temporary/short term noise impacts from construction of the project. This impact will take place from Monday through Friday from the hours of 7am to 5pm. Work on Sundays and holidays to be determined (as needed). The project is anticipated to take approximately 6 months.

Minimal security lighting at the project entrance may be considered. If needed, downlighting will be used. No significant adverse impacts associated with noise or light are anticipated.

Consistency with Community Character

The project does not impair the character or quality of important historical, archeological, architectural, or aesthetic resources or of existing community or neighborhood character. The proposed solar facility is not an agricultural use; however, the facility will be adequately screened from Lewis Road. Additionally, as previously mentioned, the solar farm is temporary with a decommissioning plan that will allow the impacted areas to be converted back to agricultural uses in the future. Therefore, there should be no significant impact to community character.

Attachment A

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GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

GZA GeoEnvironmental of New York
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East Syracuse, NY 13057
T: 315.800.1800
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www.gza.com

November 18, 2020
File No. 31.0180320.00

Ryan McCune, Business Development Manager
Nexamp
101 Summer Street, 2nd Floor
Boston, MA 02110

Re: Wetland Delineation Findings
25257- Deerfield Solar PV Site
3905 Lewis Road
Thurston, New York
Tax Parcel ID: 277.00-01-010.000

Dear Mr. McCune,

Pursuant to our proposal dated March 25, 2020, GZA GeoEnvironmental of New York (GZA) reviewed the above referenced property for the presence of regulated wetland and waterbody resources relative to current New York State and Federal methodologies. This letter summarizes the findings GZA's desktop review and field delineation.

Introduction

GZA was retained by Nexamp (Client) to perform a wetland delineation on a portion of the property located at 3905 Lewis Road (SBL: 277.00-01-010.000) in the Town of Thurston, Steuben County, New York (Site). The Site is 414.93 acres and the limits of the project area for the wetland delineation are the portions of the tax parcel that would be utilized for the footprint of the proposed solar array as identified in the conceptual design provided by Nexamp. The project area (Project Area) consists of approximately 21.73 acres of active agricultural fields, fallow agricultural land and planted evergreen trees. See **Figure 1** for the Site Location Map.

GPS data for wetlands, waterbodies and other key site features were obtained in the field using a sub-meter Global Positioning System (GPS). GZA identified and delineated two wetland areas within the Project Area. A Photo log is provided as **Appendix A.**

Desktop Review Summary

GZA reviewed publicly-available environmental data including: the New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands Map[1], the U.S.

[1] New York State Department of Environmental Conservation, Environmental Resource Mapper, 2020 [Website]. Available at: http://www.dec.ny.gov/gis/erm/

Fish and Wildlife Service (USFWS) National Wetland Inventory Map[2], United States Geological Survey (USGS) National Mapper[3], and the Natural Resources Conservation Service (NRCS) Web Soil Survey Map[4].

The Project Area is approximately 21.7 acres of undeveloped land and is located at 3905 Lewis Road, Thurston, NY. The Project Area is moderately sloped 3.5% to the northeast, with elevations ranging from 1655 feet above mean sea level (msl) to 1730 feet msl.

A review of the NYSDEC Freshwater Wetlands Mapper does not identify any state regulated wetlands on or near the Site. The nearest mapped state wetland (RB-5) is located 0.4 miles west of the Site. The USFWS National Wetland Inventory (NWI) mapper **(Figure 2)** does not identify any mapped resources on the Site. The nearest mapped NWI wetland is located 0.25 miles to the east of the Site and coincides with a DEC class C intermittent stream.

The NRCS Steuben County Soil Survey map provided in **Appendix C,** available online through the Web Soil Survey https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm mapped the following soils at the Project area: Lordstown channery silt loam, Mardin channery silt loam, and Volusia channery silt loam soil series.

Lordstown channery silt loam is not prime farmland, is well drained, has a restrictive lithic bedrock feature at a depth of 20 to 40 inches, and is nonhydric. Lordstown channery silt loam makes up 7.5% of the Site. Mardin channery silt loam is farmland of statewide importance, is moderately well drained, has a restrictive fragipan feature at a depth of 14 to 26 inches, and is nonhydric. Mardin channery silt loam makes up 41.7% of the Site. Volusia channery silt loam (3 to 8% slopes) is farmland of statewide importance, somewhat poorly drained, has a restrictive fragipan feature at a depth of 10 to 22 inches, and is 5% hydric. Volusia channery silt loam (3 to 8% slopes) makes up 35.6% of the Site. Volusia channery silt loam (8 to 15% slopes) is classified as farmland of statewide importance, somewhat poorly drained, has a restrictive fragipan feature at a depth of 10 to 22 inches, and is 4% hydric. Volusia channery silt loam (8 to 15% slopes) makes up 15.2% of the Site.

There are no streams mapped within the Site. An unnamed tributary to Michigan Creek is located 0.25 miles east of the Site Parcel. The tributary and Michigan Creek are designated with a water quality value of Class C with C standards. To be designated as a New York State protected stream under 6 NYCRR Part 608- Use and Protection of Streams, a Class or Standard of C with C(T) or higher designation is required. Therefore, the stream is not a New York protected stream under Article 15 ECL-Protection of Waters.

A review of aerial photographs dating back to 1938 shows that the Project area has been historically and consistently used for agricultural. There is no evidence of saturation visible on current or historic imagery and no apparent hydrologic alterations, such as tile drainage, are visible. The gas pipeline along the east side of the project area appears to have been installed during 2008.

[2] U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetland Mapper, 2020 [Website]. Available at: https://www.fsw.gov/wetaldns/data/mapper.html
[3] U.S. Geological Survey, The National Map, 2020 [Website]. Available at: https://viewer.nationalmap.gov/advanced-viewer/
[4] United States Department of Agriculture, National Resource Conservation Service, Web Soil Survey, 2020 [Website]. Available at: https://websilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

Assessment Findings

GZA wetland scientists conducted a preliminary wetland and waterbody delineation on June 25 of the Project Area, followed by a second site visit on November 10, 2020 to finalize the delineation. Wetlands and waterbodies were delineated using the methodology outlined in the *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, using the Routine Determination Method; in conjunction with the Regional Supplement to the Corps 1987 Wetland Delineation Manual: North Central and Northeast Region, Technical Report ERDC/EL TR-09-19; North American Digital Flora: National Wetland Plant List, Version 2.4.0 US Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH and BONAP, Chapel Hill, NC (2012); and *Field Indicators for Identifying Hydric Soils* in New England, Version 3 (2004).

GZA's wetland delineation identified two wetland mosaics within the Project area. According to the Regional Supplement to the Corps 1987 Wetland Delineation Manual: North Central and Northeast Region, mosaics "refer to a landscape where wetland and non-wetland components are too closely associated to be easily delineated or mapped separately. These areas often have complex microtopography, with repeated small changes in elevation occurring over short distances." In addition to having a wetland/non-wetland mosaic, the Project area also contained problematic hydrophytic vegetation, problematic hydric soils and lacked primary indicators of wetland hydrology. Wetland determinations on problematic sites have a modified procedure and are based on the best information available to the field inspector.

Problematic hydrophytic vegetation within the Project area called for a modified delineation procedure. For example, the pipeline right-of-way crosses through wetland T2. The dominant plant species growing in this location was reed canary grass (*Phalaris arundinacea*, FACW), a common component of restoration seed mixes and often found growing in previously disturbed areas. Wetland T2 is in an area within the landscape position likely to collect water runoff and contained eastern white pine (*Pinus strobus*, FACU) (a species that commonly dominates wetlands) and therefore, per method prescribed by the Regional Supplement for delineating within areas of Problematic Hydrophytic Vegetation, this species was dropped from the coverage data[5].

The project area contained problematic hydric soils in both wetland and upload areas. Mapped soil in the project area are described to have a shallow restrictive feature (fragipan). In multiple soil test pit locations across the Site in both upland and wetland areas, refusal was met at 6-8 inches deep.

The project area lacked primary hydrology indicators of wetlands and is altered by active agricultural practices. Aerial imagery was reviewed dating back to 1938, and saturation patterns were not visible on the Project Area or adjacent to the Project Area. Observed hydrology indicators consisted of secondary indicators.

GZA delineated wetland and waterbody resources are described as:

<u>Wetland Mosaic T1</u>

Wetland Mosaic T1 is 1.29 acres in size and is located on the western edge of the Site (**Figure 3).** This area is considered a wetland/non-wetland mosaic with approximately 40% wetland and 60% upland based on a visual assessment.

[5] Regional Supplement to the Corps 1987 Wetland Delineation Manual: North Central and Northeast Region, Technical Report ERDC/EL TR-09-19

The vegetation within the mosaic contains emergent wetland vegetation. Wetland vegetation in herb stratum consisted of dark green bullrush (*Scirpus atrovirens,* OBL*),* reed canary grass, soft rush (*Juncus effusus*, OBL). The vegetation within the non-wetland portions of the mosaic include Canada goldenrod (*Solidago canadensis,* FACU), timothy grass (*Phleum pratense,* FACU), and honeysuckle (*Lonicera sp.*). Soils exhibited hydric conditions such as redoximorphic features and showed low matrix chromas with mottles, but due to refusal at shallow depths the criteria could not be met for any hydric soil indicators. Due to the channery and fragipan components of the soils, refusal was met at 6 to 8 inches at multiple soil test pit locations. Hydrologic indicators were secondary indicators and included microtopographic relief and the FAC-Neutral test.

Wetland Mosaic T2

Wetland Mosaic T2 is 0.55 acres in size and is located on the eastern edge of the Site (**Figure 3).** This area is considered a wetland mosaic with approximately 60% wetland.

The vegetation within the mosaic contains emergent wetland vegetation. Wetland vegetation in herb stratum consisted of dark green bullrush, reed canary grass, woolgrass (*Scirpus cyperinus,* OBL) and false hop sedge (*Carex lupuliformis,* OBL). The vegetation within the non-wetland portions of the mosaic include goldenrod (*Solidago sp.*), timothy grass, and eastern white pine. Soils exhibited hydric conditions such as redoximorphic features and showed low matrix chromas with mottles, but due to refusal at shallow depths the criteria could not be met for any hydric soil indicators. Due to the channery and fragipan components of the soils, refusal was met at 6 inches at multiple soil test pit locations. Hydrologic indicators included microtopographic relief, geomorphic position, and the FAC-Neutral test.

Wetlands were assigned a cover type based on the Cowardian classification system. Wetlands T1&T2 are palustrine emergent wetlands (PEM). Palustrine emergent wetlands are inland, nontidal wetlands characterized by an herbaceous layer of hydrophytic plant species.

The wetlands on Site have no apparent surface hydrologic connection to traditional navigable waters (TNW). Based on topography [6], overland flow is directed offsite to the northeast. There is a roadside ditch and culvert under Lewis Road conveying surface water to the east through an agricultural field and hedgerow. At the time of the site visits, there was no water in the ditch. The area to the north of the Site is undeveloped forested land. The adjacent land to the east is agricultural and residential.

Regulatory Authority

New York State Department of Environmental Conservation

The Freshwater Wetlands Act [Article 24 and Title 23 of Article 71 of the Environmental Conservation Law (ECL)] gives the NYSDEC jurisdiction over state-protected wetlands and an adjacent 100-foot protective upland buffer area.

There are no mapped NYSDEC Freshwater wetlands on or near the Site and due to the size of the delineated wetlands (1.84 acres cumulative), therefore NYSDEC does not have jurisdiction over the delineated wetlands on the Site.

[6] U.S. Geological Survey, The National Map, 2020 [Website]. Available at: https://viewer.nationalmap.gov/advanced-viewer/

United States Army Corps of Engineers

In accordance with Section 404 of the Clean Water Act (CWA), the USACE asserts jurisdiction over Waters of the United States (WOTUS). WOTUS are defined as wetlands, streams, and other aquatic resources under the regulatory authority per Title 33 Code of Federal Regulations (CFR) Part 328 and the United States Environmental Protection Agency (EPA) per Title 40 CFR Part 230.3(s). Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[c]).

The EPA published the Navigable Waters Protection Rule on April 21, 2020 and became effective on June 22, 2020. This rule revised the definition of WOTUS under the CWA. The document outlined major key points defined below.

The USACE will assert jurisdiction over the following waters:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (i.e., typically three months); and
- Wetlands that directly abut such tributaries.

The USACE generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); and
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities).

The wetlands on Site have no apparent surface hydrologic connection to traditional navigable waters (TNW). Based on topography [7], overland flow is directed offsite to the northeast. If the proposed project activity includes work within the delineated wetlands, coordination with USACE would be recommended to determine whether USACE has jurisdiction over the delineated wetlands in the Project Area, and therefore would require a permit.

Conclusions

- The field delineation conducted first conducted in June and supplemented by a second visit in November 2020 identified two wetland mosaics (Wetland T1- 1.29 acres; Wetland T2- 0.55 acres) located on the Project Area. The Project area contained problematic hydrophytic vegetation due to prior disturbance and active agriculture, and problematic hydric soils due to the shallow depth to a restrictive feature.

[7] U.S. Geological Survey, The National Map, 2020 [Website]. Available at: https://viewer.nationalmap.gov/advanced-viewer/

- There are no mapped NYSDEC Freshwater wetlands on or near the Site and due to the size of the delineated wetlands (1.84 acres total), NYSDEC does not have jurisdiction over the delineated wetlands on the Site.
- Based on observed lack of hydrologic connectivity, the wetlands identified within the Project Area are not likely to be considered jurisdictional by the USACE under Section 404 of the Clean Water Act. Final determination of the jurisdictional status of the wetlands identified within the Project Area would be made by the USACE by an approved jurisdictional determination process.
- If the proposed project activity includes work within the delineated wetlands, coordination with USACE would be recommended to determine if a permit would be required.

We hope this satisfies your present needs. If you need additional information, please contact Julia Braunmueller at (315) 415-2021 or by email at Julia.braunmueller@gza.com.

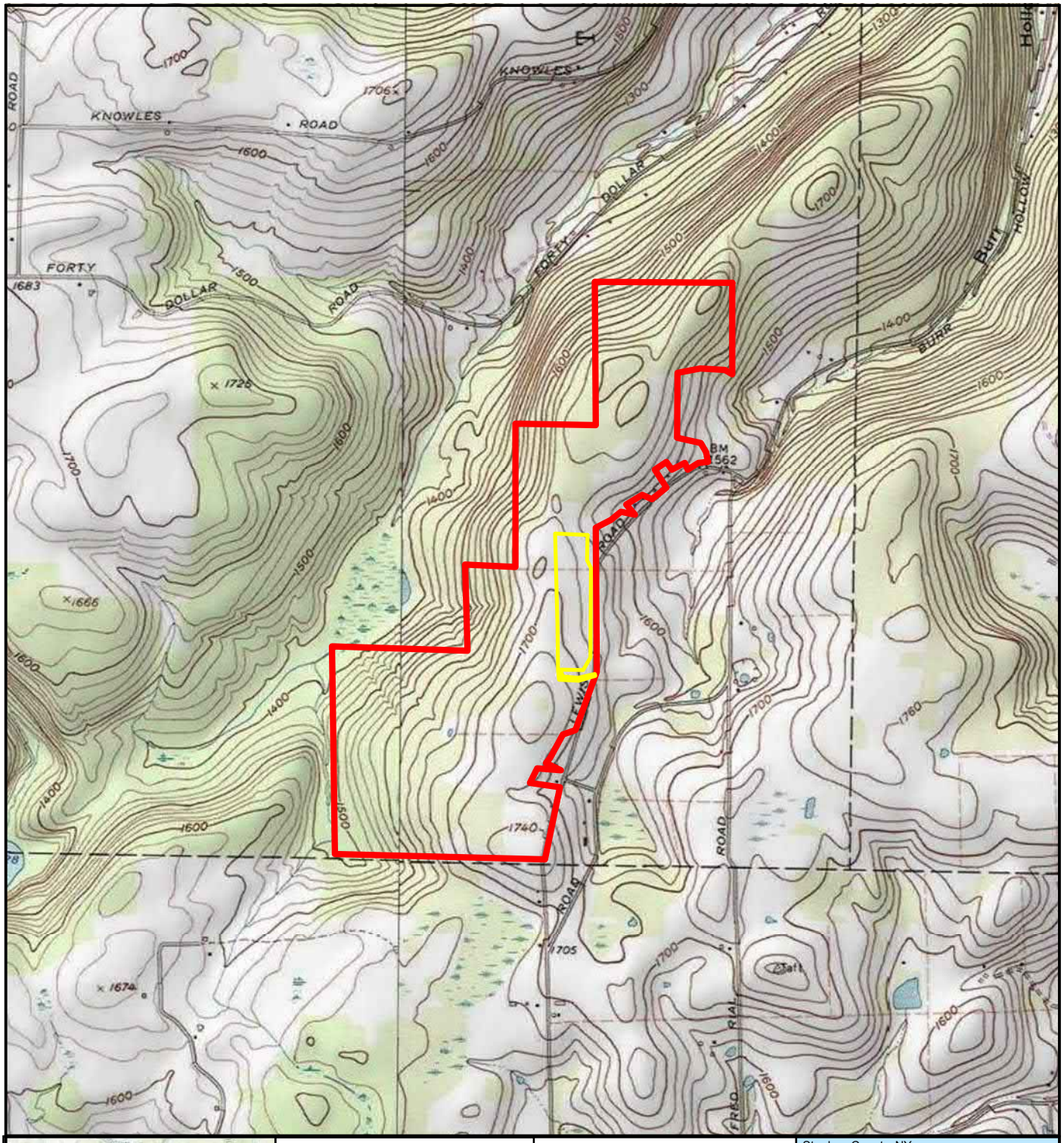
Sincerely,
GZA GeoEnvironmental, Inc.

Julia B. Braunmueller
Senior Project Manager

Deborah M. Zarta Gier, CNRP
Principal in Charge

Kimberly K. Degutis, PWS, CESCL
Consultant Reviewer

Attachments:
Figure 1 Site Location
Figure 2 Resource Map
Figure 3 Wetland Map
Appendix A- Photo Log
Appendix B- Data Forms
Appendix C- Soil Report



LEGEND

- Project Site
- Tax Parcel

DATA SOURCE
UNITED STATE GEOLOGICAL SURVEY 24K
CAMPBELL QUADRANGLE NEW YORK

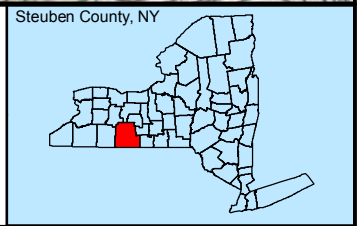
PROJECT STUDY LIMITS: 21.73 ACRES

CENTER OF PROJECT STUDY LIMITS:
42.193°, -77.241° WGS 84

PROJECT USGS QUAD(S):
CAMPBELL QUADRANGLE

0 1,000 2,000 Feet

N W E S



DEERFIELD STEUBEN SOLAR SITE
CRITICAL ISSUES ANALYSIS
TOWN OF THURSTON, NEW YORK

SITE LOCATION MAP

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

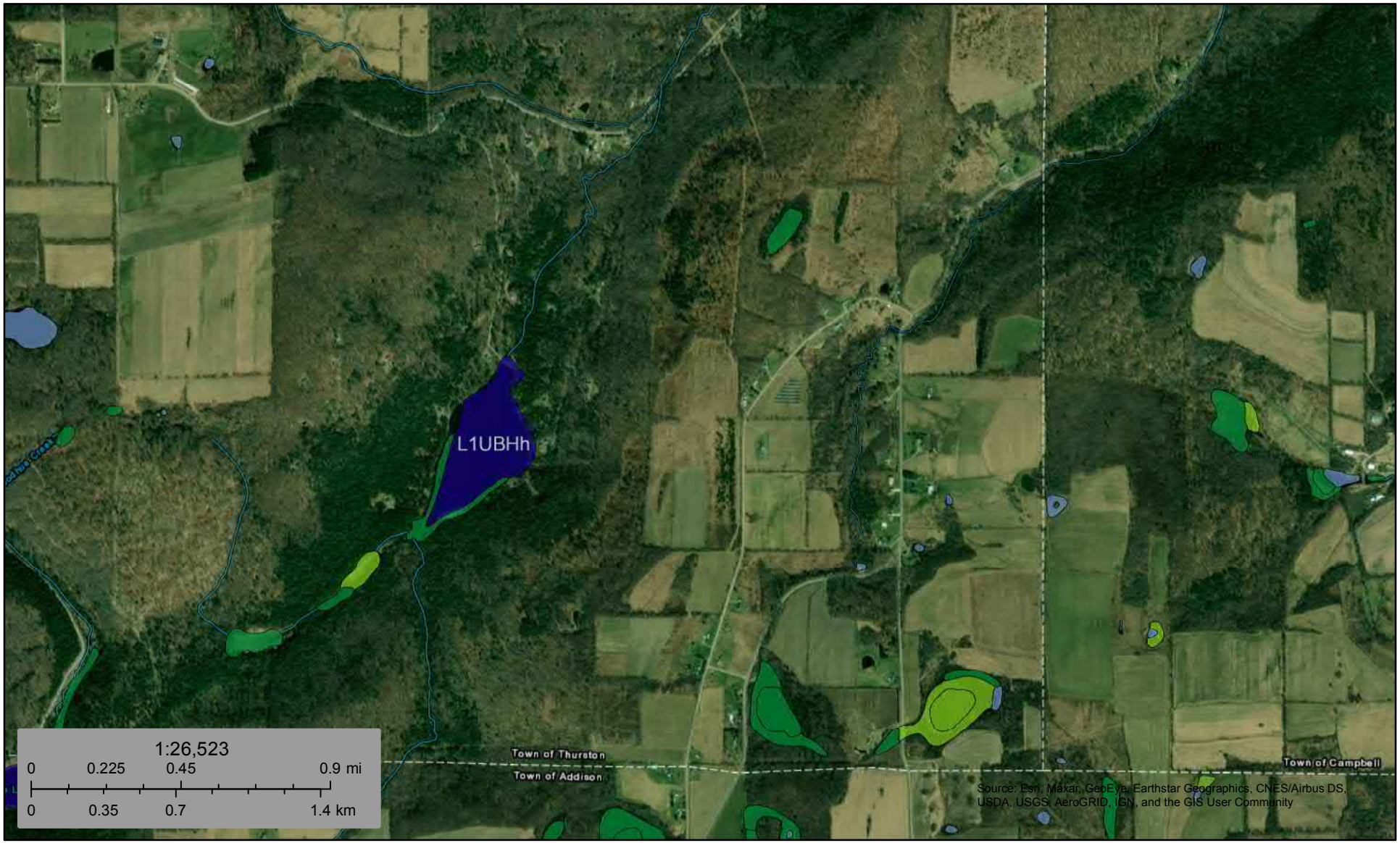
PREPARED FOR:
NEXAMP, INC.
101 SUMMER STREET
BOSTON, MA 02110

PROJ MGR:	JBB	REVIEWED BY:	JBB	CHECKED BY: DMZ	FIGURE 1
DESIGNED BY:	ARD	DRAWN BY:	ARD	SCALE: 1 inch = 2,000 feet	
DATE: 11/18/2020		PROJECT NO. 31.0180320.00		REVISION NO.	SHEET NO. 1 OF 3

 J:\31.0180320.00 Nexamp Deerfield Steuben Solar Site\GIS\Figure 1 - Site Location.mxd, 11/18/2020, 4:05:06 PM, rachel.radicello

U.S. Fish and Wildlife Service
National Wetlands Inventory

Nexamp Steuben



November 16, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

LEGEND

- Datasheet
- Culvert
- Delineated Wetlands
- Gas Pipeline
- Project Site
- Tax Parcel
- Roads
- DEC Streams
- DEC Wetlands

NOTES

1) THIS MAP CONTAINS THE ESRI ArcGIS ONLINE WORLD IMAGERY MAP SERVICE, PUBLISHED DECEMBER 12, 2009 BY ESRI ARCGIS SERVICES AND UPDATED OFTEN. THIS SERVICE USES UNIFORM NATIONALLY RECOGNIZED DATUM AND CARTOGRAPHY STANDARDS AND A VARIETY OF AVAILABLE SOURCES FROM SEVERAL DATA PROVIDERS.
2) STREETS, TAX PARCEL, DEC WETLAND AND STREAM DATA WERE OBTAINED FROM THE NYS GIS CLEARINGHOUSE DATA LIBRARY, AND SHOULD BE CONSIDERED APPROXIMATE.

0 150 300 600

SCALE IN FEET

N W E S

DEERFIELD STEUBEN SITE
TOWN OF THURSTON, NEW YORK

WETLANDS AND SURFACE WATERS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: NEXAMP, INC. 101 SUMMER STREET BOSTON, MA 02110

PROJ MGR: JBB	REVIEWED BY: JBB	CHECKED BY: DMZ	FIG 3
DESIGNED BY: RMR	DRAWN BY: RMR	SCALE: 1 in = 300 ft	
DATE: 11/16/20	PROJECT NO: 31.0180320.00	REVISION NO:	SHEET NO: 3 OF 3

APPENDIX A: PHOTO LOG

Photographic Log

Client Name: Nexamp, Inc.	**Site Location:** 25257 Deerfield Steuben PV Site	**Project No.** 31.0180320.00

Photo No.	**Date:**
1	6/25/20

Direction Photo Taken:
South

Description:
The central portion of the Project Area at the edge of the active agricultural field.

Photo No.	**Date:**
2	6/25/20

Direction Photo Taken:
Southeast

Description:
The central portion of the Project Area is an active agricultural field planted with corn.

Photographic Log

Client Name: Nexamp, Inc.	**Site Location:** 25257 Deerfield Steuben PV Site	**Project No.** 31.0180320.00

Photo No.	**Date:**
3	6/25/20

Direction Photo Taken:
Northeast

Description:
Field delineated wetland T1 along the western edge of the Project Area.

Photo No.	**Date:**
4	6/25/20

Direction Photo Taken:
South

Description:
Field delineated wetland T1 along the western edge of the Project Area.

Photographic Log

Client Name: Nexamp, Inc.	Site Location: 25257 Deerfield Steuben PV Site	Project No. 31.0180320.00

Photo No.	Date:
5	6/25/20

Direction Photo Taken:
North

Description:
Field delineated wetland T2 along the eastern edge of the Project Area.

Photo No.	Date:
6	6/25/20

Direction Photo Taken:
South

Description:
Field delineated wetland T2 along the eastern edge of the Project Area.

Photographic Log

Client Name: Nexamp, Inc.	**Site Location:** 25257 Deerfield Steuben PV Site	**Project No.** 31.0180320.00

Photo No.	**Date:**
7	6/25/20

Direction Photo Taken:
West

Description:
At the southern edge of the active agricultural field, near to the proposed access road through the hedgerow.

Photo No.	**Date:**
8	6/25/20

Direction Photo Taken:
Northeast

Description:
A gas pipeline marker along the eastern edge of the Project Area.

Photographic Log

Client Name: Nexamp, Inc.	Site Location: 25257 Deerfield Steuben PV Site	Project No. 31.0180320.00

Photo No.	Date:
9	11/10/20

Direction Photo Taken:
North

Description:
Field delineated wetland T2 along the eastern edge of the Project Area.

Photo No.	Date:
10	11/10/20

Direction Photo Taken:
South

Description:
Field delineated wetland T1 along the western edge of the Project Area.

APPENDIX B: DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Steuben Wetlands City/County: Steuben Sampling Date: 11-10-20

Applicant/Owner: State: NY Sampling Point: 1

Investigator(s): RMR Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Volusia channery silt loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
isolated wetland mosaic and soil depth not available to meet indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Standing water in June and dry in November

VEGETATION – Use scientific names of plants. Sampling Point: 1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*			FACU
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Lonicera*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Solidago*			
2. *Scirpus atrovirens*	15	Yes	OBL
3. *Solidago gigantea*	25	Yes	FACW
4. *Scirpus cyperinus*	5	No	OBL
5. *Carex lupuliformis*	5	No	OBL
6. *Phalaris arundinacea*			FACW
7.			
8.			
9.			
10.			
11.			
12.			
	50 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		75 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/2	90	5YR 4/6	10	C	M	Loamy/Clayey	rocky, refusal at 8"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Steuben Wetlands City/County: Steuben Sampling Date: 11-10-20

Applicant/Owner: State: NY Sampling Point: 2

Investigator(s): RMR Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Volusia channery silt loam, 8 to 15 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Lonicera canadensis*			FACU
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size:)			
1. *Solidago*			
2. *Phleum pratense*	25	Yes	FACU
3. *Solidago canadensis*	50	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	95	7.5YR 4/4	5	C	M	Loamy/Clayey	rocky, refusal at 4"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Steuben Wetlands City/County: Steuben Sampling Date: 11-10-20

Applicant/Owner: State: NY Sampling Point: 3

Investigator(s): RMR Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Lordstown channery silt loam, 12 to 20 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
isolated wetland mosaic and soil depth not available to meet indicators

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1. *Picea pungens*	2	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	2 =Total Cover		
Herb Stratum (Plot size:)			
1.			
2. *Phleum pratense*	10	No	FACU
3. *Phalaris arundinacea*			FACW
4. *Juncus effusus*	10	No	OBL
5. *Scirpus atrovirens*	15	Yes	OBL
6. *Solidago canadensis*	15	Yes	FACU
7. *Solidago gigantea*	25	Yes	FACW
8.			
9.			
10.			
11.			
12.			
	75 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	25	x 2 =	50
FAC species	0	x 3 =	0
FACU species	27	x 4 =	108
UPL species	0	x 5 =	0
Column Totals:	77 (A)		183 (B)

Prevalence Index = B/A = 2.38

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	99					Loamy/Clayey	rocky, refusal at 6"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Steuben Wetlands City/County: Steuben Sampling Date: 11-10-20

Applicant/Owner: State: NY Sampling Point: 4

Investigator(s): RMR Section, Township, Range:

Landform (hillside, terrace, etc.): Local relief (concave, convex, none): Slope %:

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Volusia channery silt loam, 8 to 15 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
edge of ag field

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 4

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size:)			
1. *Solidago*	50	Yes	
2. *Amaranthus*	10	No	
3. *Phleum pratense*	25	Yes	FACU
4. *Taraxacum officinale*	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	35	x 4 =	140
UPL species	0	x 5 =	0
Column Totals:	35 (A)		140 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 5/3	100					Loamy/Clayey	rocky, refusal at 6"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ? Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

APPENDIX C: Soil Report

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 Steuben County, New York

March 23, 2020

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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Contents

How Soil Surveys Are Made

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

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

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

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

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

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

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

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

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

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

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

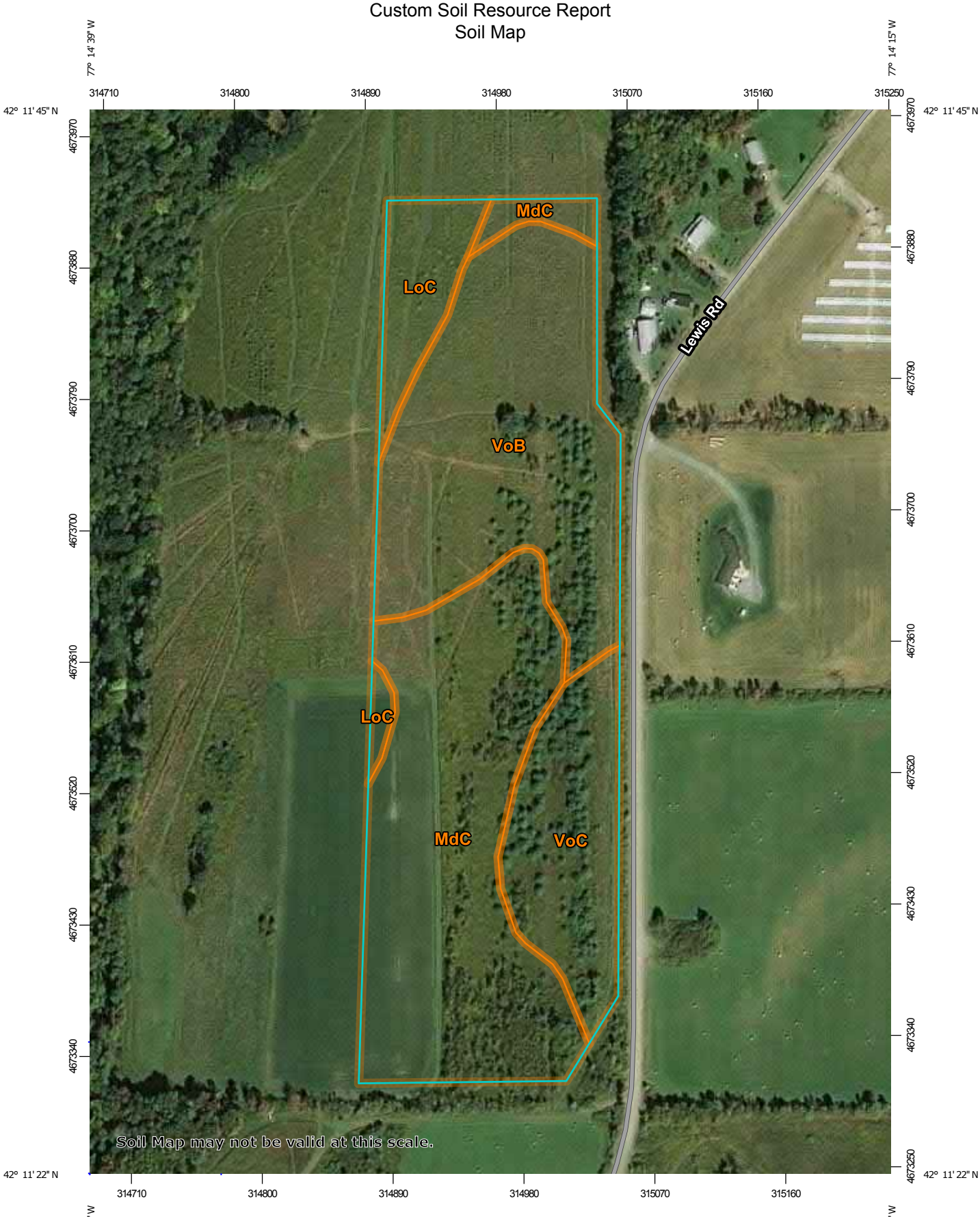
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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: Steuben County, New York
Survey Area Data: Version 16, Sep 16, 2019

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

Date(s) aerial images were photographed: May 21, 2019—Sep 22, 2019

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
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	3.7	15.2%
Totals for Area of Interest		**24.6**	**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.

Steuben County, New York

LoC—Lordstown channery silt loam, 12 to 20 percent slopes

Map Unit Setting

National map unit symbol: 2wzlv
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

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

Description of Lordstown

Setting

Landform: Mountains, hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Mountaintop, crest, nose slope, side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Loamy till derived from sandstone and siltstone

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw1 - 9 to 17 inches: channery silt loam
Bw2 - 17 to 24 inches: very channery silt loam
C - 24 to 30 inches: extremely channery silt loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 12 to 20 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural 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
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Arnot

Percent of map unit: 5 percent
Landform: Mountains, hills
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Mountaintop, interfluve, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

Mardin and similar soils: 88 percent
Minor components: 12 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mardin

Setting

Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy till

Typical profile

Ap - 0 to 8 inches: channery silt loam
BE - 8 to 12 inches: channery silt loam
Bw1 - 12 to 16 inches: channery silt loam
Bw2 - 16 to 20 inches: channery silt loam

Bx1 - 20 to 36 inches: channery silt loam
Bx2 - 36 to 57 inches: channery silt loam
C - 57 to 72 inches: channery silt loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 14 to 26 inches to fragipan
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 13 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Bath

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Nose slope, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Volusia

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve, side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Lordstown

Percent of map unit: 2 percent
Landform: Mountains, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountaintop, side slope, nose slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

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

Description of Volusia

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Hydric soil rating: No

Minor Components

Chippewa

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

Mardin

Percent of map unit: 5 percent
Landform: Hills, mountains
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

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

Map Unit Setting

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

Map Unit Composition

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

Description of Volusia

Setting

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

Typical profile

Ap - 0 to 9 inches: channery silt loam
Bw - 9 to 15 inches: channery silt loam
Eg - 15 to 17 inches: channery silt loam

Bx1 - 17 to 29 inches: channery loam
Bx2 - 29 to 54 inches: channery loam
C - 54 to 72 inches: channery silt loam

Properties and qualities

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

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Mardin

Percent of map unit: 6 percent
Landform: Hills, mountains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Chippewa

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

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

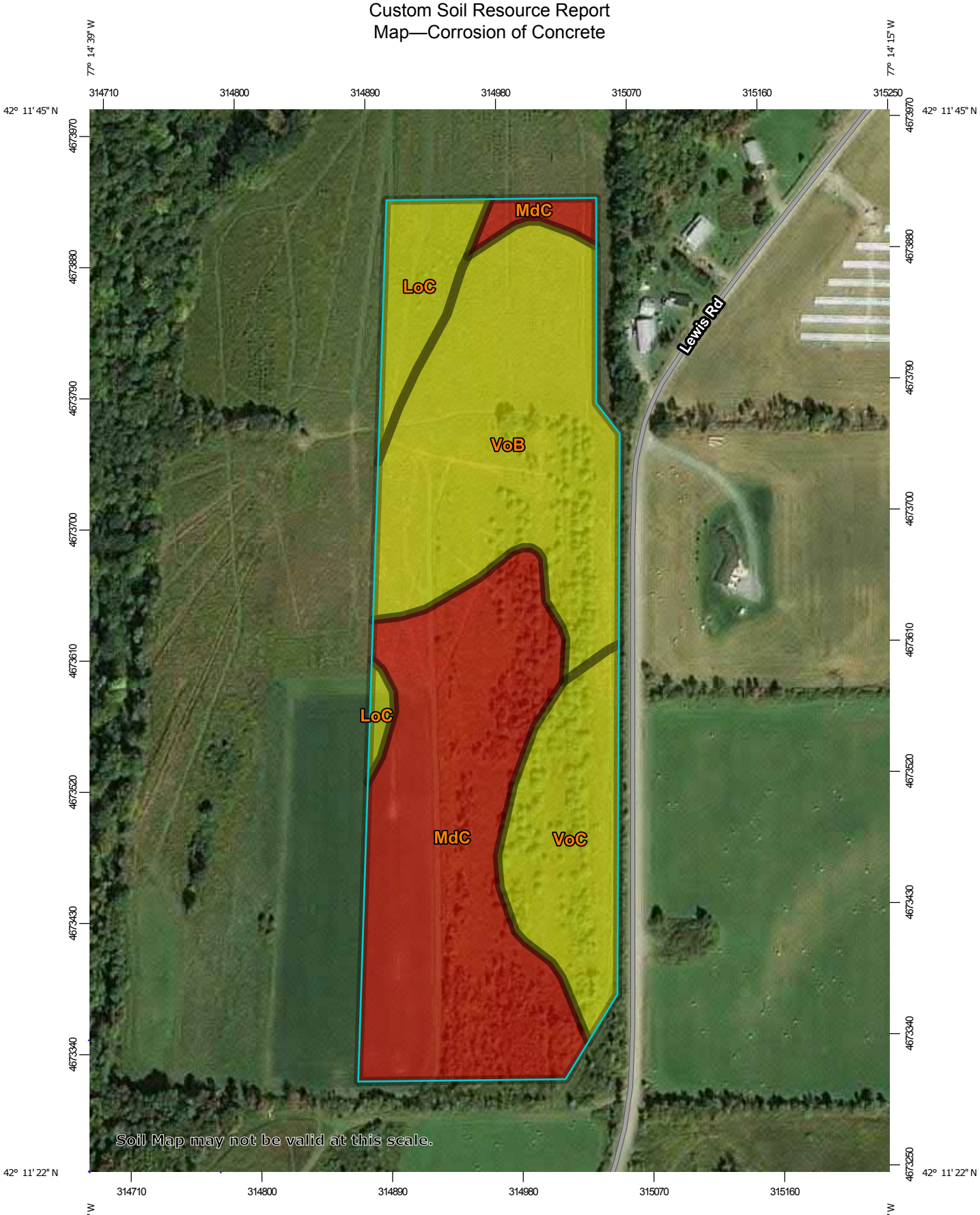
Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."



Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

High

Moderate

Low

Not rated or not available

Soil Rating Lines

High

Moderate

Low

Not rated or not available

Soil Rating Points

High

Moderate

Low

Not rated or not available

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: Steuben County, New York
Survey Area Data: Version 16, Sep 16, 2019

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

Date(s) aerial images were photographed: May 21, 2019—Sep 22, 2019

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.

Table—Corrosion of Concrete

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	Moderate	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	High	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	Moderate	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	Moderate	3.7	15.2%
Totals for Area of Interest			**24.6**	**100.0%**

Rating Options—Corrosion of Concrete

Aggregation Method: Dominant Condition

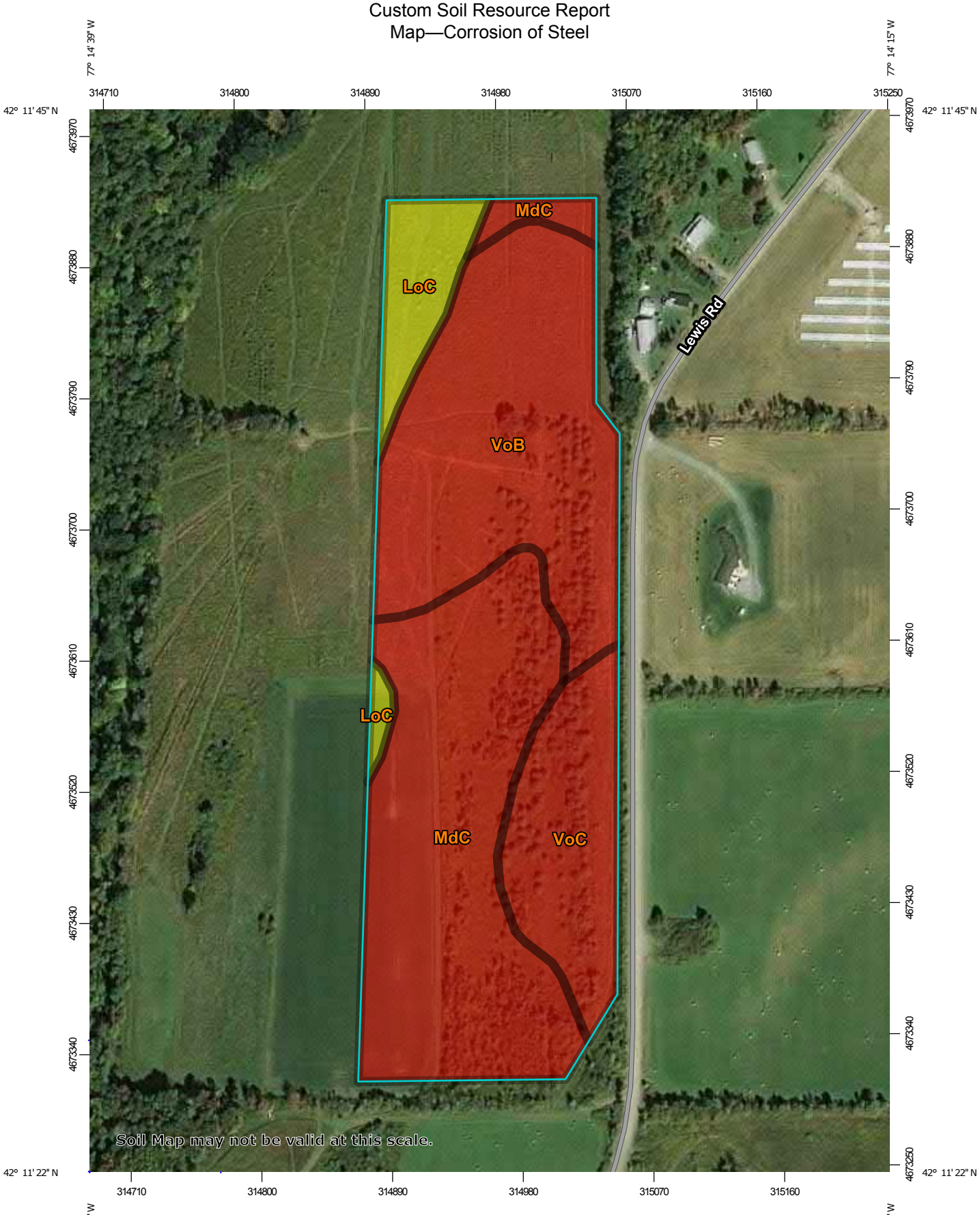
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Corrosion of Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."



Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

High

Moderate

Low

Not rated or not available

Soil Rating Lines

High

Moderate

Low

Not rated or not available

Soil Rating Points

High

Moderate

Low

Not rated or not available

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: Steuben County, New York
Survey Area Data: Version 16, Sep 16, 2019

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

Date(s) aerial images were photographed: May 21, 2019—Sep 22, 2019

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.

Table—Corrosion of Steel

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	Moderate	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	High	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	High	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	High	3.7	15.2%
Totals for Area of Interest			**24.6**	**100.0%**

Rating Options—Corrosion of Steel

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Shallow Excavations

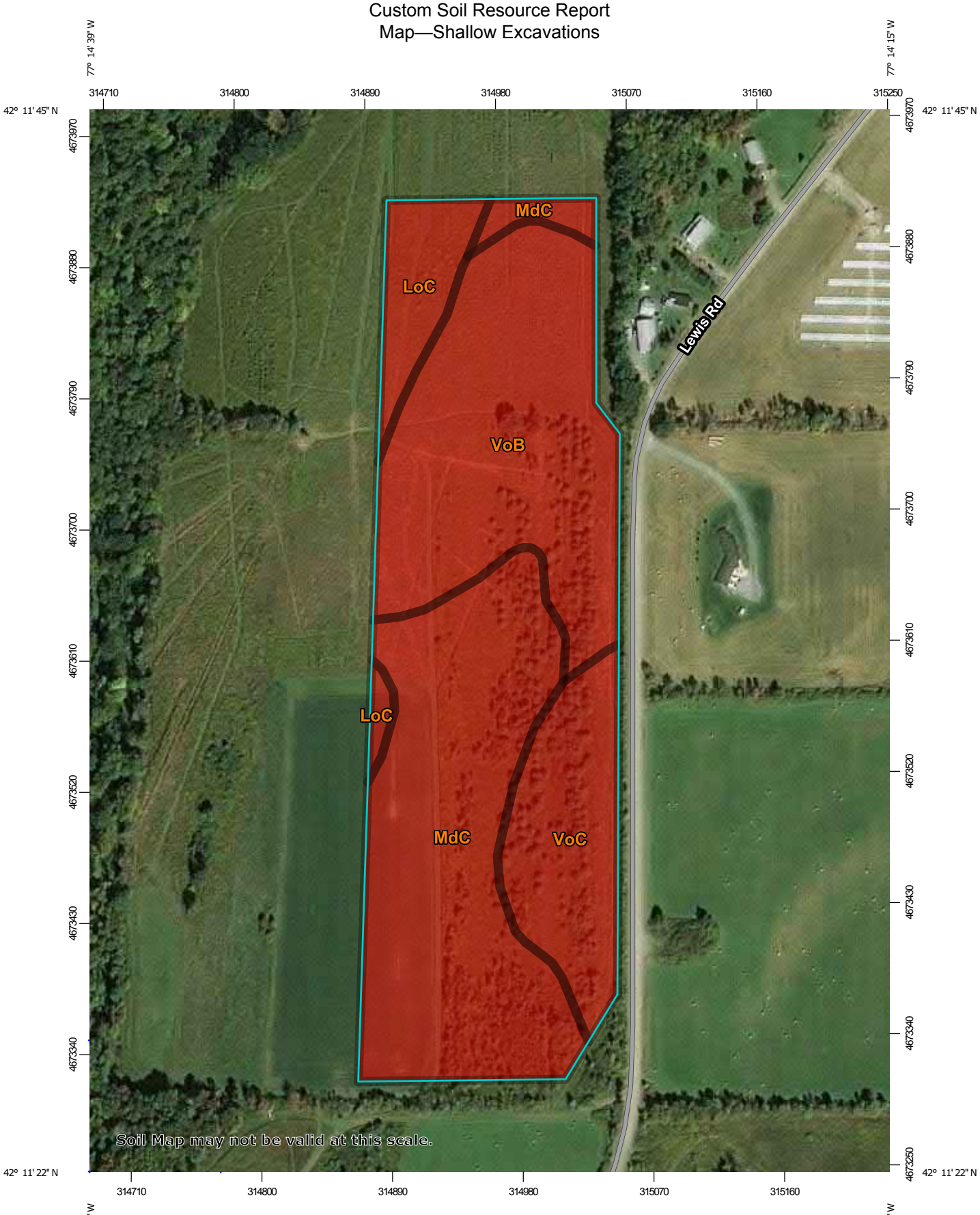
Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of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

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. 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 equivalent report 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.



Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

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

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

Background
- Aerial Photography

MAP INFORMATION

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Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 16, Sep 16, 2019

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Tables—Shallow Excavations

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	Very limited	Lordstown (90%)	Depth to hard bedrock (1.00)	1.8	7.5%
				Slope (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Arnot (5%)	Depth to hard bedrock (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (5%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
MdC	Mardin channery silt loam, 8 to 15 percent slopes	Very limited	Mardin (88%)	Depth to saturated zone (1.00)	10.3	41.7%
				Slope (0.63)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Bath (5%)	Slope (1.00)		
				Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Volusia (5%)	Depth to saturated zone (1.00)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
				Dusty (0.01)		
			Lordstown (2%)	Depth to hard bedrock (1.00)		
				Slope (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
VoB	Volusia channery silt loam, 3 to 8 percent slopes	Very limited	Volusia (90%)	Depth to saturated zone (1.00)	8.7	35.6%
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (5%)	Depth to saturated zone (1.00)		
				Slope (0.63)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Chippewa (5%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
VoC	Volusia channery silt loam, 8 to 15 percent slopes	Very limited	Volusia (90%)	Depth to saturated zone (1.00)	3.7	15.2%
				Slope (0.63)		
				Dense layer (0.50)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Mardin (6%)	Slope (1.00)		
				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
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
			Chippewa (4%)	Depth to saturated zone (1.00)		
				Unstable excavation walls (0.01)		
				Dusty (0.01)		
Totals for Area of Interest					**24.6**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Very limited	24.6	100.0%
Totals for Area of Interest	**24.6**	**100.0%**

Rating Options—Shallow Excavations

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

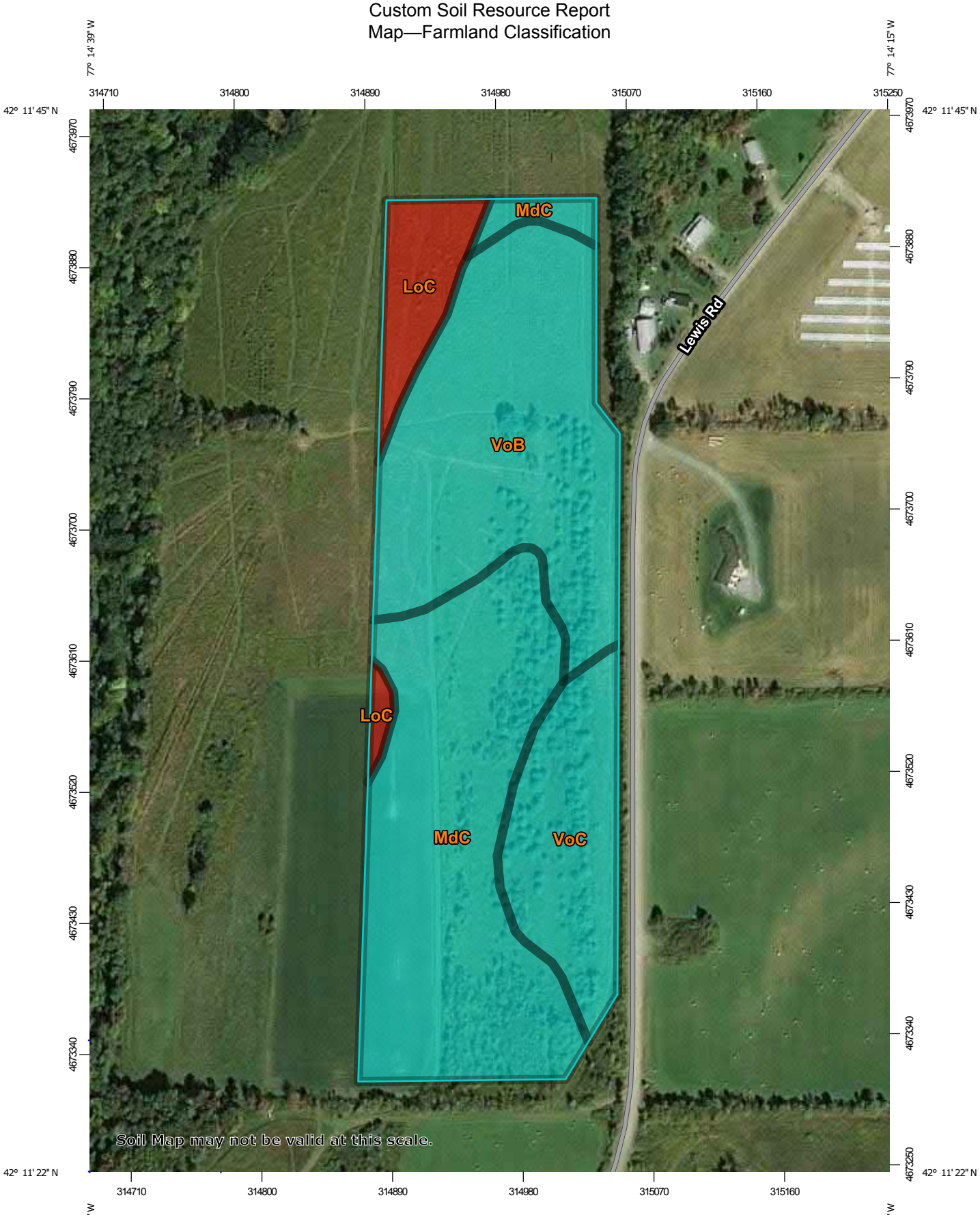
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification



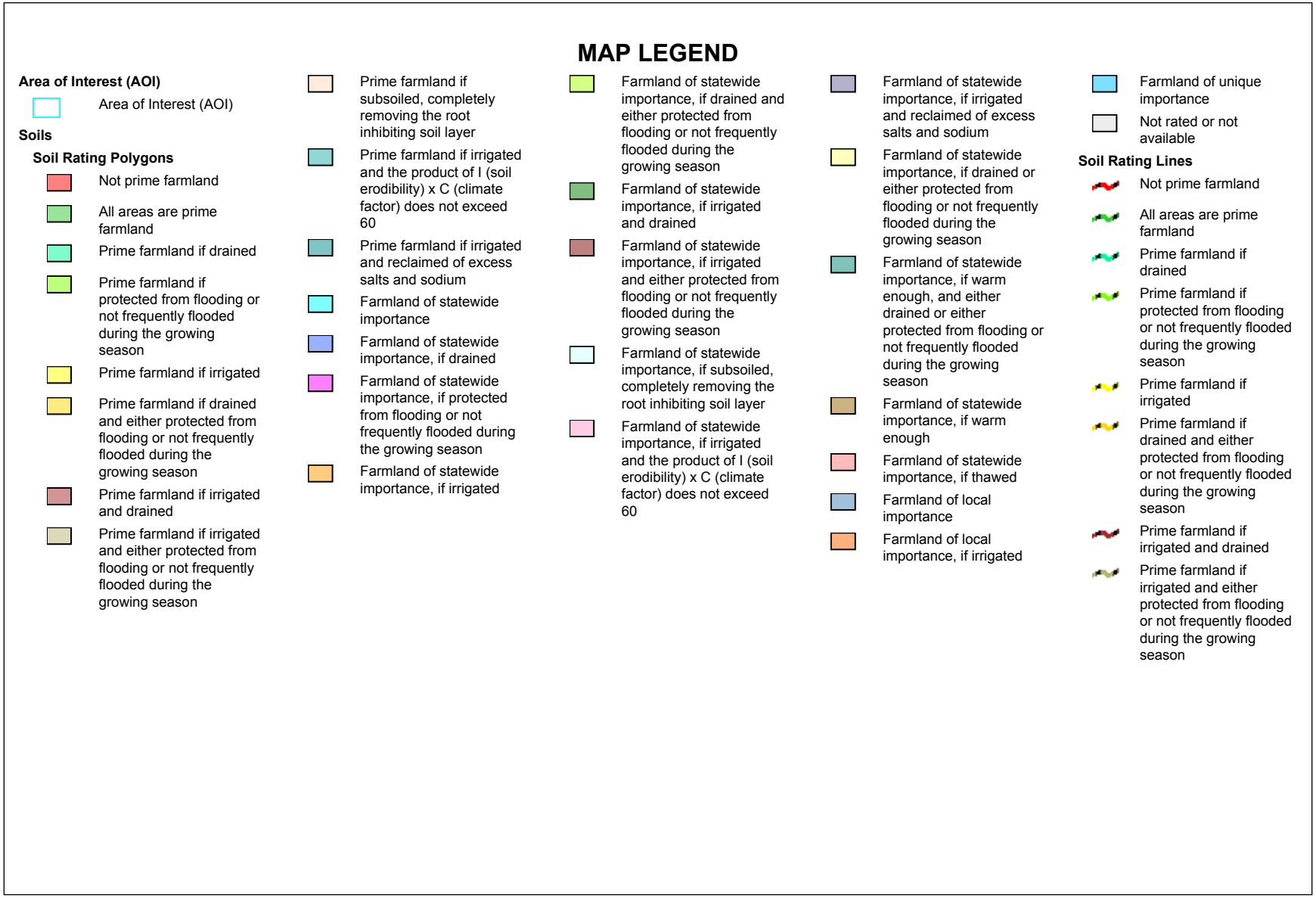
Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

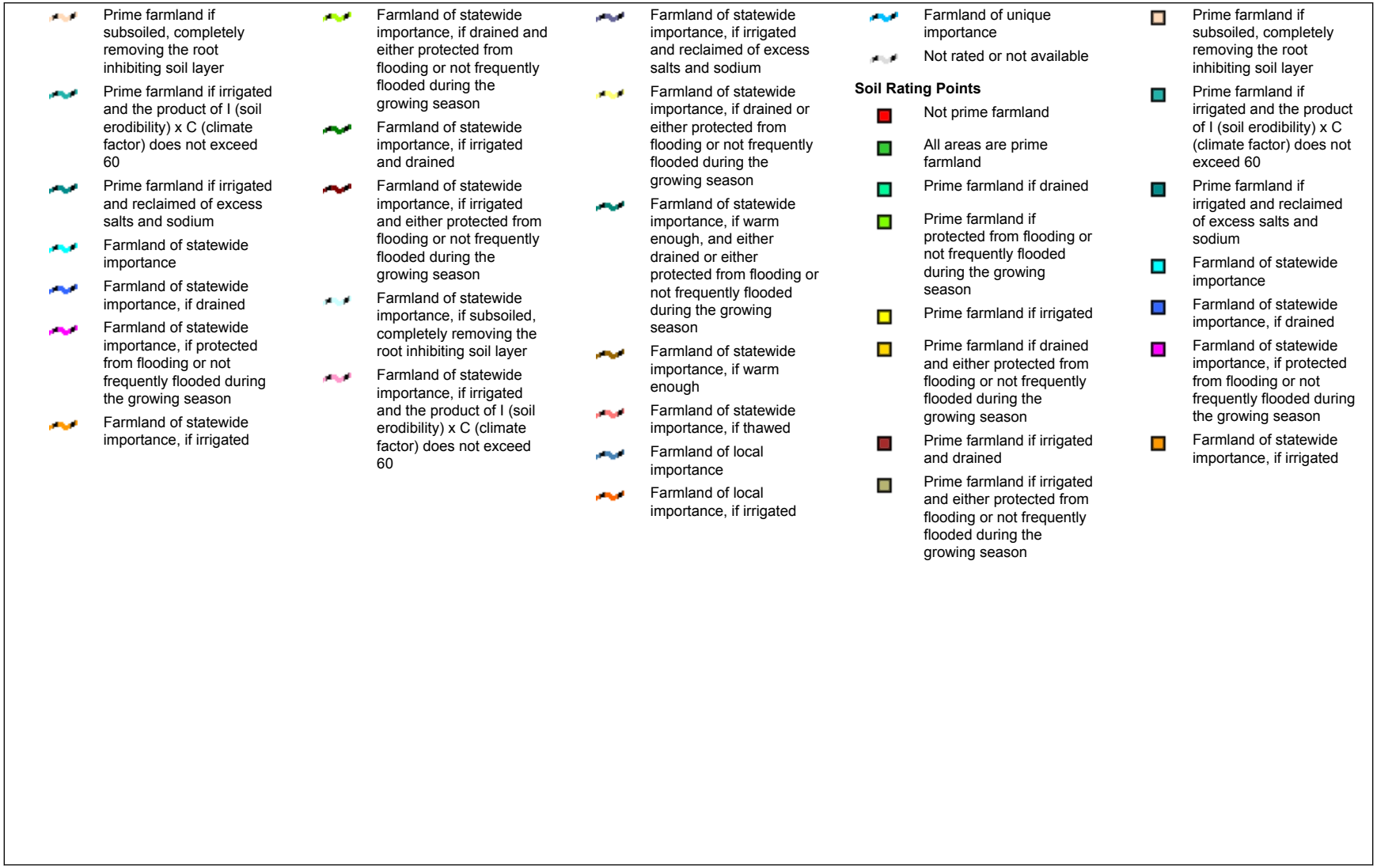
N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

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


MAP LEGEND
Area of Interest (AOI)
Area of Interest (AOI)
Soils
Soil Rating Polygons
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Lines
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season


Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated
Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated and drained
Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if warm enough
Farmland of statewide importance, if thawed
Farmland of local importance
Farmland of local importance, if irrigated
Farmland of unique importance
Not rated or not available
Soil Rating Points
Not prime farmland
All areas are prime farmland
Prime farmland if drained
Prime farmland if protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated
Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
Prime farmland if irrigated and drained
Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
Prime farmland if subsoiled, completely removing the root inhibiting soil layer
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Prime farmland if irrigated and reclaimed of excess salts and sodium
Farmland of statewide importance
Farmland of statewide importance, if drained
Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
Farmland of statewide importance, if irrigated

- Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if irrigated and drained
- Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
- Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance, if warm enough
- Farmland of statewide importance, if thawed
- Farmland of local importance
- Farmland of local importance, if irrigated
- Farmland of unique importance
- Not rated or not available

Water Features

- Streams and Canals

Transportation

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

Background

- Aerial Photography

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	Not prime farmland	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	Farmland of statewide importance	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	Farmland of statewide importance	3.7	15.2%
Totals for Area of Interest			**24.6**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

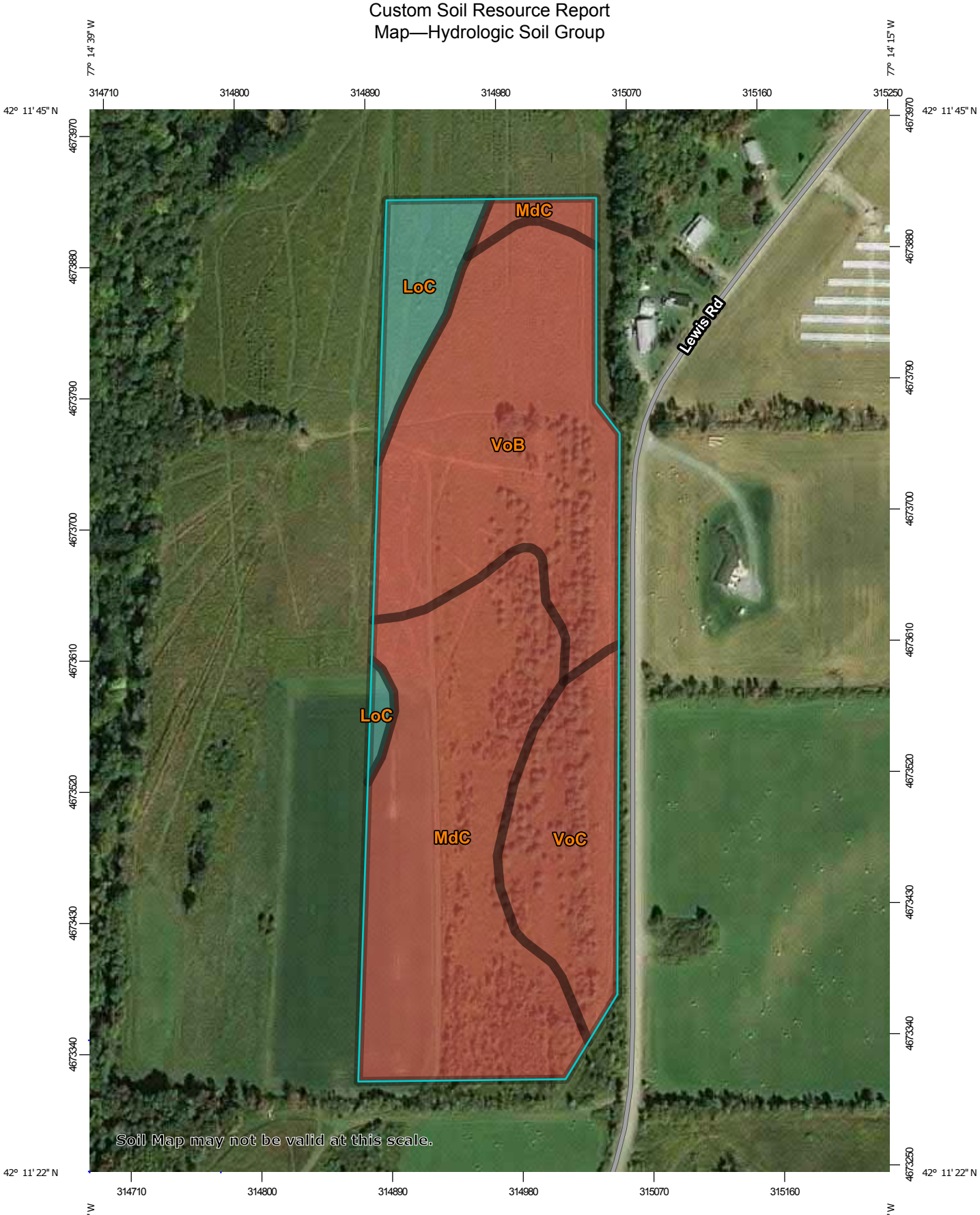
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at

or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



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N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
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- Local Roads

Background

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Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	C	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	D	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	D	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	D	3.7	15.2%
Totals for Area of Interest			**24.6**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

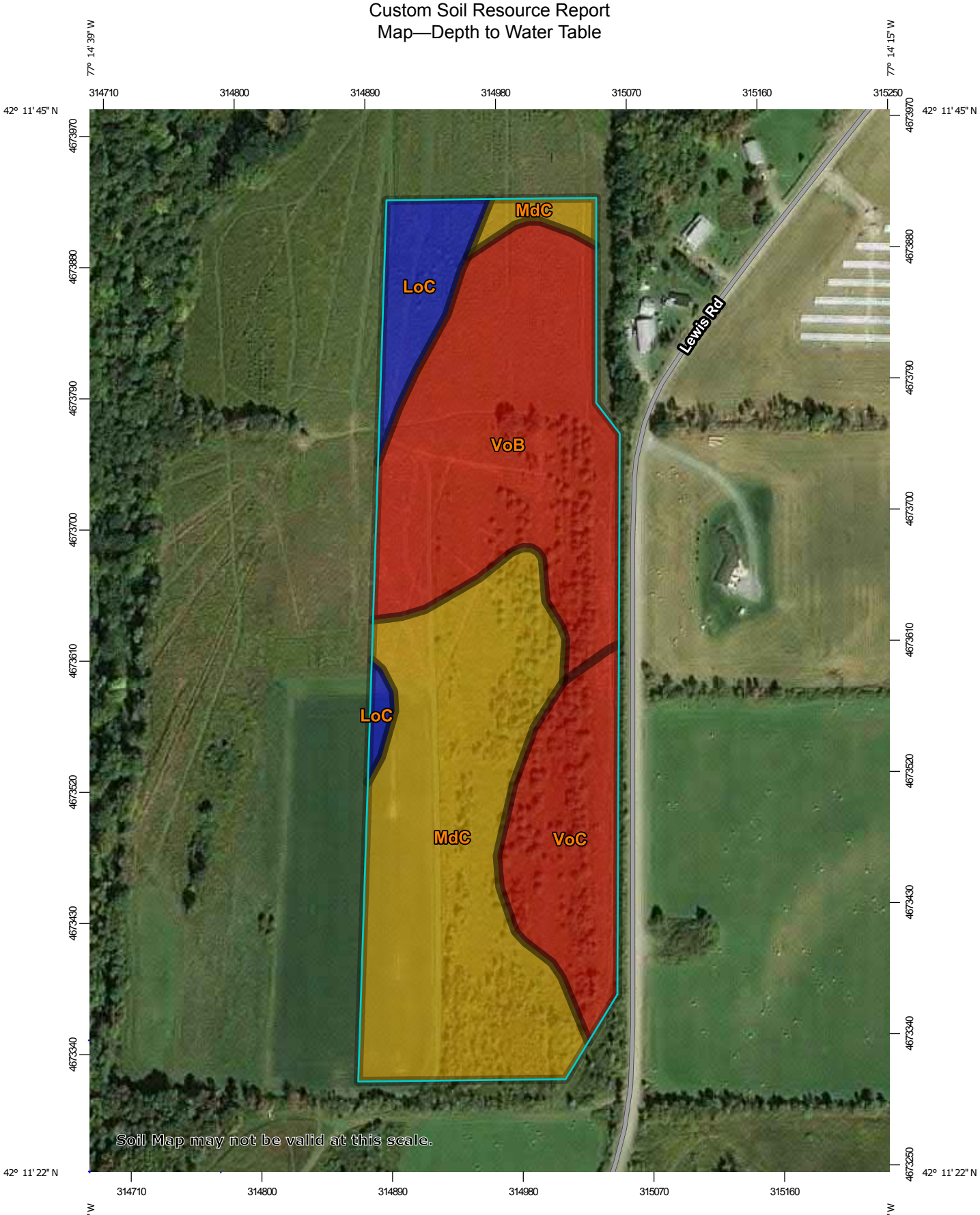
Water Features

Water Features include ponding frequency, flooding frequency, and depth to water table.

Depth to Water Table

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

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



Map Scale: 1:3,550 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 150 300 600 900

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Lines

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Soil Rating Points

0 - 25

25 - 50

50 - 100

100 - 150

150 - 200

> 200

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

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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: Steuben County, New York
Survey Area Data: Version 16, Sep 16, 2019

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

Date(s) aerial images were photographed: May 21, 2019—Sep 22, 2019

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.

Table—Depth to Water Table

Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI
LoC	Lordstown channery silt loam, 12 to 20 percent slopes	>200	1.8	7.5%
MdC	Mardin channery silt loam, 8 to 15 percent slopes	43	10.3	41.7%
VoB	Volusia channery silt loam, 3 to 8 percent slopes	21	8.7	35.6%
VoC	Volusia channery silt loam, 8 to 15 percent slopes	21	3.7	15.2%
Totals for Area of Interest			**24.6**	**100.0%**

Rating Options—Depth to Water Table

Units of Measure: centimeters

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Interpret Nulls as Zero: No

Beginning Month: January

Ending Month: December

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Attachment B

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Steuben County, New York

Local office

New York Ecological Services Field Office

(607) 753-9334
(607) 753-9699

3817 Luker Road
Cortland, NY 13045-9385

http://www.fws.gov/northeast/nyfo/es/section7.htm

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Black-capped Chickadee *Poecile atricapillus practicus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and

nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment C

NEW YORK STATE OF OPPORTUNITY. Agriculture and Markets

ANDREW M. CUOMO
Governor

RICHARD A. BALL
Commissioner

February 16, 2021

Candace Rossi, Program Manager
NY Sun- NYSERDA
17 Columbia Circle
Albany, NY 12203

Re: Final Notice of Intent – Notice of Intent to Undertake an Action Within an Agricultural District, Nexamp Solar, Thurston Ridge Solar Project in the Town of Thurston, Steuben County Agricultural District No. 6

Dear Ms. Rossi:

Pursuant to Agriculture and Markets Law (AML) §305(4), the Department of Agriculture and Markets has completed its review of the Notice of Intent (NOI) submitted by the New York State Energy Research and Development Authority (NYSERDA) for the advance of public funds for the construction of a 5.0 mW solar array facility, located in the Town of Thurston, within Steuben County Agricultural District No. 6.

The Final Notice of Intent was sent to the Commissioner of Environmental Conservation (DEC), the Advisory Council on Agriculture (ACA) and the Steuben County Agricultural and Farmland Protection Board (AFPB) for their review of the proposed action. The ACA, DEC and AFPB did not submit any comments.

Based on all relevant information before me, I have determined that the proposed action would not have an unreasonably adverse effect on the continuing viability of farm enterprises within the district or State environmental plans, policies and objectives. This determination is due, in part, to NYSERDA's NOI filing, including the Project Company's commitment to adhere to the Department's *Guidelines for Solar Energy Projects - Construction Mitigation for Agricultural Lands* (10/18/19), in its entirety, notwithstanding the fact that this parcel may not be returned to agricultural use, and its commitment to return the affected parcel to its current condition once the project is decommissioned. This determination is also due to NYSERDA's commitment, as represented by its NOI filing, to require that the Project Company comply with the agreed upon mitigation.

Please be advised that in order to complete its filing obligations under §305(4), NYSERDA must certify to me at least ten days prior to advancing the funds to construct the solar arrays, that it has made an explicit finding that the requirements of §305(4) have been met, and to the maximum extent practicable, adverse agricultural impacts revealed in the Notice of Intent process will be minimized or avoided. The certification shall set forth the reasons in support of the finding and is more fully set forth in AML §305(4)(f).

Sincerely,

Richard A. Ball
Commissioner

cc: McCrea Burnham, NYS Department of Environmental Conservation
ACA Members
Amy Dlugos, Chair, Steuben County AFPB
Hon. Wendy Loza, Supervisor, Town of Thurston
Chris Clark, Nexamp Solar

File: AP 21/008-NOI

Attachment D

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

February 11, 2021

Ms. Melanie Musarra
The Environmental Design Partnership, LLP
900 Route 146
Clifton Park, NY 12065

Re: NYSERDA
Thurston Ridge Solar Farm Construction Project/5.0 MW/15 Acres of 407.25 Acre Parcel
3835 Lewis Rd (Tax Parcel I.D. 277.-01-01.), Thurston, Steuben County, NY
21PR00107

Dear Melanie Musarra:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the Phase IA/B Cultural Resources Survey report prepared by Birchwood Archaeological Services, Inc. (Moyer, February 2021; 21SR00077) in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation, and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources.

Based on this review, OPRHP understands no archaeological cultural resources were identified during the above-noted investigation, and thus no further archaeological investigations are warranted. It is, therefore, OPRHP's opinion that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project. Should the project design be changed OPRHP recommends further consultation with this office.

If you have any questions, I can be reached via e-mail at Josalyn.Ferguson@parks.ny.gov.

Sincerely,

Josalyn Ferguson, Ph.D.
Scientist Archaeology *via email only*

c.c. Charles Vandrei, DEC
c.c. David Moyer, Birchwood Archaeological Services, Inc.