CONNECTICUT DEPARTMENT OF AGRICULTURE
450 Columbus Blvd, Suite 701 | Hartford, Connecticut 06103 | 860.713.2500
Office of the Commissioner
An Equal Opportunity Employer

July 18, 2025

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Greenskies Clean Energy – Old Maids Lane, Portland, Proposed 4-Megawatt AC Solar Generating Facility

Dear Executive Director Bachman:

Pursuant to 16-50k(a) of the Connecticut General Statutes, we have reviewed the above cited project with respect to agricultural impacts, specifically, to determine whether "…such project will not materially affect the status of such land as prime farmland…"

This project will be located on 41.7 acres comprised of one parcel located on Old Maids Lane in Portland, CT owned by Walnut Hill Farms, LLC. The property contains three (3) acres classified as prime farmland soils. The proposed project site would occupy approximately 23.3 acres, of which 1.8 acres are classified as prime farmland soils. 17.4 acres are included in the generation footprint and within the footprint, 1.7 acres are classified as prime farmland soils.

In summary:

Subject Property	41.7 acres
Project Site	23.3acres
Prime Farmland Soils within the Project Site	1.8 acres
Generation Footprint	17.4 acres
Prime Farmland Soils within the Generation Footprint	1.7 acres

In an email to the Department of Agriculture, dated June 13, 2025, the Petitioner (Greenskies Clean Energy LLC) has agreed to implementation of agrivoltaics through the installation of 1.7 acres of pollinator habitat, which will be sited in the location of mapped prime farmland soils within the Generation Footprint. This shall serve a beneficial dual use by providing habitat for declining pollinator populations and local beekeepers while also helping replenish the soils within the Subject Property. There will be two distinct seed mixes: one for meadow habitat and one for pollinator habitat. The pollinator habitat seed mix shall include a variety of native grasses and forb species that bloom over the course of the growing season to maximize floral resources for pollinators.

Based on preliminary information provided to the Agency (enclosed), and the successful implementation of the co-uses described in the attached, the Department of Agriculture concludes this project will not materially affect the status of project land as prime farmland.

This letter is conditioned upon all dual use plans being fully implemented and operational for the duration of the solar installation. If the Petitioner sells the solar project to another entity, dual use programing and decommissioning responsibilities must carry over to the new owner.

Should any project changes raise concerns to the Agency, we reserve the right to modify our position on this project, including opposing it, as detailed plans are provided by the Petitioner. Nothing in this letter relieves the Petitioner of other obligations under applicable federal, state, and local law that may be necessary as part of the proposed project design and implementation.

If you have any questions, please feel free to contact Jaime Smith of my staff. Jaime can be reached at jaime.smith@ct.gov.

Sincerely,

Bryan P. Hurlburt
Commissioner

Enc. Old Maids Lane, Portland – Farm Plan
Old Maids Lane, Portland – VSMP and Soil Health Assessment

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection
Emilie Cohen, Greenskies Clean Energy LLC

Agrivoltaics Farm Plan

Old Maids Lane Solar Project
Middlesex County, Connecticut

Prepared for:
Greenskies Clean Energy
127 Washington Avenue
North Haven, CT 06473

Prepared by:
Verdantas
200 Court Street, 2nd Floor
Middletown, CT 06457
+1 860-894-1022

Verdantas Project No: 24412

June 2025

This page intentionally left blank.

Table of Contents

Figures

Appendices

1. Property Information

1.1 Subject Property Information

Greenskies is developing a solar electric generation facility, the Old Maids Lane Project, in Portland, Middlesex County, Connecticut (the "Project", or the "Facility"; **Figure 1**). The Project is located on a single parcel (Subject Property) with details as provided in **Table 1**.

Table 1. Parcels within which the Project is Sited

Subject Property Address	Owner	Ownership Date	Total Subject Property Acreage	Parcel Number(s)	Parcel Zoning
Old Maids Lane	Walnut Hills Farm, LLC	02/05/2001	41.7 acres	119/0014	R25

In total, the Subject Property comprises 41.7 acres. The total proposed development area comprises 23.3 acres of the Subject Property (the "Project Site"). The Generation Footprint (the fenced in areas supporting infrastructure) will comprise 17.40 acres.

The Subject Property has been most recently utilized as a gravel quarry in the western section and an apple orchard in the eastern section, accessible via an access road off a residential street. There has not been a lessee or tenant farmer on the Subject Property in the last five years, and the orchard has been maintained solely by the landowner. It is surrounded by forest, several agricultural fields, and an elementary school. Photographs from a Subject Property reconnaissance are included in **Appendix A**. **Figure 2** provides an aerial of the Subject Property, the Project Site, and the Generation Footprint.

There are nine (9) soil map units present in the Subject Property, two of which are classified as prime farmland. **Table 2** provides the soil map units within the Subject Property and their farmland classification. **Appendix B** provides a custom soil resource report for the Project.

Table 2. Soil Map Units within the Subject Property

Soil Map Unit	Farmland Classification	Acreage in Subject Property	Percent of Subject Property
Udorthents, smoothed	Not prime farmland	18.6	44.70%
Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Not prime farmland	12.0	28.70%
Manchester gravelly sandy loam, 15 to 45 percent slopes	Not prime farmland	5.9	14.10%
Hartford sandy loam, 0 to 3 percent slopes	All areas are prime farmland	2.9	6.90%
Hinckley loamy sand, 15 to 45 percent slopes	Not prime farmland	1.0	2.40%

Soil Map Unit	Farmland Classification	Acreage in Subject Property	Percent of Subject Property
Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Not prime farmland	0.5	1.20%
Udorthents-Pits complex, gravelly	Not prime farmland	0.5	1.20%
Manchester gravelly sandy loam, 3 to 15 percent slopes	Farmland of statewide importance	0.2	0.60%
Ellington silt loam, 0 to 5 percent slopes	All areas are prime farmland	0.1	0.30%
TOTAL		**41.7**	**100.00%**

Additionally, the Soil Health Assessment for the Project, commissioned by Greenskies, and provided under separate cover, establishes the baseline conditions for the soils within the Generation Footprint. Specific to the area of mapped prime farmland within the Generation Footprint, that assessment provides documentation regarding the disturbed nature of that area and provides a recommendation for reclassifying the soils in that area to a non-prime farmland classification.

1.2 Project Overview

The Project will have a capacity of up to 4 megawatts alternating current. The Project will be participating in the Non-residential Renewable Energy Solutions (NRES) program. Of the 41.7 acres within the Subject Property, the Project Site will comprise 23.3 acres and the ultimate Generation Footprint will comprise 17.4 acres. The Project Site will contain 1.8 acres of mapped prime farmland, and the Generation Footprint will contain 1.7 acres of mapped prime farmland. **Figure 3** shows the location of mapped prime farmland soils in relationship to the Project Site and the Generation Footprint.

The Project will consist of arrays of ground-mounted solar modules, metal racking systems and support piles, underground electric collection lines, inverters, transformers, pyranometers, stormwater controls, an electrical interconnect transmission line, and an associated access road comprised of crushed stone. The Project is designed to have a lifespan of 21 years, with potential extensions.

1.2.1 Site Access

In the event that a person authorized by the state of Connecticut would like to request access to the site for data collection purposes related to Agrivoltaics, they may reach out to Steve Martineau of Greenskies Clean Energy's Asset & Monitoring Team at steven.martineau@greenskies.com.

1.2.2 Potential Sale of Project

If the Project is sold to another entity, this Farm Plan as well as decommissioning responsibilities, will carry over to the new owner.

1.3 Past Agricultural Activities

The apple orchard in the eastern section of the Subject Property was planted prior to 1934. As such, the trees are past peak production and have been managed/harvested for non-commercial use by the landowner for the last five years. Construction and operation of the proposed Project would require the removal of the apple orchard and the ceasing of agricultural operations. The remaining portions of the Subject Property have not been used to support any form of farming operation (crops, livestock, farm buildings, etc.) during that time period.

It is important to note that the mapped prime farmland soils do not overlap with the apple orchard. The area of mapped prime farmland soils that will be impacted by the Project Site and the Generation Footprint ceased agricultural production in the mid-to-late 1980's, at which time the land use was converted to extractive quarry operations. As such, the areas outside of the apple orchard have experienced severe historic disturbance that preclude future agricultural production, including topsoil removal and compaction from heavy equipment. The Soil Health Assessment, provided under separate cover, provides further information regarding the characterization of soils within the Generation Footprint. **Figure 2** provides an aerial depicting the location of apple orchard in relation to the Project Site and Generation Footprint.

2. Property Management

The following sections describe how the Project will be managed for agricultural use during construction and operation.

2.1 Soil Displacement Considerations

Prime farmland is a valuable resource in Connecticut and of the utmost importance to Greenskies and the participating landowner. The Project must conserve prime farmland, meet stormwater management requirements, provide pollinator habitat throughout its duration, and return the site to its original non-agricultural use post-decommissioning. Therefore, Greenskies has formed the following objectives related to the Project:

1. Minimize disturbance to prime farmland soils within the Project Site during the construction, operation, and decommissioning phases of the Project;
2. Facilitate ground cover establishment for stormwater management;
3. Restore prime farmland soils to near-original or better conditions upon decommissioning; and
4. Comply with all applicable federal, state, and local regulations.

Soils within the Project Site have undergone significant disturbance and modification due to quarry operations. Therefore, studying the physical and chemical properties of the soil prior to development activities establishes a soil health and quality baseline that can be used to guide the management of prime farmland at the facility. As previously noted, Greenskies has commissioned a **Soil Health Assessment** for the Project, provided under separate cover, that establishes these baseline conditions. Additionally, Greenskies has developed a **Vegetation and Soils Management Plan**, also provided under separate cover, that provides information on how the above objectives plan to be implemented and achieved.

Some displacement of mapped prime farmland soils during construction of the Project is planned to occur. This displacement will primarily occur from the installation of panel arrays and support

pilings, and the access road. Soil displacement from construction would include the driving of piles and utility poles into the ground, and grading. The grading within the mapped prime farmland area will primarily be fill with finished grades higher than existing grades, and the existing soil will not be removed. Within the mapped prime farmland area, very limited cut will be required for the relocated gravel access drive and stormwater management infrastructure, but this will be limited to a maximum of approximately 2 feet. Where this cut occurs, soil can be used as fill within the mapped prime farmland area. However, as noted in Section 1.1 and further discussed in the Soil Health Assessment, the area of mapped prime farmland within the Generation Footprint is highly disturbed and has been recommended for reclassification as non-prime farmland. In addition to the **Vegetation and Soils Management Plan**, Greenskies has developed a **preliminary Erosion and Sediment Control Plan (ES&C Plan)** that includes best management practices (BMPs) for topsoil management during construction. The preliminary ES&C Plan will be provided to the Connecticut Siting Council (CSC) as part of the petition process.

2.2 Proposed Agrivoltaics Co-Use

The Department of Energy defines agrivoltaics as “agricultural production, such as crop or livestock production or pollinator habitats, underneath solar panels or adjacent to solar panels”. Greenskies proposes to implement agrivoltaics through the installation of 1.7 acres of pollinator habitat, which will be sited in the location of mapped prime farmland soils within the Generation Footprint.

As mentioned previously, the areas of mapped prime farmland within the Project Site and Generation Footprint have been heavily impacted by quarrying operations. The removal of topsoil and the compaction of subsoils by heavy equipment precludes the ability of this area to easily support future agricultural production. Pollinator habitat can serve a dual beneficial use for the Project by providing habitat for declining pollinator populations and local beekeepers while also helping replenish the soils within the Subject Property by providing soil stabilization, organic matter, root channels that help decompact the soil and filtrate nutrients and water into the soil. The remaining portions of the Project Site and Generation Footprint will be stabilized with low maintenance meadow seeds to encourage water retention and eliminate the use of fertilizers and pesticides.

2.2.1 Farm Plan

Greenskies plans to stabilize the mapped prime farmland section of the Generation Footprint using a seed mix intended to establish a pollinator habitat. Areas that will not be designated as pollinator habitat will be stabilized with a meadow seed mix within the Generation Footprint.

2.2.2 Seed Mix Identification

Selecting the appropriate seed mix for the Project Site is essential to ensure both the operational efficiency of the solar panels and the ecological benefits of the site. There will be two distinct seed mixes: one for meadow habitat and one for pollinator habitat. The meadow seed mix should comprise low-growing, native meadow forbs and grasses that are well-suited to the local climate and soil conditions. These plants should be chosen for their ability to stabilize soil, enhance water retention, and support pollinator species. It is imperative to select vegetation that remains relatively short, typically under 72 inches, to prevent shading of the solar panels and facilitate easy maintenance. Low-growing plants such as little bluestem and golden alexanders are ideal choices as they provide effective ground cover without interfering with the solar infrastructure.

The pollinator habitat seed mix should include a variety of native grasses and forb species that bloom over the course of the entire growing season to maximize floral resources for pollinators.

The Prairie Moon Nursery Shortgrass Inexpensive Prairie Seed Mix follows the principles of a meadow habitat and is suggested as an example of an appropriate seed mix selection for the Project. The Ernst Northeast Solar Pollinator 4' Mix (ERNMX-611) follows the principles of a pollinator habitat and is suggested as an example of an appropriate seed mix selection for the Project. Inclusion of these sample mixes is not intended to indicate its final selection on-site, which should be informed based upon the considerations outlined above. ERNMX-611 is presented in **Table 3** and Prairie Moon Nursery Shortgrass Inexpensive Prairie Seed Mix is presented in **Table 4**. Both seed mixes are provided as an example only; other reputable suppliers, such as Northeast Seed Collective, could also be considered. The **Vegetation and Soils Management Plan** provides further details regarding appropriate seed mix selection.

Table 3. Ernst Northeast Solar Pollinator 4' Mix - ERNMX-611, Seed at 15 lbs/acre broadcast or 10 lbs/acre drilled

Botanical Name	Common Name	% of Mix[1]
Grasses		
Bouteloua curtipendula, Butte	Sideoats grama	35.00%
Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype	Little bluestem, Fort Indiantown Gap-PA Ecotype	35.00%
Agrostis perennans, Albany Pine Bush-NY Ecotype	Autumn bentgrass, Albany Pine Bush-NY Ecotype	10.00%
Forbs		
Coreopsis lanceolata	Lanceleaf coreopsis	8.00%
Asclepias tuberosa, PA Ecotype	Butterfly milkweed, PA Ecotype	4.00%
Rudbeckia hirta	Blackeyed Susan	4.00%
Pycnanthemum tenuifolium	Narrowleaf mountainmint	0.90%
Penstemon digitalis, PA Ecotype	Tall white beardtongue, PA Ecotype	0.80%
Aster oblongifolius, PA Ecotype	Aromatic aster, PA Ecotype	0.70%
Aster prenanthoides, PA Ecotype	Zigzag aster, PA Ecotype	0.50%
Tradescantia ohiensis, PA Ecotype	Ohio spiderwort, PA Ecotype	0.50%
Zizia aurea	Golden alexanders	0.50%
Solidago nemoralis, PA Ecotype	Gray goldenrod, PA Ecotype	0.10%
Total		**100.00%**

Table reproduced from ERNMX-611 Fact Sheet downloaded May 12, 2025.

[1]PLS, Seeds/SF, and Seeds/OZ are provided upon receiving quote from seed supplier.

Table 4. Prairie Moon Nursery Shortgrass Inexpensive Prairie Seed Mix, Seed at 11.70 lbs/acre

Botanical Name	Common Name	% of Mix[1]
Grasses		
Bouteloua curtipendula	Sideoats grama	25.65%
Schizachyrium scoparium	Little bluestem	23.08%
Sporobolus compositus	Rough dropseed	7.91%
Bouteloua gracilis	Blue grama	3.42%
Forbs		
Chamaecrista fasciculata	Partridge pea	8.55%
Coreopsis lanceolata	Lanceleaf coreopsis	4.27%
Dalea purpurea	Purple prairie clover	4.27%
Rudbeckia hirta	Blackeyed Susan	4.27%
Dalea candida	White prairie clover	3.21%
Echinacea pallida	Pale purple coneflower	2.14%
Heliopsis helianthoides	Early sunflower	2.14%
Senna marilandica	Maryland senna	2.14%
Penstemon hirsutus	Hairy beardtongue	1.34%
Baptisia alba	White wild indigo	1.07%
Echinacea purpurea	Purple coneflower	1.07%
Lespedeza capitata	Round-headed bush clover	1.07%
Penstemon digitalis	Foxglove beardtongue	1.07%
Verbena stricta	Hoary vervain	1.07%
Allium stellatum	Prairie onion	0.53%
Asclepias tuberosa	Butterfly weed	0.53%
Oligoneuron rigidum	Stiff goldenrod	0.53%
Astragalus canadensis	Canada milk vetch	0.40%
Symphyotrichum laeve	Smooth blue aster	0.27%
Total		**100.00%**

Table reproduced from Prairie Moon Nursery Shortgrass Inexpensive Prairie Seed Mix Components Online on May 13, 2025.

[1]PLS, Seeds/SF, and Seeds/OZ are provided upon receiving quote from seed supplier.

While the seed mix formulations provided above are subject to change, the guiding philosophy of the mixes are not. To provide increased pollinator support and ecosystem services, other low-growing forbs may be included.

Throughout the life of the Project, cover crops may be used to improve soil health or suppress weeds. Cover crops will be selected based on site conditions, the goal for its use, and the timing of installation. Locally appropriate resources, such as the Northeast Cover Crops Council Cover Crop Selector, will be used to select the appropriate cover crop at the time of its use.

2.2.3 Planting Techniques and Sequence

Vegetation will need to be established in the following areas:

1. **Array Area**, defined for the purposes of this Plan as the area within the fence line (also referred to in this plan as the Generation Footprint).
2. **Border Area**, defined for the purposes of this Plan as the area outside of the fence line and under Greenskies' lease control.

The Array Area will be planted with two distinct categories of species: 1) the pollinator habitat mix will be planted within the mapped prime farmland soil area of the Generation Footprint and 2) a meadow mix will be planted within the remaining area of the Generation Footprint. Both seed mixes will be planted underneath the arrays, and between the arrays and the fence line within their designated locations.

The Border Area comprises the areas outside of the Generation Footprint that are under Greenskies' lease control. The Border Area is planned to be revegetated with the same meadow mix that will be used in the Array Area (**Table 4**).

This section describes how planting of vegetation will be conducted for each of the above areas. The **Vegetation and Soils Management Plan** provides more detail regarding site preparation, temporary cover crop installation, and permanent seed mix installation up to the end of construction.

There are no stormwater detention areas proposed for the Project, and therefore, a Stormwater Detention Area will not be addressed in this Plan.

2.2.3.1 Overall Planting Sequence

The Project will be revegetated following this sequence:

1. During construction, any disturbed and stockpiled areas of topsoil that will be left exposed for more than 30 days and not subject to construction traffic will immediately receive a temporary seeding and mulching. If the season prohibits temporary seeding, the disturbed area will be mulched with straw, hay, or equivalent and bound in accordance with *Connecticut Guidelines for Soil Erosion and Sediment Control* standards.
2. During construction and immediately following initial disturbance or rough grading, all critical areas subject to erosion will receive a temporary seeding in combination with straw mulch or a suitable equivalent, in accordance with *Connecticut Guidelines for Soil Erosion and Sediment Control* standards.
3. When construction is completed in a location that is slated to receive the meadow seed mix and the season allows (generally, between March 15 through June 30, and August 15 through October 31), permanent seeding will occur.
4. When construction is completed in a location that is slated to receive the pollinator seed mix and the season allows (generally, between March 15 through June 30, and August 15 through October 31), permanent seeding will occur.

2.2.3.2 Overall Timeline and Planting Methods

The Project is currently slated for construction to begin in Spring or Summer of 2027, and construction will continue up to the end of the year. However, because the Project is in the early stages of permitting, the timing of certain milestones may alter the current development timeline. Generally speaking, permanent vegetation will be planted in the following windows with the following methods:

1. **Permanent Meadow Mix in Array and Border Areas**: planting may occur during the normal seeding dates in Connecticut, which are March 15 through June 30, and August 15 through October 31. The ideal planting time is in late summer-early fall before the first frost so that the seed mix can experience natural cold stratification over the winter. The seed mix should be installed primarily using a seed drill, however, broadcast seeding may occur in locations where limited access for the seed drill is available, such as directly underneath the arrays.

2. **Permanent Pollinator Habitat Mix in Array Area**: planting may occur during the normal seeding dates in Connecticut, which are March 15 through June 30, and August 15 through October 31. The ideal planting time is in late summer-early fall before the first frost so that the seed mix can experience natural cold stratification over the winter. The seed mix should be installed primarily using a seed drill, however, broadcast seeding may occur in locations where limited access for the seed drill is available, such as directly underneath the arrays.

3. **Cover Crops**: planting may occur at any point during the growing season, generally between March and November, but is dependent on the species being planted. Species selection of cover crops will vary based on time of year, desired goals, and the timing of installation. Cover crops may be planted using a seed drill or through broadcast seeding. Locally appropriate resources, such as the Northeast Cover Crops Council Cover Crop Selector, will be used to select the appropriate cover crop at the time of its use.

3. Design Specifications

The following sections describe the Project's design specifications.

3.1 Equipment Specifications

At this stage of development, Greenskies has not yet selected an engineering, procurement, and construction (EPC) contractor for the Project. This is planned to occur after the initial round of permitting is completed. The specifications provided in this document are subject to change as Project design progresses with the EPC. Changes to the specifications, however, are not anticipated to be substantial, as Greenskies is developing the Project with agrivoltaics as a long-term and integrated aspect of the Facility. The proposed equipment specifications are as follows:

- Panel height (taken from center): 6.387 feet
- Panel dimensions:
  - Length: 7.82 feet
  - Width: 4.28 feet
- Row width: 1 panel wide (4.28 feet)
- Module inter-row spacing: 8 feet
- Tracking: Single-Axis

3.2 Configuration Supporting Dual-Use

The Facility is planned to be designed in a way that pollinator and meadow habitat can successfully take place within the Generation Footprint. The following modifications have been made to achieve this goal:

1. The lowest point of the solar modules will be raised higher than is needed for solar only to allow for increased sunlight to the area below the modules. Raising panels also allows for taller vegetation to more easily fit within the Generation Footprint.
2. The inter-row spacing is designed to allow access for agricultural equipment to operate within the space between arrays, and the increased width also allows for sufficient sunlight levels.
3. The arrays will be oriented north-south to maximize available sunlight for plants to grow.

3.3 Analysis of Sunlight Reduction

Greenskies used the Agricultural Canopy Shading Analysis Tool to model the amount of direct sunlight available per square foot with time-phased shade map simulations to assist with pollinator planting. This analysis incorporated the CT DOAG's growing season and time of day considerations. The meteorological data used for this analysis was pulled from the nearest station, which was in Rutland, Massachusetts, approximately 58 miles away. The model uses the specifications provided in **Section 3.1** with a representative Study Area comprising 20 rows of arrays, where each row is one panel wide and 26 panels tall. **Table 5** summarizes the results of the analysis. **Figure 4** provides a "heat map" of potential shade reduction across the study period.

Table 5. Results of Dual-Use Shading Analysis in Study Area

Overall Results	
Minimum Sun[1]	48%
Maximum Sun[2]	100%
Average Sun	63%
% Sun	**Square Feet**
100% - 90%	467
90% - 80%	227
80% - 70%	3,019
70% - 60%	27,384
60% - 50%	13,376
50% - 40%	30
40%-30%	0
30%-20%	0
20%-10%	0
10%-0%	0
TOTAL	44,503

[1]The lowest observed sunlight percentage within the Study Area across the entire Study Period.

[2] The highest observed sunlight percentage within the Study Area across the entire Study Period.

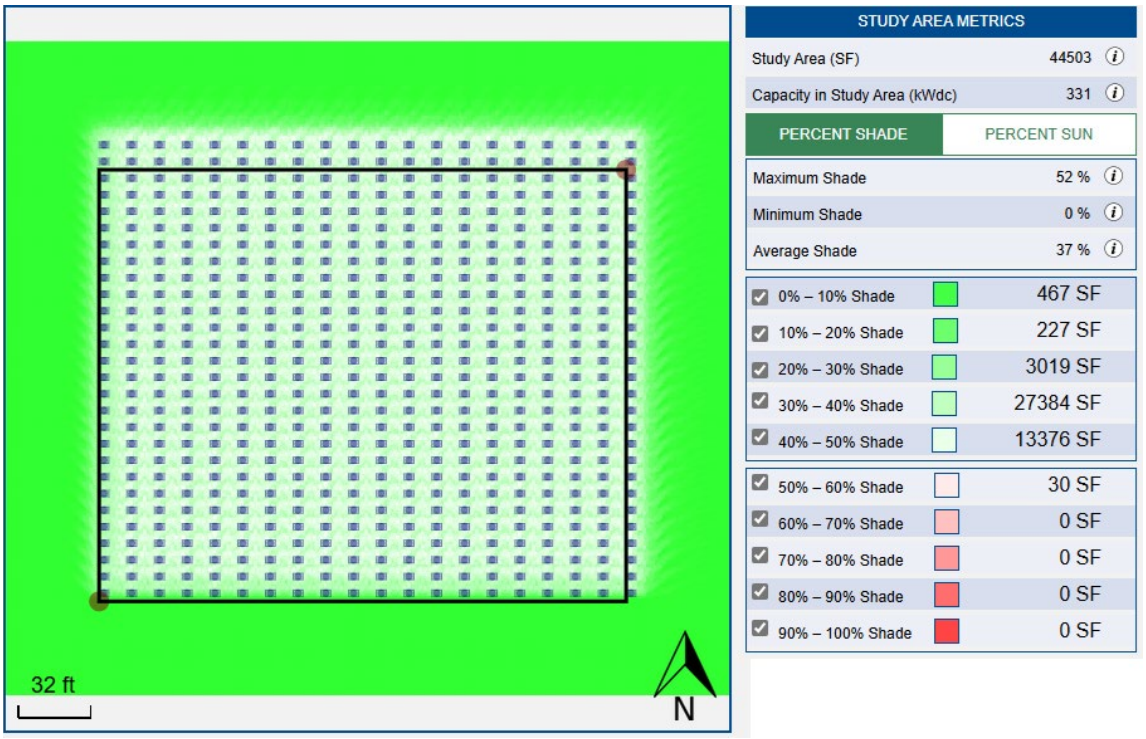
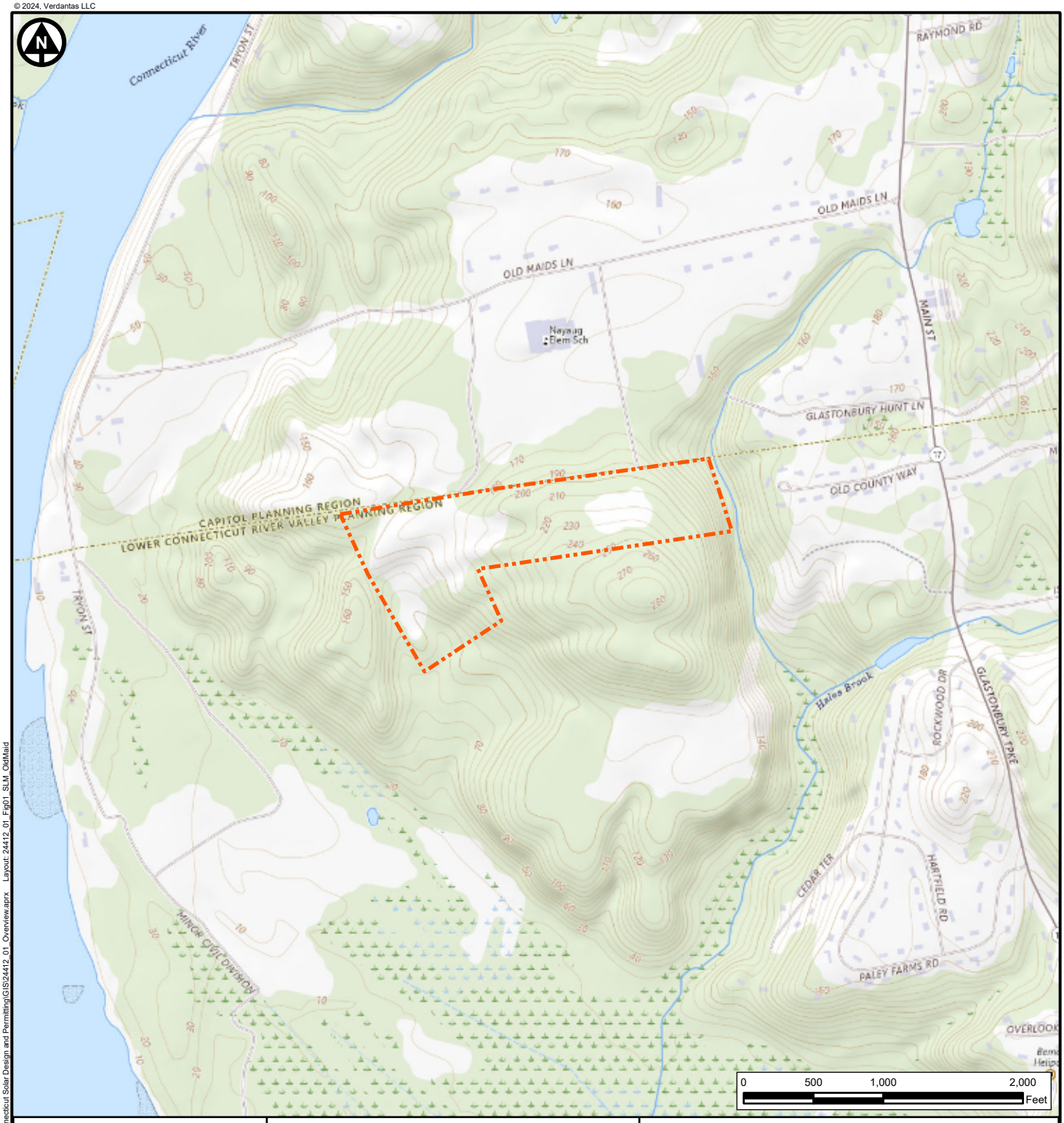


Figure 4: Results of the Dual-Use Shading Analysis Tool

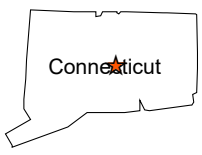
The average shade reduction throughout the study period is 37%. The Analysis Tool indicates that the highest shading (50-60%) will primarily occur directly beneath the arrays, where native pollinator and meadow vegetation will be planted. This 37% average shade reduction is advantageous as it fosters diverse microclimate conditions, supporting the optimal growth of various native species within the Generation Footprint.



Site Boundary

DISCLAIMER: Verdantas LLC has furnished this map to the Client for its sole and exclusive use as a preliminary planning and screening tool. This map is reproduced from geospatial information compiled from third-party sources which may change over time and are not accurate as to mapping, surveying or engineering standards. Verdantas LLC makes no representation or warranty as to the content, accuracy, timeliness or completeness of any information. In no event will Verdantas LLC, its owners, officers, employees or agents, be liable for damages of any kind arising out of the use of this map by Client or any other party.

verdantas



Sources:
Aerial Imagery: Esri Imagery Web Service dated 2023.

Topographic Map: National Geographic Society Web Service.

Quadrangles: Glastonbury, Middle Haddam, Middletown, Hartford South, Connecticut; published1985

127 Washington Ave
North Haven, CT 06473

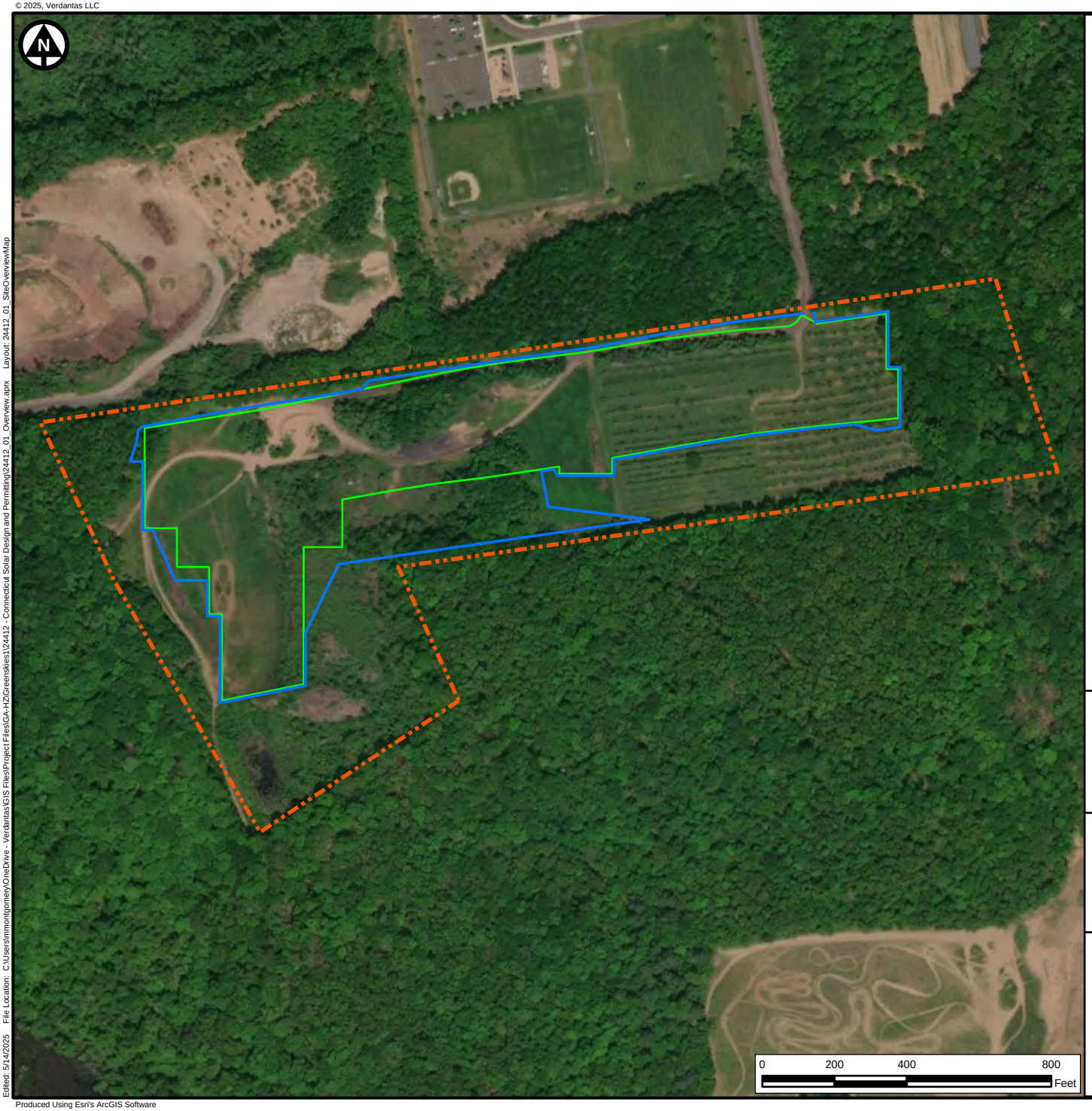
Site Location Map

Old Maids Lane
Greenskies Clean Energy

Project Number	24412
Date	08/2024
Author	mmontgomery
Scale	1 in = 1,000 ft
Figure	1

Edited: 8/6/2024 File Location: Z:\Project Files\GA-HZ\Greenskies\124412 - Connecticut Solar Design and Permitting\GIS\24412_01_Overview.aprx Layout: 24412_01_Fig01_SLM_OldMaid

Produced Using Esri's ArcGIS Software



Subject Property

Generation Footprint

Project Site

Note: The aerial photo was acquired through the Esri Imagery Web Service. Aerial photography dated 2023.

verdantas

127 Washington Ave
North Haven, CT 06473

Site Overview Map

Old Maids Lane Solar Facility
Greenskies Clean Energy

Project Number	24412
Date	05/2025
Author	mmontgomery
Scale	1 in = 400 ft
Figure	2

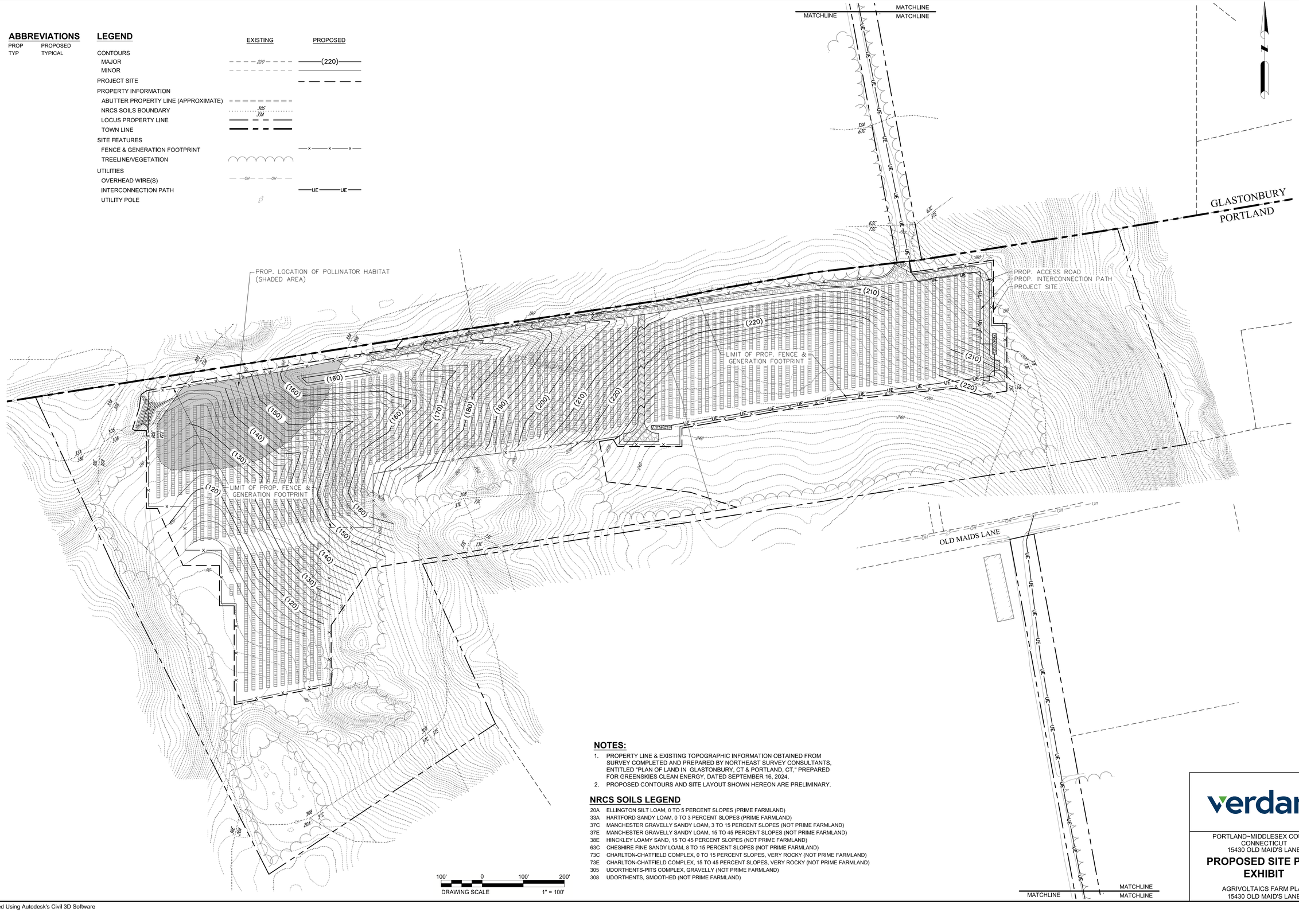
Edited: 5/14/2025 File Location: C:\Users\mmontgomery\OneDrive - Verdantas\GIS Files\Project Files\GA-HZ\Greenskies\124412 - Connecticut Solar Design and Permitting\24412_01_Overview.aprx Layout: 24412_01_SiteOverviewMap

ABBREVIATIONS

PROP	PROPOSED
TYP	TYPICAL

LEGEND

	EXISTING	PROPOSED
CONTOURS		
MAJOR	220	(220)
MINOR		
PROJECT SITE		
PROPERTY INFORMATION		
ABUTTER PROPERTY LINE (APPROXIMATE)		
NRCS SOILS BOUNDARY	305 / 334	
LOCUS PROPERTY LINE		
TOWN LINE		
SITE FEATURES		
FENCE & GENERATION FOOTPRINT		x x x
TREELINE/VEGETATION		
UTILITIES		
OVERHEAD WIRE(S)	OH	
INTERCONNECTION PATH		UE UE
UTILITY POLE		



DRAWING SCALE 1" = 100'

100' 0 100' 200'

NOTES:

1. PROPERTY LINE & EXISTING TOPOGRAPHIC INFORMATION OBTAINED FROM SURVEY COMPLETED AND PREPARED BY NORTHEAST SURVEY CONSULTANTS, ENTITLED "PLAN OF LAND IN GLASTONBURY, CT & PORTLAND, CT," PREPARED FOR GREENSKIES CLEAN ENERGY, DATED SEPTEMBER 16, 2024.
2. PROPOSED CONTOURS AND SITE LAYOUT SHOWN HEREON ARE PRELIMINARY.

NRCS SOILS LEGEND

20A	ELLINGTON SILT LOAM, 0 TO 5 PERCENT SLOPES (PRIME FARMLAND)
33A	HARTFORD SANDY LOAM, 0 TO 3 PERCENT SLOPES (PRIME FARMLAND)
37C	MANCHESTER GRAVELLY SANDY LOAM, 3 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
37E	MANCHESTER GRAVELLY SANDY LOAM, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
38E	HINCKLEY LOAMY SAND, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
63C	CHESHIRE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
73C	CHARLTON-CHATFIELD COMPLEX, 0 TO 15 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
73E	CHARLTON-CHATFIELD COMPLEX, 15 TO 45 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
305	UDORTHENTS-PITS COMPLEX, GRAVELLY (NOT PRIME FARMLAND)
308	UDORTHENTS, SMOOTHED (NOT PRIME FARMLAND)

verdantas

PORTLAND–MIDDLESEX COUNTY
CONNECTICUT
15430 OLD MAID'S LANE

PROPOSED SITE PLAN EXHIBIT

AGRIVOLTAICS FARM PLAN
15430 OLD MAID'S LANE

Project Number	24412
Date	05/12/2025
Author	JMB
Scale	1"=100'
Figure	3

z:\project files\ga-hz\greenskies\124412 - connecticut solar design and permitting\cad\exhibits\portland\24412_greenskies_portland_farm plan.dwg 5/12/2025 1:55 PM

Produced Using Autodesk's Civil 3D Software

Appendix A

Site Photographs

Project Number: 24412 **Client:** Greenskies **Date:** August 1, 2024

Field Data Record

Verdantas Field Personnel On-Site: Abigail Baker

Notes:

Front gate from access road off Old Maids Lane

Notes: 41.63527° N, 72.61287° W

Hay Stockpile in NE corner of property

Notes: 41.63512° N, 72.61210° W

Twig Stockpile in field located in SW region of Subject Property

Notes: 41.63272° N, 72.61907° W

More twig stockpiles in same location as photo above

Notes: 41.63361° N, 72.61959° W

Gravel pit towards NW corner of Subject Property

Notes: 41.63430° N, 72.61791° W

Gravel pit in same location as photo above

Notes: 41.63430° N, 72.61806° W

Blue unk. AST located East of gravel pit

Notes: 41.63422° N, 72.61761° W

Gravel Stockpile located before fork in access road

Notes: 41.63409° N, 72.61622° W

Beekeeping Boxes located on path of gravel stockpile, but closer to entrance

Notes: 41.63447° N, 72.61552° W

Gravel stockpile extension into woods

Notes: 41.63417° N, 72.61650° W

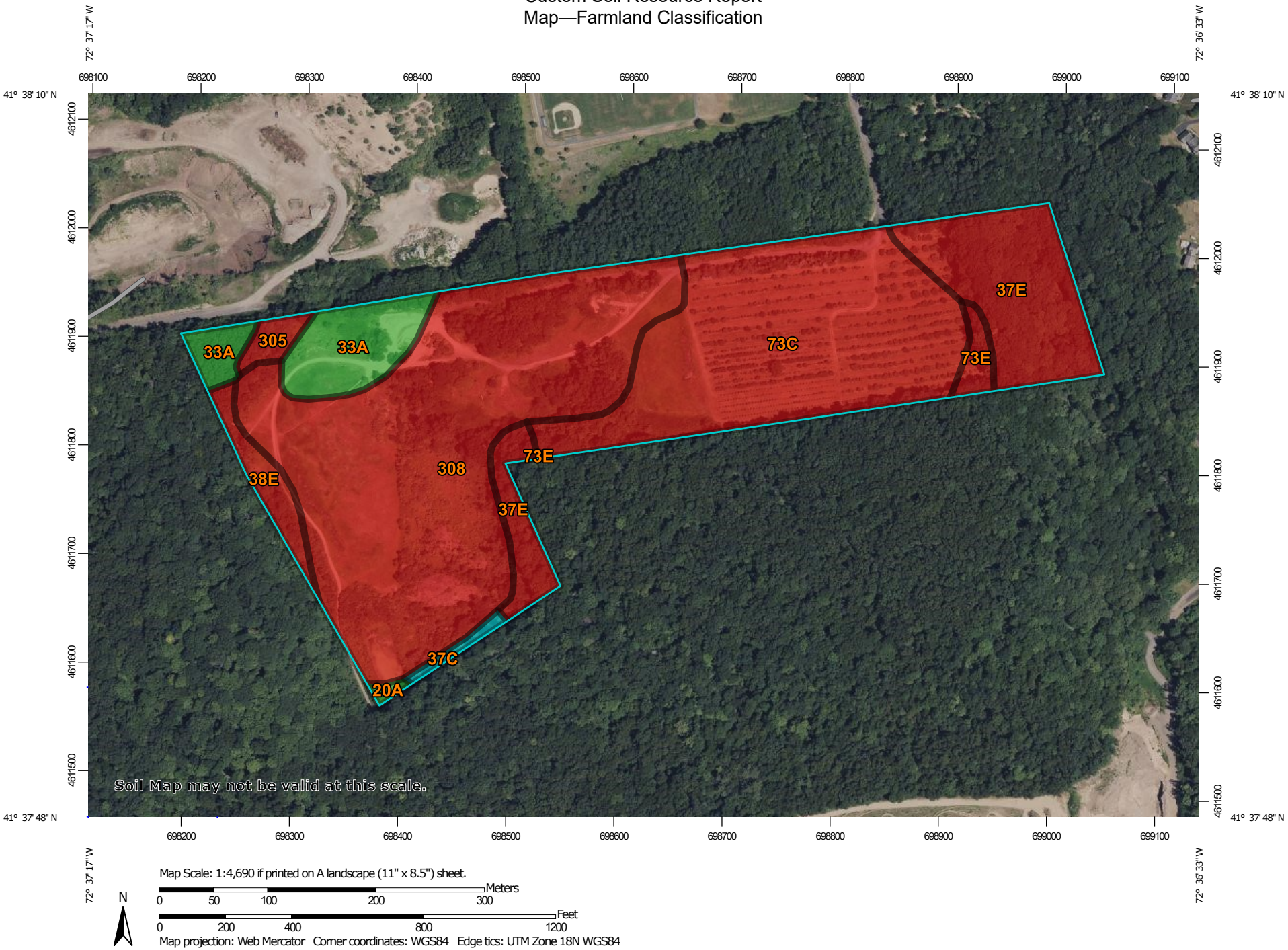
Project Number: 24412 **Client:** Greenskies **Date:** August 1, 2024

Metal beam in woods off access trail

Notes: 41.63486° N, 72.61556° W

Appendix B

NRCS Soil Resource Report



Map Scale: 1:4,690 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

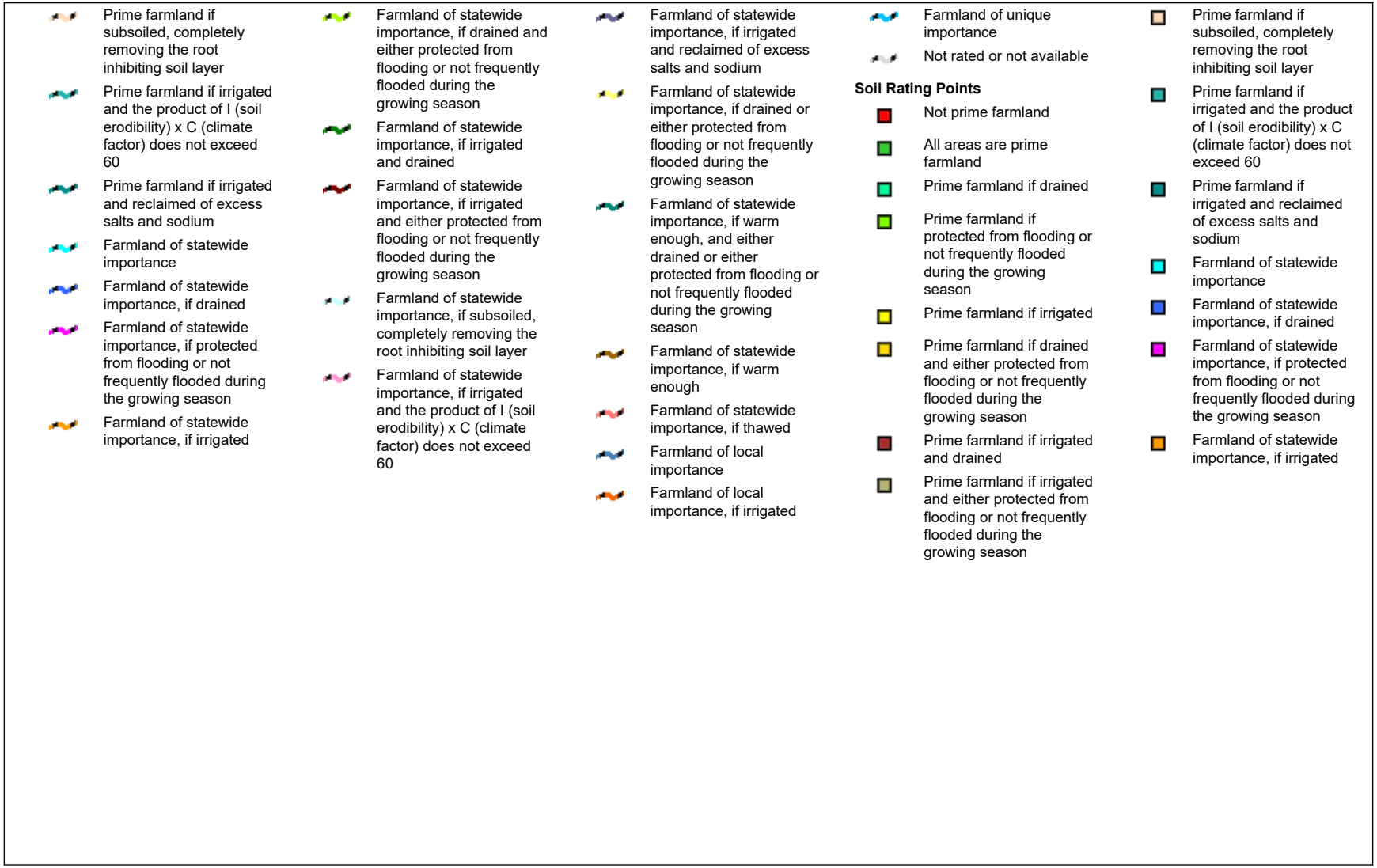
Soils

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

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: State of Connecticut, Eastern Part
Survey Area Data: Version 2, Aug 30, 2024

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
20A	Ellington silt loam, 0 to 5 percent slopes	All areas are prime farmland	0.1	0.3%
33A	Hartford sandy loam, 0 to 3 percent slopes	All areas are prime farmland	2.8	6.8%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	Farmland of statewide importance	0.2	0.6%
37E	Manchester gravelly sandy loam, 15 to 45 percent slopes	Not prime farmland	5.9	14.0%
38E	Hinckley loamy sand, 15 to 45 percent slopes	Not prime farmland	1.0	2.5%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Not prime farmland	12.0	28.8%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Not prime farmland	0.5	1.2%
305	Udorthents-Pits complex, gravelly	Not prime farmland	0.5	1.2%
308	Udorthents, smoothed	Not prime farmland	18.6	44.5%
Totals for Area of Interest			**41.7**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

verdantas

Vegetation and Soils Management Plan

Old Maids Lane Solar Project
Middlesex County, Connecticut

Prepared for:
Greenskies Clean Energy
127 Washington Avenue
North Haven, CT 06473

Prepared by:
Verdantas LLC
200 Court Street, 2nd Floor
Middletown, CT 06457
+1 860-894-1022

Verdantas Project No: 24412

June 2025

This page intentionally left blank.

Table of Contents

Figures

Appendices

1. Introduction

This Vegetation and Soils Management Plan (VSMP) has been prepared for the Old Maids Lane Solar Project, a proposed solar electric generation facility in the Town of Portland, Middlesex County, Connecticut (the "Project", or the "Facility"; **Figure 1**). The Project will have a capacity of up to 4 MWAC. The Project is sited on one parcel comprising approximately 41.7 acres (the "Subject Property"). The proposed development area comprises 23.3 acres of the Subject Property (the "Project Site"). The Generation Footprint (the fenced in areas supporting infrastructure) will comprise 17.40 acres. **Figure 2** provides an aerial of the Subject Property, the Project Site, and the Generation Footprint.

1.1 Purpose and Objectives

Preservation of agriculture is of the utmost importance to the Project, the state of Connecticut, participating landowners, and the community. The Project Site will contain 1.8 acres of prime farmland, and the Generation Footprint will contain 1.7 acres of prime farmland. **Figure 3** shows the location of prime farmland soils in relationship to the Project Site and the Generation Footprint.

Projects that impact prime farmland, in whole or part, and that are 2 MWAC or more in size are required to comply with Agrivoltaics Requirements set forth by the Connecticut Department of Agriculture (CT DOAG, 2023). This VSMP satisfies the following requirements:

> *"1. Soil disturbances and soil compaction shall be minimized, especially during construction and decommissioning, and a vegetation and soil management plan shall be developed for the lifetime of the solar project".*

The purpose of this VSMP is to aid in the overall goal of the Project to "not materially affect the status of such land as prime farmland". Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. For these reasons, the recommendations and guidance provided in this document were developed with the following primary objectives:

1. Minimize disturbance to prime farmland soils within the Project Site during the construction, operation, and decommissioning phases of the Project;
2. Facilitate ground cover establishment for stormwater management;
3. Restore prime farmland soils to near original or better conditions upon decommissioning; and
4. Comply with all applicable federal, state, and local regulations.

When designed and executed correctly, agrivoltaics projects can contribute to short-term and long-term farm viability. Over the lifespan of the Project, the prime farmland portion of the Project Site will be transformed into a pollinator habitat by planting native grasses and forbs that support pollinator species. Additionally, areas outside the prime farmland section will be permanently stabilized with a meadow seed mix containing perennial grasses and forbs to further support pollinator species and enhance biodiversity on-site.

1.2 Related Plans

There are two related plans that have been developed in support of the Project that are designed to be used in conjunction with this VSMP. These plans include:

1. The Project's **Agrivoltaics Farm Plan** describes the proposed agricultural co-use in areas supporting prime farmland, specifically detailing the plan for creating pollinator habitat in the Project's Generation Footprint.
2. The Project's **Soil Health Assessment** establishes baseline conditions for soil restoration upon decommissioning. Because the methodology for the Soil Health Assessment is described in this VSMP, the results of the assessment are provided in this report as **Appendix A**.

1.3 Existing Conditions & Planned Project Infrastructure

Establishment and maintenance considerations for agrivoltaics are informed by evaluating existing site conditions and comparing them against planned project infrastructure and the Project's stated goals. This section provides an overview of the factors that were used to develop the recommendations in this VSMP.

1.3.1 Existing Conditions

1.3.1.1 Soils

There are 9 soil map units present in the Subject Property based on NRCS Web Soil Survey. Soils were assessed by a licensed soil scientist at the time of the vegetation survey and were determined to be consistent with the NRCS mapped soil types within the Project Site, with the exception of one mapped soil unit. Specifically, the soil unit in the northwest corner of the Project Site, the only area mapped as prime farmland within the Generation Footprint, does not match the description of the current soil map unit, Hartford sandy loam, 0 to 3 percent slopes (33A). The soil scientist identified human transported material; anthropogenic "fill" evidenced by soil manipulation within the top 20 inches of the soil profile. Based on the disturbed nature of the soils in the 33A soil map unit, that soil map unit is recommended for reclassification as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

Table 1 provides the soil map units within the Subject Property and their farmland classification. **Figure 3** shows the location of mapped prime farmland soils in relation to the Project Site and the Generation Footprint, which comprise a slightly smaller area of mapped prime farmland (1.8 acres, and 1.7 acres, respectively).

Table 1. Soil Map Units within the Subject Property.

Soil Map Unit	Farmland Classification	Acreage in Subject Property	Percent of Subject Property
Udorthents, smoothed	Not Prime Farmland	18.6	44.7%
Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Not Prime Farmland	12.0	28.7%

Soil Map Unit	Farmland Classification	Acreage in Subject Property	Percent of Subject Property
Manchester gravelly sandy loam, 15 to 45 percent slopes	Not Prime Farmland	5.9	14.1%
Hartford sandy loam, 0 to 3 percent slopes	All Areas Are Prime Farmland*	2.9	6.9%
Hinckley loamy sand, 15 to 45 percent slopes	Not Prime Farmland	1.0	2.4%
Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Not Prime Farmland	0.5	1.2%
Udorthents-Pits complex, gravelly	Not Prime Farmland	0.5	1.2%
Manchester gravelly sandy loam, 3 to 15 percent slopes	Farmland of Statewide Importance	0.2	0.5%
Ellington silt loam, 0 to 5 percent slopes	All Areas Are Prime Farmland	0.1	0.3%
Total		**41.7**	**100.0%**

***Note:** Based on the disturbed nature of the soils in the 33A soil map unit, as evidenced by presence of human-transported material in the upper 20 inches of the soil profile, that soil map unit is recommended for reclassification as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

It is important to note that the mapped prime farmland soils do not overlap with the apple orchard. The area of mapped prime farmland soils that will be impacted by the Project Site and the Generation Footprint ceased agricultural production in the mid-to-late 1980s, at which time the land use was converted to extractive quarry operations. As such, the areas outside of the apple orchard have experienced severe historic disturbance that preclude future agricultural production, including topsoil removal and compaction from heavy equipment.

The soil analysis results provided by the University of Connecticut Soil Nutrient Analysis Laboratory, included as Appendix A, further highlight these disturbed areas. Sample 1 exhibits elevated lead levels and a soil pH of 5.5, indicating acidic conditions and a need for limestone application. All nutrients extracted from the Sample 1 – calcium, magnesium, phosphorus, and potassium – are all below optimum levels and fertilizer is needed. Sample 2, while having low lead levels, also has a soil pH of 5.5 and suboptimal phosphorus, calcium, and potassium levels, requiring similar amendments as identified for Sample 1. Sample 3, with a slightly higher pH of 5.8, still exhibits deficiencies in phosphorus and micronutrients, requiring targeted corrective measures. Overall, these soils would require substantial intervention to restore their fertility and suitability for agricultural use.

1.3.1.2 Vegetation

The Subject Property supports a gravel quarry, apple orchard, wetlands, forests, and a fallow field. The Project Site and Generation Footprint are sited within the gravel quarry and apple orchard portions of the property to avoid impacts to sensitive natural resources. Davison Environmental botanist Aubree Keurajian evaluated the vegetative cover types on the site on May 7th, 2025.

The Project Site will comprise portions of four existing habitat types, as well as four wetland areas that are located within the gravel quarry and one freshwater pond in the southwest corner of the site. Vegetation cover in these areas was as follows and as depicted on **Figure 2**:

- Orchard: The eastern part of the Project Site supports an apple orchard, characterized by an herbaceous layer predominantly composed of introduced species. The area includes various hayfield grasses such as orchard grass (*Dactylis glomerata*) and sweet vernal grass (*Anthoxanthum odoratum*), alongside agricultural weeds. The dominant weed species were dandelion (*Taraxacum officinale*), clover (*Trifolium* sp.), tall buttercup (*Ranunculus acris*), mouse-ear thale-cress (*Arabidopsis thaliana*), and broad-leaved dock (*Rumex obtusifolius*). Additionally, invasive species including sheep sorrel (*Rumex acetosella*), narrow-leaved bitter-cress (*Cardamine impatiens*), ground ivy (*Glechoma hederacea*), and Japanese knotweed (*Fallopia japonica*) are present, with the latter occurring outside the Project's limits of disturbance to both the east and north.

- Fallow Areas: Areas dominated by invasive mugwort (*Artemisia vulgaris*), and supported hayfield grasses, introduced bedstraw (*Galium mollugo*), invasive Asiatic bittersweet (*Celastrus orbiculatus*), and native poison ivy (*Toxicodendron radicans*), common milkweed (*Asclepias syriaca*), goldenrod (*Solidago* sp.), and assorted sedges. The shrub portions of the fallow areas were dominated by native quaking poplar (*Populus tremuloides*), along with invasive autumn olive (*Elaeagnus umbellata*), shrubby honeysuckle (*Lonicera* sp.), and black locust (*Robinia pseudoacacia*).

- Gravel Quarry: Area supporting signs of active earthwork and recent tree removal were primarily unvegetated. In areas where vegetation has established, the dominant species were invasive mugwort and Japanese knotweed. Additionally, Japanese knotweed is scattered throughout the fallow area to the west of the active earthwork zone.

- Mixed Hardwood Forest: The remaining sections of the Project Site are forested, with an extensive forested area beyond the Project Site. This area includes a diverse canopy dominated by black birch (*Betula lenta*), northern red oak (*Quercus rubra*), eastern hemlock (*Tsuga canadensis*), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), and black oak (*Quercus velutina*). The shrub layer was sparse, consisting of both invasive species and native maple-leaved viburnum (*Viburnum acerifolium*). Similarly, the herb layer was minimal, comprising common woodland species such as white wood aster (*Eurybia divaricata*) and Christmas fern (*Polystichum acrostichoides*).

Effective management of invasive species, especially Japanese knotweed, would be beneficial in preventing future encroachment into array areas. A photolog documenting the existing cover types within the Project Site is provided as **Appendix B**.

1.4 Planned Project Infrastructure

The Project will consist of arrays of ground-mounted solar modules, metal racking systems and support piles, underground electric collection lines, inverters, transformers, pyranometers, stormwater controls, several utility poles, and an associated access road comprised of crushed stone. The Project is designed to have a lifespan of 21 years, with potential extensions. Details regarding design and equipment specifications can be found in the **Agrivoltaics Farm Plan**.

2. Site Preparation and Installation

This section provides guidelines for the successful installation, establishment, and maintenance of vegetation within the Project Site.

2.1 Soil

2.1.1 Design

Grading will be required for the access road, adjacent swales for stormwater conveyance, proposed infiltration basins, and overall site stabilization to comply with the Connecticut Department of Energy and Environmental Protection (CTDEEP) stormwater regulations. These features are essential for managing runoff. The grading within the prime farmland area will primarily be fill with finished grades higher than existing grades, and the existing soil will not be removed. Within the prime farmland area, very limited cut will be required for the relocated gravel access drive and stormwater management infrastructure, but this will be limited to a maximum of approximately 2 feet. Where this cut occurs, soil can be used as fill within the prime farmland area. As noted above in Section 1.3.1.1, while grading will occur within mapped prime farmland soils, those mapped prime farmland soils have been severely disturbed as a result of extractive quarry operations which compacted the soils and removed topsoil. The presence of human-transported material was noted in the upper 20 inches of the soil profile. This disturbance precludes future agricultural production. These factors support the recommendation for reclassification of the NRCS mapped prime farmland soil (33A map unit) as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

Further, the Project will comply with all federal, state, and local regulations regarding soil disturbance. Key compliance requirements will include the conditions set forth in the CTDEEP Stormwater Permit that will be obtained by the project.

2.1.2 Construction Best Management Practices

The following best management practices (BMPs) can be used during construction to responsibly manage prime farmland soils. BMPs should be selected for the appropriate scenario, and used as needed:

1. Conduct a soil health assessment prior to construction (see **Appendix A** for the results of the Soil Health Assessment for this Project).

2. When possible, minimize construction activities when soil moisture content is at or near the soil's field capacity, which is defined as the amount of soil moisture or water content held in the soil after excess water has drained away and the rate of downward movement has decreased. Methods for estimated field capacity can be found in the USDA NRCS publication "Estimating Soil Moisture by Feel and Appearance".

3. Sequence construction so access roads are constructed prior to other grading activities.

4. Construction workers should use established access roads and laydown areas for equipment and vehicular traffic, unless installing equipment in the immediate area or as necessary to safely pass other equipment or vehicles.

5. When vehicles and heavy equipment can't be limited to access roads, one option to reduce soil compaction is to use low ground pressure equipment, such as tracked vehicles.

2.2 Vegetation

2.2.1 Design

As demonstrated in **Section 1.3.1**, the Project Site is located within a gravel quarry on the western section and an apple orchard on the eastern section. Wetlands delineated on the Project Site did not possess a direct connection to Waters of the United States (WOTUS) and therefore should not be regulated by the U.S. Army Corps of Engineers under the Clean Water Act (CWA).

Per the CTDEEP Natural Diversity Database (NDDB) Preliminary Assessment No.: 202408687, a Threatened and Endangered Species Habitat Assessment for the Project was submitted to DEEP on May 20, 2025. The NDDB preliminary assessment identified known populations of state-listed species within or near the property boundaries, including the Atlantic coast leopard frog (*Rana kauffeldi*), grasshopper sparrow (*Ammodramus savannarum*), spotted turtle (*Clemmys gutatta*), eastern box turtle (*Terrapene c. carolina*), northern leopard frog (*Rana pipiens*), tidewater mucket (*Leptodea ochracea),* and eastern pondmussel (*Ligumia nasuta*). Eric Davison, a wildlife biologist and recognized Qualified Herpetologist, conducted an on-site habitat assessment to determine the presence of suitable habitat for several species. The assessment found suitable habitat for the eastern box turtle within the Project Area. Consequently, the Project will adhere to CTDEEP recommendations for eastern box turtles, including specific measures to prevent turtle access to the work zone and ensure their protection during construction activities. The survey also concluded that there was no suitable habitat for the other species identified in the NDDB assessment. Verdantas has requested that NDDB review the results of this assessment and is awaiting NDDB's final determination of protection protocols, which the Project will adhere to.

Because the gravel quarry and apple orchard within the Project are anticipated to be converted into pollinator and meadow habitat, existing vegetation within the apple orchard will not be preserved during construction. Clearing and removal of vegetation should only occur within the Project Site (defined as the construction limits of disturbance) and only as necessary. If needed, vegetation will be legally disposed of following all federal, state, and local guidelines.

2.2.2 Planned Vegetation

Refer to the **Agricultural Farm Plan** for a discussion of the planned temporary and permanent seed mixes, and an overview of the overall planting strategy and construction sequence.

2.2.3 Sequence of Events for Site Preparation and Installation

During construction and subsequent maintenance activities, temporary stabilization (e.g., seeding and mulching) should be implemented to minimize soil erosion. BMPs focused on temporary seeding can be found in Chapter 5 of the *Connecticut Guidelines for Soil Erosion and Sediment Control*. Temporary seeding should occur in disturbed areas where the suspension of work is expected to be more than 30 days but less than a year.

The timing of site preparation and installation is dependent on construction schedule. The permanent seed mixes, which would be installed in all disturbed areas within the Generation Footprint, can be installed during the normal seeding dates in Connecticut, which are March 15

through June 30, and August 15 through October 31. The ideal planting time is in late summer-early fall before the first frost so that the seed mix can experience natural cold stratification over the winter.

2.2.4 Site Preparation Methods

Upon completion of construction activities, existing vegetation should be assessed. Weed control is critical to the successful establishment of the permanent seed mix, as it can easily be outcompeted by undesirable vegetation.

Soil samples may be taken to aid the selection of potential soil amendments, particularly because the area is a former gravel quarry. Samples can be analyzed for a suite of characteristics, such as pH, organic content, and macronutrient content (nitrogen, phosphorous, and potassium).

If vegetation can be installed without soil amendments, then it is preferable not to install amendments. If amendments need to be applied, follow the guidance provided in Chapter 5 of the *Connecticut Guidelines for Soil Erosion & Sediment Control*.

Any existing vegetation should be roughly mowed to just above ground surface to allow for overseeding. Existing vegetation will shade out new seedlings, so it is important to mow as close to the surface as feasible without removing the root crown. In areas exhibiting bare soil, the seedbed should be roughened prior to installation to provide good seed-to-soil contact.

The installation of the permanent seed mixes should follow the guidance provided in Chapter 5 of the *Connecticut Guidelines for Soil Erosion & Sediment Control.* Permanent seed mixes will be placed in the areas underneath the arrays primarily using broadcast seeding. In contrast, the areas between the arrays and the fenceline will primarily be installed with a seed drill. However, other methods may be used if feasible. The permanent seed mixes should be applied according to seed supplier recommendations, including selection of the type of cover crop that should be installed alongside the permanent mixes. Seeding rates should be adapted according to the chosen seeding method and the time of year. If broadcast seeding, a roller or light raking should be used to ensure the seed has good contact with the soil. A certified weed-free straw mulch should be applied to help the soil retain moisture, to hold the seed in place, and to protect seed from predation. Once seeded, spot treatment of weeds should be completed using manual removal methods.

3. Maintenance Methods

3.1 Soil

Establishing and maintaining healthy soil is a gradual and ongoing process that is not a one-size-fits-all. Factors that affect the ability to build soil health include the baseline condition of the soil (see **Appendix A**) and the specific vegetation maintenance practices that will continue during the operation of the Facility. At a minimum, soil health should be assessed via visual inspections, which focus on the above-ground signs of soil stress. Visual inspections could evaluate the health of on-site vegetation; identify evidence of erosion and compaction (if present); and observe signs of ponding (if present).

Soil samples can also be evaluated subjectively from time to time over the life of the Project, using the following indicators of topsoil quality:

- Soil color: Color can be indicative of minerology and organic matter content. Generally, a change to a darker color implies an increase in organic matter content. A soil color chart (based on the Munsell color system) can be used for evaluating soil color.
- Soil structure: Soil structure affects water movement through the soil, along with gas exchange, nutrient cycling, plant rooting, and organism habitat. Soil structure, shape and grade can be observed for massive or platy textures due to compaction.
- Soil residue cover: This is the percentage of soil surface covered with dead plant material, organic mulch, or live plants.
- Residue breakdown: Existing residue cover can be examined for signs of decomposition, shredding, and incorporation by soil organisms. (Note: this should not be assessed soon after mechanical tillage.)
- Surface crusting: Surface crusts form on uncovered soil with poor aggregate stability. The presence of surface crusts after rain or irrigation events (and not directly after tillage) should be noted. Crusting may be due to a build-up of salt in the soil, indicating the possible need for additional investigation.
- Ponding/infiltration: Surface ponding that occurs after a normal rain or irrigation event may be due to natural conditions (such as slowly permeable soil layers/textures), or from a soil health concern (compaction).
- Penetration resistance: Penetration resistance can be measured when soil moisture is at field moisture capacity (the maximum volume of water that is held by the soil after a rainfall or irrigation event, at the conclusion of free drainage by gravity). Field capacity moisture content differs depending on soil texture. To perform simplified field estimations of soil moisture conditions, refer to the USDA NRCS publication “Estimating Soil Moisture by Feel and Appearance.”
- Water-stable aggregates: There are three common methods to test water-stable aggregates: the strainer method, the SQTKG method, and the cylinder method.
- Plant roots: Plant roots exude organic compounds that result in the formation of soil structure. Roots within the top 6 or 12 inches of the soil should be abundant and healthy. There should be no sideways root growth due to restrictive layers, or lack of root hairs due to oxygen deprivation.
- Biological diversity: Soil organisms influence aggregation, water dynamics, and nutrient cycling. Note the presence of different soil organisms such as fungal hyphae, legume nodules, earthworms, and insects.
- Biopores: A larger sample of soil (e.g., from a shovel instead of a probe) for small holes left from plant roots and organisms should be assessed.

If periodic inspections identify potential deficiencies, further soil testing may be needed to diagnose the specific issue. In instances where soils or vegetation appear stressed, adaptive management measures/restoration practices may need to be implemented. Verdantas recommends addressing deficiencies as soon as they are identified to allow ample time for soil health to build prior to decommissioning.

3.2 Vegetation

3.2.1 Short-Term Maintenance Practices

3.2.1.1 Inspection and Maintenance of Vegetation

Newly seeded areas should be inspected periodically to ensure appropriate establishment. Per the *Connecticut Guidelines for Soil Erosion & Sediment Control*, seeded areas should be inspected at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater during the first growing season. Areas the exhibit poor germination should be assessed to determine the cause of the issue. Additional remediation practices, such as further soil amendments or greater decompaction, may be necessary.

3.2.1.2 Invasive Weed Control, Monitoring, and Management

The site is most vulnerable to colonization of invasive vegetation and noxious weeds immediately post-construction, while the permanent seed mixes are establishing. The Connecticut Invasive Plants Council maintains a list of Invasive and Potentially Invasive Plants in accordance with Connecticut General Statutes §22a-381a through §22a-381d. This list can be referenced to determine whether existing vegetation on the site is categorized as invasive. Mugwort, Japanese knotweed, autumn olive, shrubby honeysuckle, black locust, sheep sorrel, narrow-leaved bitter-cress, ground ivy, and Asiatic bittersweet have been identified within the Project Site or immediately adjacent to the Project Site and are the most likely invasive species to be encountered. These species should be controlled using methods deemed appropriate for maintenance of the solar array and soil integrity, such as manual removal.

3.2.2 Long-Term Maintenance Practices

The primary objectives of long-term vegetation maintenance on-site are to maintain appropriate ground cover that prevents soil erosion, enables pollinator and meadow habitats, reduces fire risk, and does not interfere with the operation of the solar energy facility.

The Project Site may require periodic mowing or weed whipping. These practices should occur as needed based on how quickly vegetation reaches a height that could conflict with Project infrastructure. When mowing or weed whipping does occur, vegetation should be shorn high, preferably no lower than 6 inches. Spot mowing can be used to target specific areas where vegetation is growing too tall, minimizing disturbance to the entire habitat. Establishing a regular mowing schedule helps keep vegetation at a manageable height, preventing overgrowth and shading of solar panels. Selective mowing focuses on invasive or fast-growing species while preserving beneficial plants to maintain biodiversity. Utilizing mechanical mowing with specialized equipment ensures safe operation around solar panels. Adjusting the mower height to maintain vegetation at the optimal level, typically 6-12 inches, is crucial. Additionally, seasonal considerations should be taken into account, with more frequent mowing during peak growing seasons.

Fire risk in relation to vegetation is generally driven by the excessive build up of thatch. Excessive thatch can also impede the movement of water, nutrients, and air into the soil while creating perfect conditions for fungal and bacterial diseases. If during the life of the project excessive thatch is identified, mechanical dethatchers can be used for removal. Manual methods, such as raking or using a specialized dethatching rake, can also be utilized.

If areas of poor establishment are identified during the operational life of the project, they should be assessed to determine the cause of the issue. Additional remedial measures, such as further soil amendments, decompaction, and reseeding, may be necessary.

Invasive species should continue to be managed as they are encountered. The exact method and timing of treatment is determined based on the species identity and the size of the population identified.

4. Decommissioning

4.1 Soils

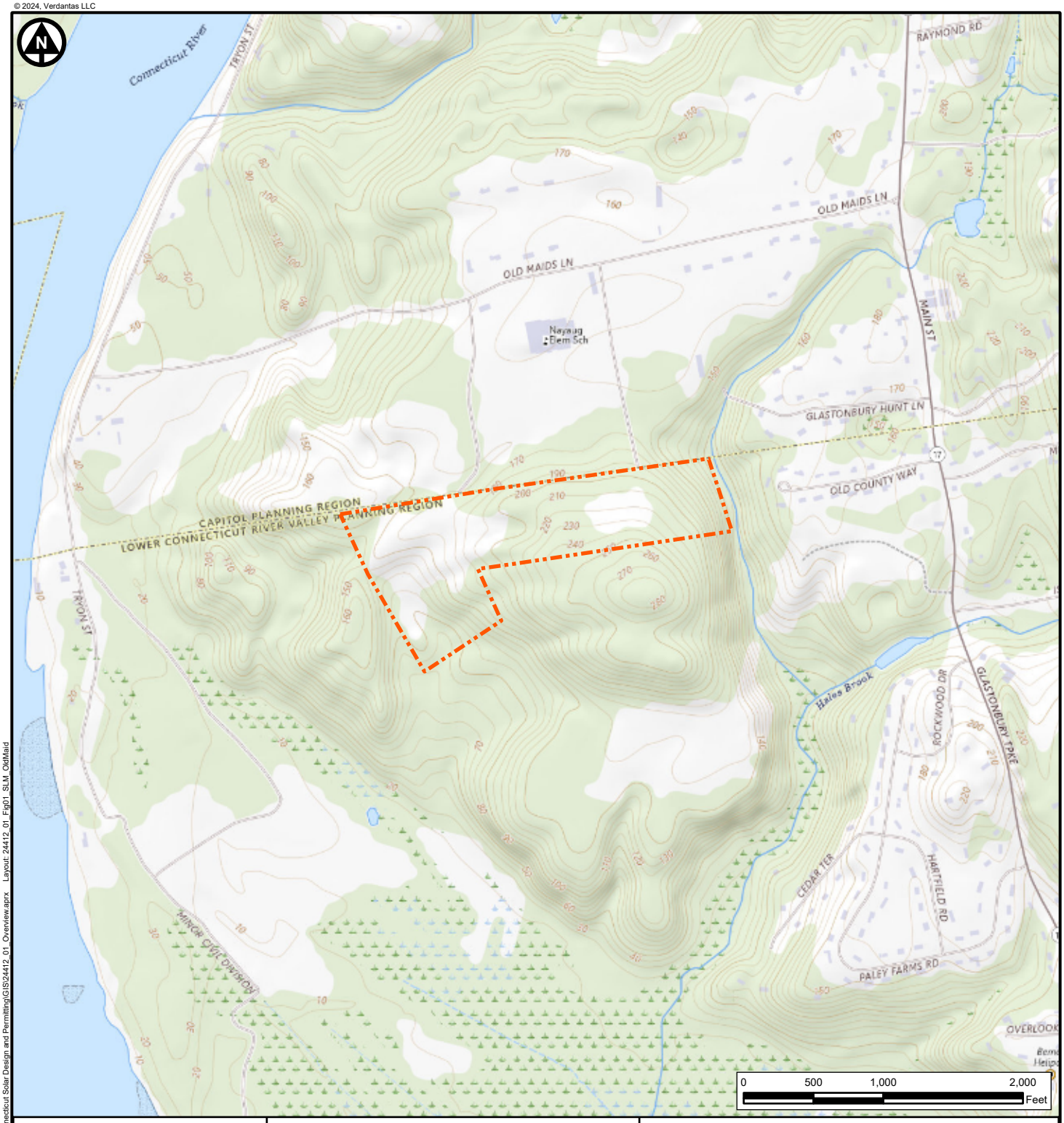
One of the requirements of the Connecticut Department of Agriculture Agrivoltaics Requirements is that soil should be restored upon decommissioning. The results of the **Soil Health Assessment (Appendix A)** established pre-construction baseline conditions. Construction BMPs detailed in Section 2.1.2 are applicable to decommissioning and should be followed. Temporary stockpiles may be required as part of the decommissioning process and should follow the guidelines provided in Section 2.1.2. Operational stockpiles, which were placed during the initial construction phase, should be replaced during decommissioning activities.

The removal of solar racking systems and perimeter fencing may leave areas that require backfilling. Operational stockpiles should be respread and decompacted. Seeding, mulching, and erosion control practices should follow the *Connecticut Guidelines for Soil Erosion and Sediment Control.*

Upon completion of decommissioning, soil samples should be taken and tested following the same methods and parameters as used in the baseline **Soil Health Assessment (Appendix A)**. This will allow for a direct comparison between soil conditions prior to construction and post-decommissioning. If deficiencies are identified, possible remedies may include:

- If plant-available nutrients are below baseline conditions, further testing may be required to confirm consistently lower values rather than seasonal fluctuations. If values remain below baseline or are insufficient for plant growth, fertilizer application may be necessary.
- If the organic matter is below baseline levels, incorporating compost, mulch, or cover crops can enhance moisture retention, increase nutrient availability, improve soil fertility, and stimulate microbial activity.
- If tests indicate pH is lower than the baseline, lime can be used to adjust and regulate pH conditions.
- Subsoiling or disking may be required during decommissioning. Bulk density results may be assessed alongside soil health data to determine if high values are affecting plant growth (e.g., horizontal root development, surface crust formation).

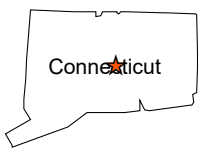
Figures



Subject Property

DISCLAIMER: Verdantas LLC has furnished this map to the Client for its sole and exclusive use as a preliminary planning and screening tool. This map is reproduced from geospatial information compiled from third-party sources which may change over time and are not accurate as to mapping, surveying or engineering standards. Verdantas LLC makes no representation or warranty as to the content, accuracy, timeliness or completeness of any information. In no event will Verdantas LLC, its owners, officers, employees or agents, be liable for damages of any kind arising out of the use of this map by Client or any other party.

verdantas



Sources:
Aerial Imagery: Esri Imagery Web Service dated 2023.

Topographic Map: National Geographic Society Web Service.

Quadrangles: Glastonbury, Middle Haddam, Middletown, Hartford South, Connecticut; published1985

127 Washington Ave
North Haven, CT 06473

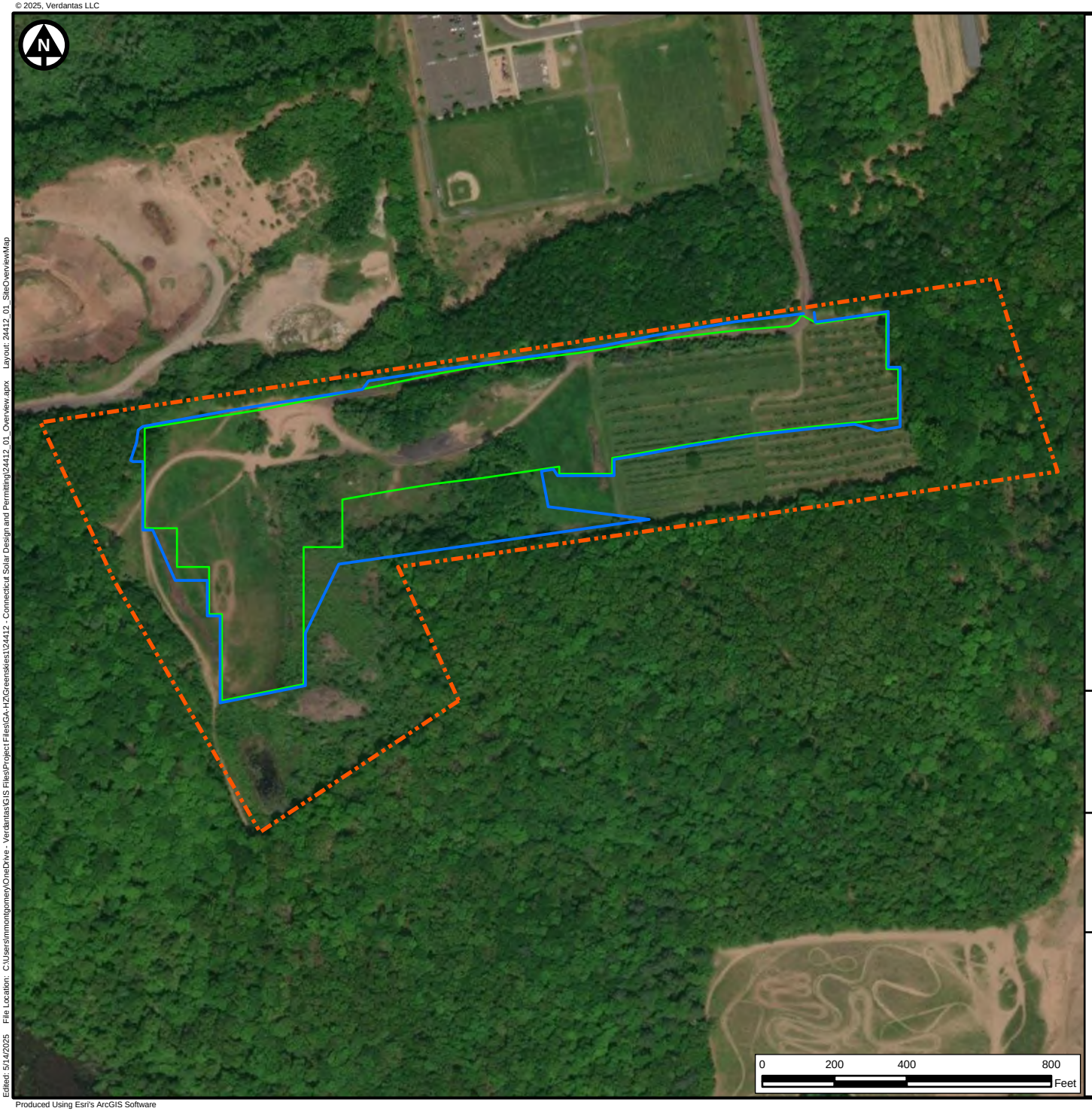
Site Location Map

Old Maids Lane
Greenskies Clean Energy

Project Number	24412
Date	08/2024
Author	mmontgomery
Scale	1 in = 1,000 ft
Figure	1

Edited: 8/6/2024 File Location: Z:\Project Files\GA-HZ\Greenskies\124412 - Connecticut Solar Design and Permitting\GIS\24412_01_Overview.aprx Layout: 24412_01_Fig01_SLM_OldMaid

Produced Using Esri's ArcGIS Software



Subject Property

Generation Footprint

Project Site

Note: The aerial photo was acquired through the Esri Imagery Web Service. Aerial photography dated 2023.

verdantas

127 Washington Ave
North Haven, CT 06473

Site Overview Map

Old Maids Lane Solar Facility
Greenskies Clean Energy

Project Number	24412
Date	05/2025
Author	mmontgomery
Scale	1 in = 400 ft
Figure	2

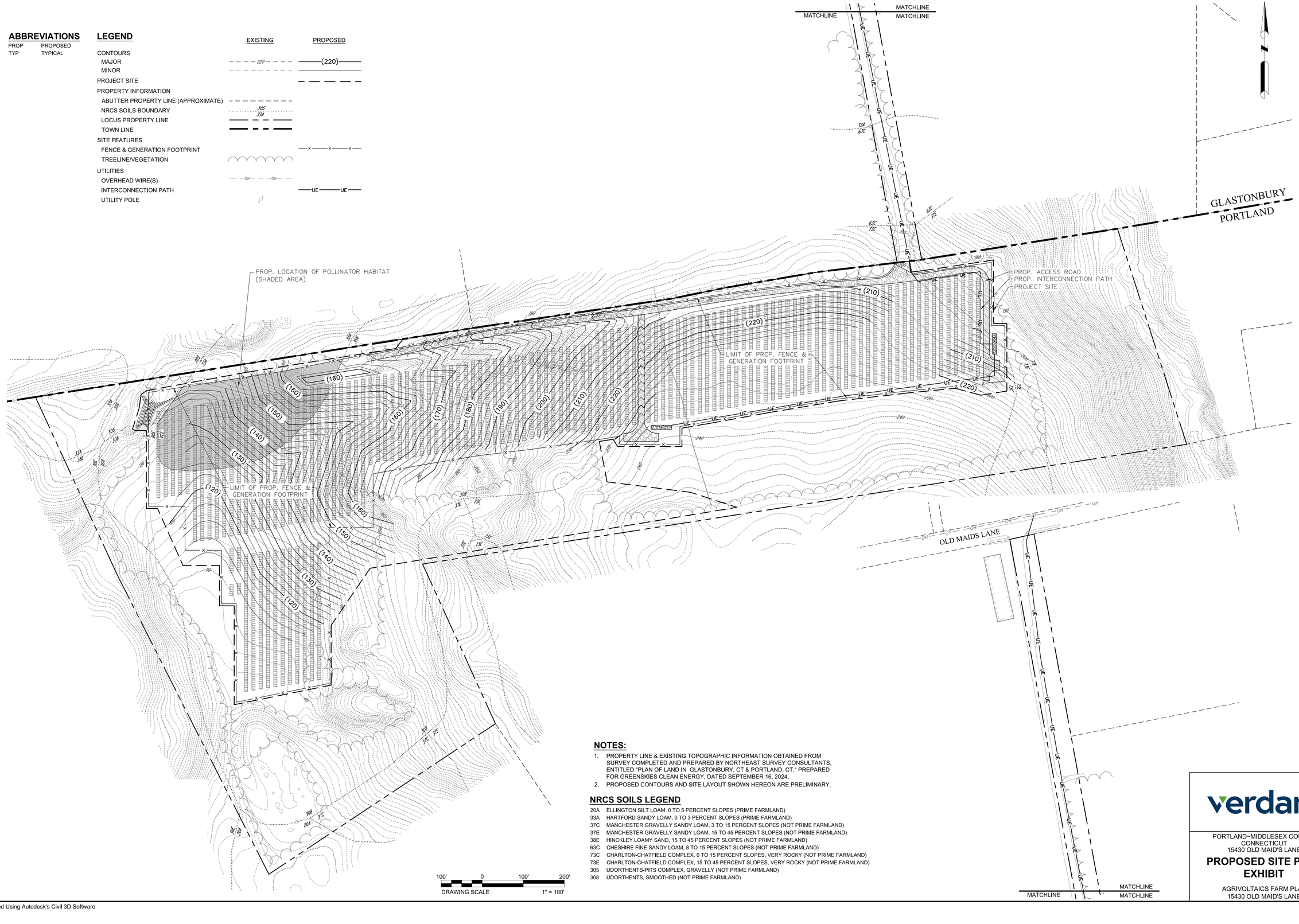
Edited: 5/14/2025 File Location: C:\Users\mmontgomery\OneDrive - Verdantas\GIS Files\Project Files\GA-HZ\Greenskies\124412 - Connecticut Solar Design and Permitting\24412_01_Overview.aprx Layout: 24412_01_SiteOverviewMap

ABBREVIATIONS

PROP	PROPOSED
TYP	TYPICAL

LEGEND

	EXISTING	PROPOSED
CONTOURS		
MAJOR	220	(220)
MINOR		
PROJECT SITE		
PROPERTY INFORMATION		
ABUTTER PROPERTY LINE (APPROXIMATE)		
NRCS SOILS BOUNDARY	305 / 334	
LOCUS PROPERTY LINE		
TOWN LINE		
SITE FEATURES		
FENCE & GENERATION FOOTPRINT		x x x
TREELINE/VEGETATION		
UTILITIES		
OVERHEAD WIRE(S)	OH	
INTERCONNECTION PATH		UE UE
UTILITY POLE		



DRAWING SCALE 1" = 100'

100' 0 100' 200'

NOTES:

1. PROPERTY LINE & EXISTING TOPOGRAPHIC INFORMATION OBTAINED FROM SURVEY COMPLETED AND PREPARED BY NORTHEAST SURVEY CONSULTANTS, ENTITLED "PLAN OF LAND IN GLASTONBURY, CT & PORTLAND, CT," PREPARED FOR GREENSKIES CLEAN ENERGY, DATED SEPTEMBER 16, 2024.
2. PROPOSED CONTOURS AND SITE LAYOUT SHOWN HEREON ARE PRELIMINARY.

NRCS SOILS LEGEND

20A	ELLINGTON SILT LOAM, 0 TO 5 PERCENT SLOPES (PRIME FARMLAND)
33A	HARTFORD SANDY LOAM, 0 TO 3 PERCENT SLOPES (PRIME FARMLAND)
37C	MANCHESTER GRAVELLY SANDY LOAM, 3 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
37E	MANCHESTER GRAVELLY SANDY LOAM, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
38E	HINCKLEY LOAMY SAND, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
63C	CHESHIRE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
73C	CHARLTON-CHATFIELD COMPLEX, 0 TO 15 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
73E	CHARLTON-CHATFIELD COMPLEX, 15 TO 45 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
305	UDORTHENTS-PITS COMPLEX, GRAVELLY (NOT PRIME FARMLAND)
308	UDORTHENTS, SMOOTHED (NOT PRIME FARMLAND)

verdantas

PORTLAND–MIDDLESEX COUNTY
CONNECTICUT
15430 OLD MAID'S LANE

PROPOSED SITE PLAN EXHIBIT

AGRIVOLTAICS FARM PLAN
15430 OLD MAID'S LANE

Project Number	24412
Date	05/12/2025
Author	JMB
Scale	1"=100'
Figure	3

z:\project files\ga-hz\greenskies\124412 - connecticut solar design and permitting\cad\exhibits\portland\24412_greenskies_portland_farm plan.dwg 5/12/2025 1:55 PM

Produced Using Autodesk's Civil 3D Software

Appendix A

Soil Health Assessment

verdantas

Memo

Date	June 13, 2025
Subject	Old Maids Lane Solar Project - Soil Health Assessment
Project Number	24412

1. Introduction

Greenskies is developing an up to 4 MWAC solar electric generation facility, the Old Maids Lane Solar Project, in the Town of Portland, Middlesex County, Connecticut (the "Project", or the "Facility. In total, the Subject Property comprises 41.7 acres. The total proposed development area comprises 23.3 acres of the Subject Property (the "Project Site"). The Generation Footprint (the fenced in areas supporting infrastructure) will comprise 17.4 acres.

The Project Site and Generation Footprint are sited within the apple orchard and gravel quarry portions of the property to avoid impacts to sensitive natural resources. The Project Site will contain 1.8 acres of mapped prime farmland, and the Generation Footprint will contain 1.7 acres of mapped prime farmland.

Projects that impact prime farmland, in whole or part, and that are 2 MWAC or more in size are required to comply with Agrivoltaics Requirements set forth by the Connecticut Department of Agriculture (DoAg). To assist with DoAg's determination that the Project will "…not materially affect the status of such land as prime farmland…", this Soil Health Assessment was performed to establish baseline conditions for soil restoration upon decommissioning.

2. Methods

A licensed soil scientist from Davison Environmental evaluated the soil types and conditions on the site on May 7th, 2025, and June 11th, 2025. The field evaluation included a topsoil delineation to verify Natural Resources Conservation Service (NRCS) mapped soils within the Project Area. Soils were delineated where they changed in surface texture, color, estimated organic matter content, or depth.

Additionally, soil samples were taken at a rate of approximately one sampling location every 5 acres of the Project Site. The soil scientist used their best professional judgement to take additional samples, as needed, that reflected changes in landform and other factors that would influence soil properties. At each sampling location, the soil scientist determined the soil profile to a depth of 36 inches, or until a restrictive layer was reached. Within each identified horizon, the soil texture and color were determined and recorded. Photographs of each sampling location were captured. Three of the four soil samples were submitted to the University of Connecticut Soil Nutrient Analysis Laboratory (UCONN SNAL) for analysis of major and minor plant nutrients, lead, and pH.

3. Results

The topsoil delineation determined that the NRCS mapped soils within the northwest corner of the Project Site were inaccurate. Specifically, the soils in this area do not match the description

of the current soil map unit, 33A (Hartford sandy loam, 0 to 3 percent slopes). The soil scientist characterized the mapped prime farmland soils (soil map unit 33A) as disturbed and identified the presence of human-transported material in the upper 20 inches of the soil profile. Therefore, it is recommended that this soil map unit be reclassified as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308). **Attachment 1** provides a map showing the locations of each soil series within the Project Site. **Table 1** describes the soil map units within the Project Site.

Table 1. Soil Map Units within the Project Site

Soil Map Unit	Farmland Classification	Acreage in Project Site	Percent of Project Site
Udorthents, smoothed	Not Prime Farmland	11.9	54.3%
Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Not Prime Farmland	7.5	34.0%
Hartford sandy loam, 0 to 3 percent slopes	All Areas Are Prime Farmland*	1.8	8.0%
Manchester gravelly sandy loam, 15 to 45 percent slopes	Not Prime Farmland	0.7	3.1%
Udorthents-Pits complex, gravelly	Not Prime Farmland	0.1	0.6%
Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Not Prime Farmland	<0.1	<0.1%
Total		**22.0**	**100.0%**

***Note:** Based on the disturbed nature of the soils in the 33A soil map unit, as evidenced by presence of human-transported material in the upper 20 inches of the soil profile, that soil map unit is recommended for reclassification as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

Four soil samples were taken within the Project Site. The locations of the samples are provided in **Attachment 2**. **Table 2** provides the soil sample profiles from each sampling location. Photographs of the sampling locations are provided as **Attachment 3**. The results of the soil analyses for three of the four samples analyzed are provided in **Attachment 4**.

verdantas

Table 2. Soil Sample Profiles

Soil Sample #1				
Depth (in)	**Horizon**	**Matrix Color**	**Redox**	**Description**
0-6	A	10YR 3/4		Sandy loam
6-12	Bw1	7.5YR 3/4		Sandy loam, 5-10% gravel
12-38	Bw2	2.5Y 5/4	Very faint concentrations, 7.5YR 5/6	Sandy loam, 15% gravel
38+	Cd	N/A		Densic layer, very gravelly, unable to penetrate
Soil Sample #2				
Depth (in)	**Horizon**	**Matrix Color**	**Redox**	**Description**
0-6	A	7.5YR 3/3	None	Sandy loam
6-36+	B	7.5YR 4/4		Sandy, 25-25% gravel, horizons not clear
Soil Sample #3				
Depth (in)	**Horizon**	**Matrix Color**	**Redox**	**Description**
0-4	A	10YR 3/3	None	Sandy loam
4-16	B	10YR 4/4		Sandy loam, 35-50% gravel
16+	Cd	N/A		Densic layer, very gravelly, unable to penetrate
Soil Sample #4				
Depth (in)	**Horizon**	**Matrix Color**	**Redox**	**Description**
0-20	^A	10YR 3/3		Human-transported material, Anthropogenic “fill” evidenced by soil manipulation. Sandy loam, gravel 15-20%, no horizonation within top 20 inches
20-30	B	7.5YR 4/4		Sandy loam, 10-15% gravel

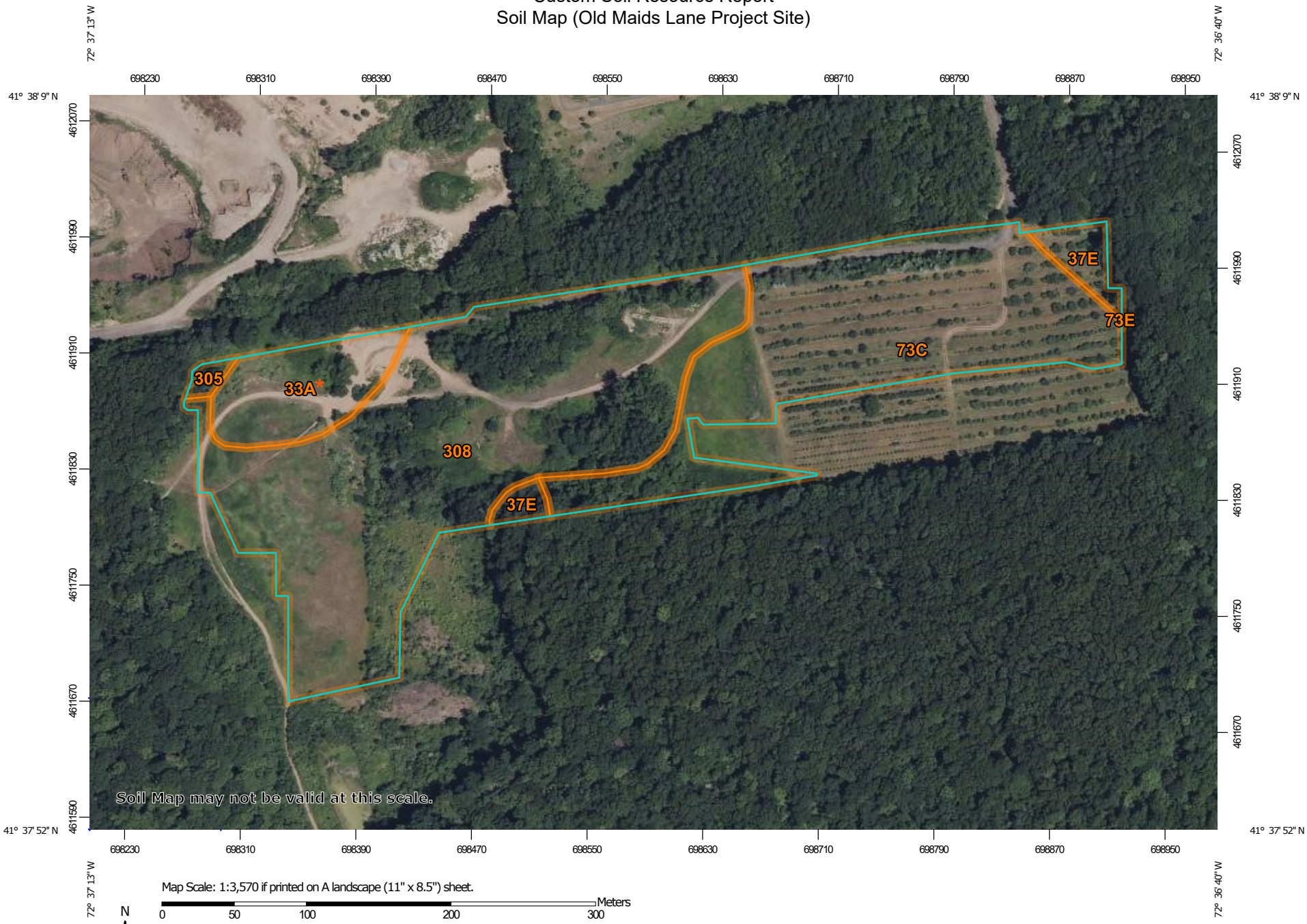
30-38	BC	7.5YR 4/6		Sandy loam, 10-15% gravel
38+	Cd	N/A		Densic layer, unable to penetrate

Note: The “caret” symbol (^) is used as a prefix to master horizon designations to indicate mineral or organic layers of human-transported material. This material has been moved horizontally onto a pedon from a source outside of that pedon by directed human activity, usually with the aid of machinery.

verdantas

Attachment 1: NRCS WSS Mapping

Custom Soil Resource Report
Soil Map (Old Maids Lane Project Site)



Map Scale: 1:3,570 if printed on A landscape (11" x 8.5") 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

***Note:** Based on the disturbed nature of the soils in the 33A soil map unit, as evidenced by presence of human-transported material in the upper 20 inches of the soil profile, that soil map unit is recommended for reclassification as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

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 1:12,000.

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: State of Connecticut, Eastern Part
Survey Area Data: Version 2, Aug 30, 2024

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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

Map Unit Legend (Old Maids Lane Project Site)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
33A*	Hartford sandy loam, 0 to 3 percent slopes	1.8	8.0%
37E	Manchester gravelly sandy loam, 15 to 45 percent slopes	0.7	3.1%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	7.5	34.0%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	0.0	0.0%
305	Udorthents-Pits complex, gravelly	0.1	0.6%
308	Udorthents, smoothed	11.9	54.3%
Totals for Area of Interest		**22.0**	**100.0%**

***Note:** Based on the disturbed nature of the soils in the 33A soil map unit, as evidenced by presence of human-transported material in the upper 20 inches of the soil profile, that soil map unit is recommended for reclassification as either Udorthents-Pits complex, gravelly (305) or Udorthents, smooth (308).

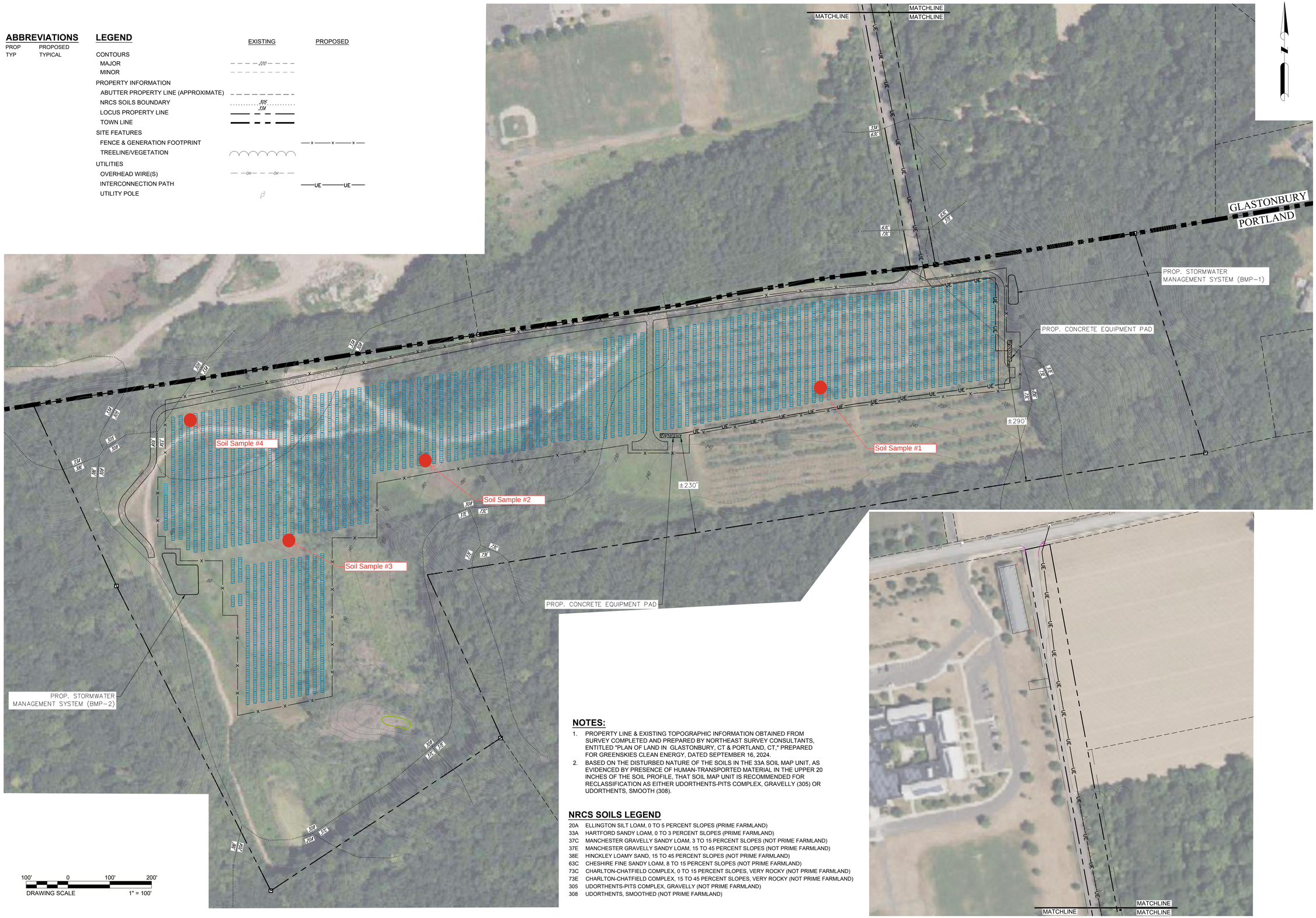
Attachment 2: Soil Sample Locations Map

ABBREVIATIONS

PROP	PROPOSED
TYP	TYPICAL

LEGEND

	EXISTING	PROPOSED
CONTOURS		
MAJOR	220	
MINOR		
PROPERTY INFORMATION		
ABUTTER PROPERTY LINE (APPROXIMATE)		
NRCS SOILS BOUNDARY	305	
LOCUS PROPERTY LINE	334	
TOWN LINE		
SITE FEATURES		
FENCE & GENERATION FOOTPRINT		x x x
TREELINE/VEGETATION		
UTILITIES		
OVERHEAD WIRE(S)	OH	
INTERCONNECTION PATH		UE UE
UTILITY POLE		



NOTES:

1. PROPERTY LINE & EXISTING TOPOGRAPHIC INFORMATION OBTAINED FROM SURVEY COMPLETED AND PREPARED BY NORTHEAST SURVEY CONSULTANTS, ENTITLED "PLAN OF LAND IN GLASTONBURY, CT & PORTLAND, CT," PREPARED FOR GREENSKIES CLEAN ENERGY, DATED SEPTEMBER 16, 2024.
2. BASED ON THE DISTURBED NATURE OF THE SOILS IN THE 33A SOIL MAP UNIT, AS EVIDENCED BY PRESENCE OF HUMAN-TRANSPORTED MATERIAL IN THE UPPER 20 INCHES OF THE SOIL PROFILE, THAT SOIL MAP UNIT IS RECOMMENDED FOR RECLASSIFICATION AS EITHER UDORTHENTS-PITS COMPLEX, GRAVELLY (305) OR UDORTHENTS, SMOOTH (308).

NRCS SOILS LEGEND

20A	ELLINGTON SILT LOAM, 0 TO 5 PERCENT SLOPES (PRIME FARMLAND)
33A	HARTFORD SANDY LOAM, 0 TO 3 PERCENT SLOPES (PRIME FARMLAND)
37C	MANCHESTER GRAVELLY SANDY LOAM, 3 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
37E	MANCHESTER GRAVELLY SANDY LOAM, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
38E	HINCKLEY LOAMY SAND, 15 TO 45 PERCENT SLOPES (NOT PRIME FARMLAND)
63C	CHESHIRE FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES (NOT PRIME FARMLAND)
73C	CHARLTON-CHATFIELD COMPLEX, 0 TO 15 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
73E	CHARLTON-CHATFIELD COMPLEX, 15 TO 45 PERCENT SLOPES, VERY ROCKY (NOT PRIME FARMLAND)
305	UDORTHENTS-PITS COMPLEX, GRAVELLY (NOT PRIME FARMLAND)
308	UDORTHENTS, SMOOTHED (NOT PRIME FARMLAND)

verdantas
1005 MAIN STREET, SUITE NO.: 8120
PAWTUCKET, RI 02860

PROFESSIONAL ENGINEER NO.: XXXX
STATE: XXXXXX P.E.: #####

DESIGNED BY	DRAWN BY	CHECKED BY	PROJECT NO.
ED. JJL, JMB	ED. JJL	ED	24412

CH'KD BY DATE

No.	REVISION

NOT FOR CONSTRUCTION

PORTLAND~MIDDLESEX COUNTY~CONNECTICUT

SCHEMATIC DESIGN LAYOUT
SOLAR ARRAY DEVELOPMENT
GREENSKIES CLEAN ENERGY
15430 OLD MAID'S LANE

DATE: JUNE 2025

SCALE: 1" = 100'

SHEET: 1 OF 1

Attachment 3: Site Photographs

Photo 1: Location of soil sample #1 looking east

Photo 2: Location of soil sample #2 looking southwest

Photo 3: Location of soil sample #3 looking north

Photo 4: Location of soil sample #4 looking east

Attachment 4: Soil Analysis Results

UConn Soil Nutrient Analysis Laboratory
6 Sherman Place, Union Cottage, Unit 5102
Storrs, CT 06269-5102
860-486-4274
soiltesting.cahnr.uconn.edu

UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION & PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

Soil Test Report

Order Number: 24490

Prepared For:

Eric Davison
Davison Environmental LLC
10 Maple Street
Chester, CT 06412

eric@davisonenvironmental.com
860.803.0938

Sample Information:

Sample Name: Portland Sampl
Lab Number: 4733
Area Sampled:
Received: 5/15/2025
Reported: 5/29/2025

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**1093 lbs/acre**				
Magnesium	**149 lbs/acre**				
Phosphorus	**4 lbs/acre**				
Potassium	**247 lbs/acre**				

**** Excessive only defined for Phosphorus (>40 lbs/acre)***

Soil pH (1:1, H2O)	5.5
Est. Cation Exch. Capacity (meq/100g soil)	11.0
Buffered pH (Mod. Mehlich)	5.9

Base Saturation	***%***	***Suggested***
Potassium	3	2.0 - 7.0
Magnesium	6	10 - 30
Calcium	25	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.0	0.1 - 2.0
Copper (Cu)	0.1	0.3 - 0.8
Iron (Fe)	2.9	1.0 - 40.0
Manganese (Mn)	8.2	3.0 - 20.0
Zinc (Zn)	1.7	0.1 - 70.0
Sulfur (S)	14.9	10 - 100
Aluminum (Al)	50.3	10 - 300
Est. Total Lead (Pb)	102.9	

Limestone & Fertilizer Recommendations for Basil

Limestone (Target pH of 6.6)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
5,000 lbs / acre	**115 - 130 lbs / acre**	**90 lbs / acre**	**50 lbs / acre**

Comments:

Split the application of limestone if the recommeded value is over 4000 lbs/A.

Although adequate fertility is required, excess nitrogen applications can cause post-harvest discoloration and reduced flavor. Basil benefits from a sidedress application of nitrogen after the first or second cutting.

The lead level in this soil is elevated. See Soil Lead Interpretation Sheet for more information: https://soiltesting.cahnr.uconn.edu/wp-content/uploads/sites/3514/2022/06/Lead-Interpretation-Sheet.pdf

For questions contact: Shuresh Ghimire, Ph.D., Extension Vegetable Educator. Phone: (860) 870-6933 Email: shuresh.ghimire@uconn.edu
Consult the New England Vegetable Management Guide for more information regarding timing and placement of amendments.

References (Crop Related):

Soil Test Interpretation and Recommendations	https://soiltesting.cahnr.uconn.edu/wp-content/uploads/sites/3514/2022/06/Standard-Nutrient-Analysis.pdf
New England Vegetable Management Guide	https://nevegetable.org/cultural-practices

UConn Soil Nutrient Analysis Laboratory
6 Sherman Place, Union Cottage, Unit 5102
Storrs, CT 06269-5102
860-486-4274
soiltesting.cahnr.uconn.edu

UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION & PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

Soil Test Report

Order Number: 24490

Prepared For:

Eric Davison
Davison Environmental LLC
10 Maple Street
Chester, CT 06412

eric@davisonenvironmental.com
860.803.0938

Sample Information:

Sample Name: Portland Sampl
Lab Number: 4734
Area Sampled:
Received: 5/15/2025
Reported: 5/29/2025

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**1199 lbs/acre**				
Magnesium	**187 lbs/acre**				
Phosphorus	**6 lbs/acre**				
Potassium	**186 lbs/acre**				

**** Excessive only defined for Phosphorus (>40 lbs/acre)***

Soil pH (1:1, H2O)	5.5
Est. Cation Exch. Capacity (meq/100g soil)	11.9
Buffered pH (Mod. Mehlich)	5.9

Base Saturation	***%***	***Suggested***
Potassium	2	2.0 - 7.0
Magnesium	6	10 - 30
Calcium	25	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.1	0.1 - 2.0
Copper (Cu)	0.1	0.3 - 0.8
Iron (Fe)	3.4	1.0 - 40.0
Manganese (Mn)	13.7	3.0 - 20.0
Zinc (Zn)	0.8	0.1 - 70.0
Sulfur (S)	13.8	10 - 100
Aluminum (Al)	62.6	10 - 300
Est. Total Lead (Pb)	low	

Limestone & Fertilizer Recommendations for Basil

Limestone (Target pH of 6.6)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
6,000 lbs / acre	**115 - 130 lbs / acre**	**90 lbs / acre**	**50 lbs / acre**

Comments:

Split the application of limestone if the recommeded value is over 4000 lbs/A.

Although adequate fertility is required, excess nitrogen applications can cause post-harvest discoloration and reduced flavor. Basil benefits from a sidedress application of nitrogen after the first or second cutting.

For questions contact: Shuresh Ghimire, Ph.D., Extension Vegetable Educator. Phone: (860) 870-6933 Email: shuresh.ghimire@uconn.edu
Consult the New England Vegetable Management Guide for more information regarding timing and placement of amendments.

References (Crop Related):

Soil Test Interpretation and Recommendations	https://soiltesting.cahnr.uconn.edu/wp-content/uploads/sites/3514/2022/06/Standard-Nutrient-Analysis.pdf
New England Vegetable Management Guide	https://nevegetable.org/cultural-practices

UConn Soil Nutrient Analysis Laboratory
6 Sherman Place, Union Cottage, Unit 5102
Storrs, CT 06269-5102
860-486-4274
soiltesting.cahnr.uconn.edu

UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION & PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

Soil Test Report

Order Number: 24490

Prepared For:

Eric Davison
Davison Environmental LLC
10 Maple Street
Chester, CT 06412

eric@davisonenvironmental.com
860.803.0938

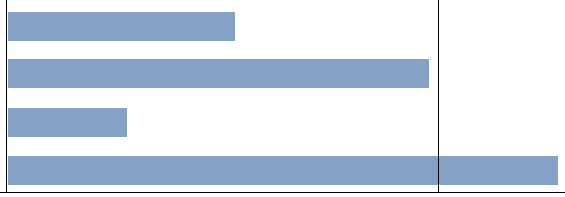
Sample Information:

Sample Name: Portland Sampl
Lab Number: 4735
Area Sampled:
Received: 5/15/2025
Reported: 5/29/2025

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**955 lbs/acre**				
Magnesium	**171 lbs/acre**				
Phosphorus	**4 lbs/acre**				
Potassium	**305 lbs/acre**				



**** Excessive only defined for Phosphorus (>40 lbs/acre)***

Soil pH (1:1, H2O)	5.8
Est. Cation Exch. Capacity (meq/100g soil)	10.2
Buffered pH (Mod. Mehlich)	6.0

Base Saturation	***%***	***Suggested***
Potassium	4	2.0 - 7.0
Magnesium	7	10 - 30
Calcium	23	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.1	0.1 - 2.0
Copper (Cu)	0.1	0.3 - 0.8
Iron (Fe)	18.3	1.0 - 40.0
Manganese (Mn)	10.1	3.0 - 20.0
Zinc (Zn)	0.5	0.1 - 70.0
Sulfur (S)	12.8	10 - 100
Aluminum (Al)	49.9	10 - 300
Est. Total Lead (Pb)	low	

Limestone & Fertilizer Recommendations for Basil

Limestone (Target pH of 6.6)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
5,000 lbs / acre	**115 - 130 lbs / acre**	**90 lbs / acre**	**25 lbs / acre**

Comments:

Split the application of limestone if the recommeded value is over 4000 lbs/A.

Although adequate fertility is required, excess nitrogen applications can cause post-harvest discoloration and reduced flavor. Basil benefits from a sidedress application of nitrogen after the first or second cutting.

For questions contact: Shuresh Ghimire, Ph.D., Extension Vegetable Educator. Phone: (860) 870-6933 Email: shuresh.ghimire@uconn.edu
Consult the New England Vegetable Management Guide for more information regarding timing and placement of amendments.

References (Crop Related):

Soil Test Interpretation and Recommendations	https://soiltesting.cahnr.uconn.edu/wp-content/uploads/sites/3514/2022/06/Standard-Nutrient-Analysis.pdf
New England Vegetable Management Guide	https://nevegetable.org/cultural-practices

Appendix B

Site Photographs

Photo 1: View of apple orchard.

Photo 2: View of apple orchard extending beyond the LOD.

Photo 3: View of fallow area near orchard.

Photo 4: View of western fallow field.

Photo 5: View of area of active earthwork.

Photo 6: View of active earthwork with establishment of Japanese knotweed.

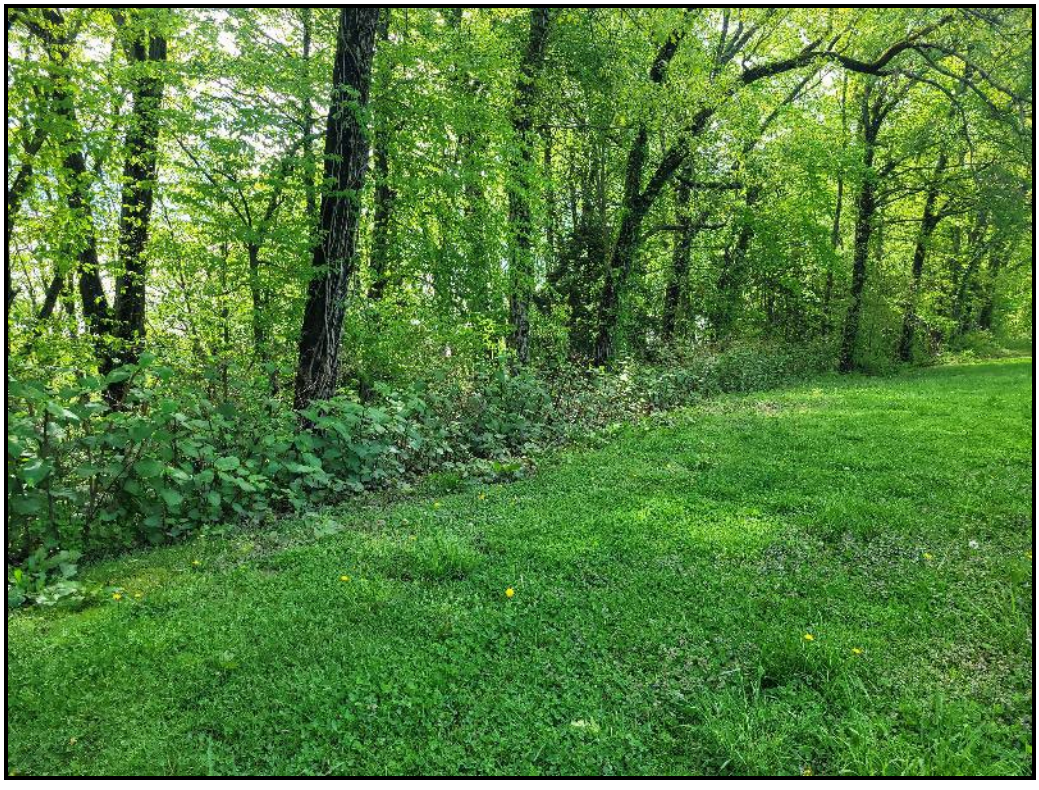


Photo 7: View of edge of mixed hardwood forest, east side.

Photo 8: View of forested edge near LOD, south side.