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

June 25, 2025

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

Re: Greenskies Clean Energy – Artillery Road, Woodbury, Proposed 2.75-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 a 61.9 parcel off Artillery Road and Quassapaug Road in Woodbury, CT, a 61.9 acre parcel owned by Beth and Carl Siemon and Taylor Markovits. The proposed solar facility would occupy approximately 13.5 acres, of which 8 acres are classified as prime farmland soils.

In an email to the Department of Agriculture, dated April 28, 2025, the Petitioner (Greenskies Clean Energy LLC) has agreed to design and manage within the Project Site a versatile agricultural co-use model that maintains ecological integrity while enabling active farming. Key practices such as no-till planting, cover cropping, compost amendment, delayed mowing, and integrated pest management shall be implemented in addition to the following activities:

1. Vegetable row cropping (e.g., squash, zucchini, kale, beans) in higher sunlight zones between rows;
2. Shade-tolerant specialty crops such as culinary mushrooms (shiitake, oyster) grown under solar panels or in dedicated shaded structures;
3. Perennial culinary herbs (e.g., thyme, oregano, lavender, mint) that complement pollinator species and require minimal intervention;
4. Berry and small fruit production (e.g., currants, gooseberries, elderberries), which can thrive with partial sunlight; and
5. Planting of perennial warm season grasses.

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. Artillery Road Proposed Agricultural Co Use
Woodbury DOAG Map
Woodbury Soil Management Plan for Construction
Woodbury Soil Health Assessment
Woodbury Vegetation and Soil Management Plan Post Construction

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection
Gabe Rusk, Greenskies Clean Energy LLC

January 21, 2025

Ref: 43509.00

Jean-Paul La Marche
Vice President of Development
Greenskies Clean Energy
127 Washington Avenue, West Building, Garden Level
North Haven, CT 06473

Re: ±2.75 MW-AC Solar Project Artillery Road in Woodbury, Connecticut – Soil Health Assessment

Dear Greenskies Clean Energy:

VHB has completed a Soil Health Assessment for the above referenced property to document existing soil health prior to construction of the proposed solar array. We understand the purpose of the SHA is to establish baseline conditions for soil restoration that may be needed upon future decommissioning of the solar array. The SHA was conducted in general conformance with the Natural Resource Conservation Services Soil Health Assessment guidance.

The SHA was conducted for two existing corn fields that encompass approximately 14 acres of land. These fields have been used for agriculture since at least 1934. At the time of the SHA a corn crop was in final stages of production at a height of approximately 4-6 feet tall and appeared healthy with ears of corn present the plants.

VHB collected soil samples for this SHA on November 15, 2024. A sampling grid was established that divided each field approximately in half with 12 discrete soil samples being collected from each half (total 48 samples). Refer to the attached Figure for approximate sample locations. Samples were collected from 0-8 inches below grade. Each set of 12 discrete samples was composited into one soil sample for laboratory analysis (total 4 composite samples). Samples were submitted to the UCONN Laboratory and Connecticut Agriculture Experiment Station for analysis of the following parameters: Texture Analysis, organic matter, pH, nitrogen, phosphorus, potassium, calcium, and magnesium. Furthermore, during soil sampling observations were documented with regard to soil structure, organic matter, as well as evidence of roots or biological activity.

In general, soils consisted of light brown to medium brown, uniformly dry fine to coarse sand with trace cobbles and gravel. The textural analysis identified samples as sandy loam based on USDA criteria. Evidence of roots along with minor organic material was identified in each of the 48 samples and biological activity (worms) were observed in 9 of the samples collected.

Laboratory analytical results are summarized below, and laboratory reports are attached.

Parameter	**Results**
Soil Texture	Sandy Loam
Organic Matter	Medium (3.1 to 4.1%)
pH	7.2 to 7.3

Nitrate Nitrogen	12-25ppm (medium high to high)
Ammonium Nitrogen	12-24ppm (low to medium low)
Phosphorus	50-100ppm (medium high to high)
Potassium	220-250ppm (high)
Calcium	1600ppm (high)
Magnesium	125ppm (high)
Soluble Salts	0.3-0.6ms/cm (low)

ppm = parts per million
ms/cm – millisiemens per centimeter

It is anticipated that following decommissioning of the solar facility, another Soil Health Assessment will be conducted, and results will be compared to those above to determine if soil amendments or improvements are needed to restore the health of the soil following decommissioning.

Please let us know if you have any questions or require addition information.

Sincerely,

Vanasse Hangen Brustlin, Inc.

Sara Berryman, CSS
Wetland Scientist
Sberryman@vhb.com

Amy Vaillancourt, LEP
Director, Environmental Services
Availlancourt@vhb.com

Attachments:
Sample Location Map
Laboratory Report

Artillery Road – Proposed Agricultural Co Use Plan

Property Information

Description of property:

The proposed project would be built on a parcel off Artillery Road and Quassapaug Road in Woodbury Connecticut owned by Beth & Carl Siemon & Taylor Markovits in Woodbury Connecticut. The parcel has been leased to farmers for at least the last 30 years. The parcel consists of 61.9 acres, which can be observed in the Agricultural Map.

Project overview:

The project is part of the NRES program and will consist of a 2.75 MW array. The project area is expected to consist of 13.5 acres, of which approximately 8 acres will be on prime farmland. The project has an expected life of twenty years, with four options to extend the project five years. The project is expected to require an access road of crushed stone along with several utility poles outlined in the Agricultural Map. Should the project be sold to another entity, the Farm Plan requirements and decommissioning plan will carry over to the new owner.

Past Agriculture Activities

The landowner has leased the property as a working farm for the past thirty years. Currently, the area is used for corn farming. Greenskies approached these farmers in the hopes they would be willing to continue farming the land which included flexibility for the farmers to choose the crop, maintain ownership of the harvest, as well as be paid by the project owner on par with competitive rates for land management, but they refused

Property Management

Description of farming activities:

Greenskies Clean Energy proposes to continue the agricultural use of the land through a Solar + Farming project through this project proposes a versatile agricultural co-use model that maintains ecological integrity while enabling active farming. Rather than committing to a single crop type or farming method, the project envisions a rotating set of viable farming strategies that respond to site conditions and market demand. These may include:

Vegetable row cropping (e.g., squash, zucchini, kale, beans) in higher sunlight zones between rows;

Shade-tolerant specialty crops such as culinary mushrooms (shiitake, oyster) grown under solar panels or in dedicated shaded structures;

Perennial culinary herbs (e.g., thyme, oregano, lavender, mint) that complement pollinator species and require minimal intervention;

Berry and small fruit production (e.g., currants, gooseberries, elderberries), which can thrive with partial sunlight;1) planting of and 2) planting of perennial warm season grasses.

These systems may be implemented in phases, depending on operator interest, soil performance, and observed microclimate conditions. The flexibility of the planting strategy allows the site to function as both a regenerative agricultural pilot and a revenue-generating farm.

Greenskies Clean Energy remains committed to the long-term viability of agriculture on-site. Key practices such as no-till planting, cover cropping, compost amendment, delayed mowing, and integrated pest management will ensure the health of the soil and resilience of the crops, regardless of the chosen model.

The spacing in between rows is being designed to allow for sufficient acreage to grow plants, provide sufficient area of high sunlight levels, and provide workability for farmers while again balancing needs of required solar capacity. These rows will be on a single mount tracker modules aligned north to south, which will maximize available sunlight for plants to grow.

The site is being designed with farmer's safety in mind. All electrical feeders will be either secured to the modules/racking directly or be underground. There will be increased signage and fencing to ensure that farm workers are never exposed to unsafe conditions. Usually, at this stage of development, Greenskies has not yet selected an engineering, procurement, and construction (EPC) contractor, nor has Greenskies finalized its site design. Both of these activities would ordinarily take place in a project's development cycle after the initial round of permitting is completed. Nonetheless, Greenskies is developing this project with farming as a long term integral aspect of the project and is committed to having the farming use be parallel with the solar for the life of the project.

Soil health is improved by using regenerative methods and perennial plants. Use of perennial plants reduces negative impact to soils, keeps living roots in the ground, provides year round ground cover, and increases the absorption of water into soils. This approach also increases the micro and fungal biodiversity of the soil which improves its quality and the ability to nourish plants grown in the soil.

Array Planting (Underneath the Solar Arrays)

The planting strategy beneath the solar arrays will emphasize productive use of shaded or partially-shaded microclimates, aligning with legitimate agricultural practices. While shade-tolerant perennial forbs and grasses will still be incorporated for soil stability, specific agricultural options may include:

Culinary mushroom cultivation, using low structures or log stacks positioned in deep shade areas;

Leafy greens or herbs such as parsley, cilantro, or sorrel, which thrive in dappled light;

Inter-row cover cropping using legumes (e.g., clover or vetch) for nitrogen fixation and potential forage value.

These crops will be established using no-till planting methods to minimize soil disturbance. The array layout (north-south single-axis trackers) provides varied sun exposure, allowing experimental or rotational cropping patterns between the rows. Farming activities will include delayed mowing, periodic overseeding, and organic soil amendments to support continuous productivity.

Border Area Planting (Along Fence Lines)

The fence line borders will serve as active edge-growing zones suitable for perennial, pollinator-friendly crops and small-scale production. In addition to native forbs and warm-season grasses, the site may support:

Berry shrubs such as elderberry, currants, or gooseberries that tolerate partial sun;

Medicinal and culinary herbs (e.g., lavender, chamomile, lemon balm);

Pollinator-friendly companion crops that support adjacent production zones (e.g., flowering buckwheat, borage).

Design Specifications

Although the system's design may change due to project needs, Greenskies anticipates using a single axis tracking system with 10 foot row spacing and height to panel center of around 5 feet. Panel dimensions will be approximately 96.9 in x 44.6 in x 1.38 in. The use of a tracking system combined with this configuration will maximize sunlight exposure for the proposed agricultural use.

Greenskies, in partnership with Spade Agrivoltaics employed a ray tracing algorithm to calculate weather data and irradiance levels over the course of a Typical Meteorological Year to establish the maximum sunlight reduction from panel shading on every square foot of land directly beneath, behind, and in the areas adjacent to and within the arrays design.

The model to estimate solar availability and shade reduction was created by Sanbox Solar LLC in partnership with Ladybug Tools developed Spade Agrivoltaics. Powered by Ladybug Tools' Honeybee application that utilizes Grasshopper, a visual programming language and environment that runs within the Rhinoceros 3D computer-aided design (CAD) application, as the graphical user Interface (GUI). The SPADE script is a generative algorithm that allows for efficient parametric manipulation to the model space. Honeybee creates, runs and visualizes the results of daylight and radiation simulations using Radiance (Ward & Shakespeare, 1998) and energy models using EnergyPlus (USDOE, 2017) and OpenStudio (2008).

The analysis found the following percentage shading reductions

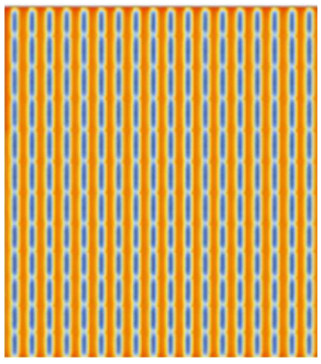
Outside 0-5%

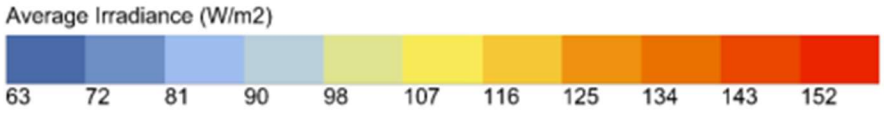
Beneath: 64%

Adjacent: 29%

Between Rows: 13%

Below is a heat map of a sample of the array with a radiance key. Based on our model, we believe the available light will provide sufficient radiance for the proposed planting.





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
steven.martineau@greenskies.com

Soil Management Plan for Construction

Purpose: to outline procedures for the excavation, handling, segregation, stockpiling, grading, and reuse of soils during construction. These are also included within construction drawings for the project.

Soil Type & Quality: Soils are classified as poorly drained to very poorly drained. Pesticide residues (4,4-DDE and 4,4-DDT) have been detected in surface soils.

Soil Excavation Scope: ~4,400 cubic yards of soils are anticipated to be excavated during construction. Grading shall be limited to what is essential. Soil disturbance shall be sequenced such that earth materials are exposed for a minimum amount of time before they are covered, seeded, or otherwise stabilized. Heavy equipment shall utilize designated access drives for travel to minimize soil disruption or compaction. No soil disturbance shall occur until proper erosion control measures are in place. No soil is expected to be transported off-site or imported to the site for this project.

Health & Safety: Procedures shall be implemented to limit worker contact with soils and for dust suppression.

Dust Control: Ensure no visible dust is generated. Mist as necessary to prevent airborne dust without creating run-off. Any run-off resulting from dust control procedures are to be properly managed/collected as necessary.

Erosion and Sediment Control: Erosion control measures shall follow federal, state, and local requirements and comply with the project's Stormwater Pollution Prevention Plan (SWPPP). Temporary sediment traps and permanent stormwater basins are to be installed in accordance with project documents. Slopes should not exceed 3:1 and erosion control blankets are to be used for drainage swale sidewalls and steep slopes. Erosion and sediment controls are to be inspected by the Contractor daily. No sediment laden runoff shall be allowed to reach the wetlands or discharge off-site. Use of anti-tracking pads and cleaning of soils from equipment is to be conducted before allowing it to leave the site. No soil disturbance will be allowed until these controls have been put into place.

Soil Stockpiling: Stockpile areas are to be located within the limits of disturbance, outside the 100-foot buffer of any wetlands, and outside the 500-foot buffer of any vernal pools. Snow-fence, haybales, and silt fence are to be installed around soil stockpiles. Stockpiles are to be covered with polyethylene sheeting and secured to prevent precipitation entering the stockpile and runoff occurring. If soils are excessively wet, earth berms are to be created to contain drainage. Stormwater runoff is to be diverted around stockpiles and managed to minimize water-related erosion. Extended stockpiling periods are to be avoided. All excavated soils are to remaining on-site and be reused to smooth grades for the solar field. Topsoil is to be stockpiled separately, retained, and reused for final grading and re-seeding.

Inspections: CTDEEP Approved Qualified Inspector shall perform weekly inspections of erosion controls and stockpile areas as well as required inspections within 24 hours of rain exceeding 0.5 inches for up to three months or until stabilization. Any deficiencies noted by the Inspector are to be addressed within 24 hours of the inspection.

Soil Stabilization: Reseed and regrade all disturbed areas as early as possible. Site soil stabilization is to be completed within 14 days of post-grading, using hydro-seeding, sodding, or biodegradable erosion control mats. Temporary erosion and sediment controls are to be removed after site stabilization. Secure effective establishment of vegetation with suitable topsoil, adequate lime, fertilizer, mulch, and water.

Soil and Vegetation Management Plan Post-Construction

Purpose: to outline procedures for revegetation as well as vegetation maintenance methods and frequency. The goal is to maximize energy production while minimizing environmental impact.

Soil Type & Quality: Soils are classified as poorly drained to very poorly drained. Surface soils were found to have medium organic matter, sandy loam texture, pH of 7.2-7.3, medium to low ammonium nitrogen and soluble salts, as well as high nitrate nitrogen, phosphorus, potassium, calcium, and magnesium.

Soil Stabilization: Reseed and regrade all disturbed areas as early as possible. Site soil stabilization is to be completed within 14 days of post-grading, using hydro-seeding, sodding, or biodegradable erosion control mats. Temporary erosion and sediment controls are to be removed after site stabilization. Secure effective establishment of vegetation with suitable topsoil, adequate lime, fertilizer, mulch, and water.

Revegetation: Ernst grass seed mix will be utilized to revegetate the site. This seed mix offers various native and naturalized seeds ensuring compatibility with solar infrastructure while promoting ecological benefits. This selected grass species is well-suited to the local climate and site conditions and can thrive under the shade of solar panels.

Establishment Phase (0-6 months)
- Site Preparation: address any remaining soil disturbances from construction activities by leveling and grading.
- Planting: sow seeds uniformly using no-till methods to avoid further soil disturbance.
- Mulching: apply mulch to reduce soil erosion, retain moisture, and suppress weeds.
- Erosion Control Blankets: use biodegradable erosion control blankets on steep slopes to stabilize soil until vegetation is established.
- Water as necessary to achieve seed germination and growth.

Maintenance Phase (6 months-5 years)
- Irrigation: provide supplemental watering to ensure germination and plant growth. Use drip irrigation to minimize water usage.
- Weed Control: monitor and manage invasive species by selective weeding, mowing or target application of environmentally safe herbicides.
- Mowing: to be conducted 3-4 times per year to a height of 3-6". The cut grass is to be left as mulch so that nutrients are returned to the soil contributing to soil fertility and reducing the need for additional fertilizer inputs. This practice ensures that the vegetation management is sustainable and requires minimal intervention.
- Fertilization: apply organic fertilizers as needed to promote healthy plant growth.
- Watering as necessary to maintain vegetation.

Soil Amendments
- Organic Matter: incorporate compost or mulch to improve soil structure and fertility, enhance microbial activity and increase water retention.
- pH Adjustment: adjust soil pH using lime or sulfur as needed to optimize conditions for grass.
- Fertilize: in April and November.

General Monitoring and Maintenance
- Inspections: perform routine inspections of vegetation, soil conditions, and erosion control measures 3 to 4 times per year (April to November).
- Adaptive Management: adjust vegetation and soil management practices based on monitoring results to ensure continued health of vegetation and reduction of invasive species.
- Documentation and Reporting: maintain detailed records of inspections as well as soil and vegetation management activities.

N

WOODBURY CT 2.75 MW

HOST PARCEL:
ARTILLERY RD
MBL 079-015
AREA = 62 ACRES

SOLAR ARRAY
AREA = 14.1 ACRES

SCALE 1"=120'

= STUDY AREA

= Proposed soil health samples (Area A - 12 samples total)

= Proposed soil health samples (Area B - 12 samples total)

= Proposed soil health samples (Area C - 12 samples total)

= Proposed soil health samples (Area D - 12 samples total)

portal.ct.gov/caes

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION

FERTILITY OF YOUR SOIL MEASURED BY THE MORGAN METHOD. A PRODUCT OF RESEARCH AT THIS STATION

"Putting Science to Work for Society"

Amy Vaillancourt
100 Great Meadow Road Suite #200
Wethersfield, CT 06109

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION
123 HUNTINGTON ST.
NEW HAVEN, CT 06511
TELEPHONE (203) 974-8512

CAES-56-N Rev. 1/22

DATE 11/22/2024 PAGE: 2 of: 2	TEST RESULTS *(see back of report for explanation)*			
LABORATORY NUMBER:	6634	6635	6636	6637
YOUR SAMPLE	Artillery CS-A	Artillery CS-B	Artillery CS-C	Artillery CS-D
CROP TO BE GROWN	N/A	N/A	N/A	N/A
SOIL TEXTURE	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam
ORGANIC MATTER	Medium	Medium	Medium	Medium
pH	7.2	7.2	7.3	7.3
NITRATE NITROGEN	High (18 ppm)	High (25 ppm)	High (18 ppm)	Medium High (12 ppm)
AMMONIUM NITROGEN	Medium Low (24 ppm)	Medium Low (24 ppm)	Low (12 ppm)	Low (12 ppm)
PHOSPHORUS	High (100 ppm)	High (75 ppm)	Medium High (50 ppm)	Medium High (50 ppm)
POTASSIUM	High (250 ppm)	High (250 ppm)	High (220 ppm)	High (220 ppm)
CALCIUM	High (1600 ppm)	High (1600 ppm)	High (1600 ppm)	High (1600 ppm)
MAGNESIUM	High (125 ppm)	High (125 ppm)	High (125 ppm)	High (125 ppm)
SOLUBLE SALTS	Low (0.5 ms/cm)	Low (0.6 ms/cm)	Low (0.3 ms/cm)	Low (0.3 ms/cm)

SUGGESTED TREATMENTS (pounds per 1000 square feet)				
pH ADJUSTMENT				
FERTILIZER GRADE				
FERTILIZER AMOUNT				

Remarks:
ppm (parts per million) values are approximate.

EXPLANATION OF RESULTS

Soil tests serve as a guide to intelligent and environmentally sensitive use of fertilizers and other soil amendments. Information from soil tests cannot correct plant problems caused by insects or disease or site limitations such as not enough sunlight.

SOIL TEXTURE: Texture describes the amount of sand, silt and clay in the soil. It influences the amount of water and nutrients a soil can hold. *Sands*, *loamy sands* and *sandy loams* require more frequent watering and lose nutrients more readily by leaching than do *fine sandy loams* and *loams*. *Silt loams*, *silty clay loams* and *clay loams* often retain excessive moisture and reduce air movement to plant roots.

ORGANIC MATTER: Organic matter also influences the amount of water and nutrients held by the soil. *High* organic soils have better structure and retain nutrients and water better than *Medium* and *Low* organic soils. Soil organic matter may be improved by the addition of materials such as compost. A yearly addition of organic matter to gardens promotes soil improvement.

pH: Soil pH affects the availability of nutrients and, when interpreted with texture and organic matter, indicates the limestone needs of the soil. The results are expressed in pH units, with pH 7.0 being neutral. Connecticut soils are generally somewhat acidic in the pH range of 4.5 to 6.5. Most plants except for rhododendrons, azaleas, mountain laurel and blueberries grow best at a soil pH between 6.0 and 7.0.

NUTRIENT TESTS

The Morgan Test provides an estimate of nutrient availability to plants. Results are given in relative terms such as *Low*, *Medium*, and *High*. *Excessive* is used when nutrient concentrations may damage plants. Generally, plant nutrients should be high during periods of rapid plant growth.

NITRATE NITROGEN: Plants generally take up nitrogen in the form of nitrate (NO_3-N), either from applied fertilizers or microbial conversion of other forms of organic nitrogen in the soil. The Morgan Test indicates how much nitrogen is immediately available to plants, but not the ability of the soil to provide nitrogen throughout the growing season. Excess nitrate nitrogen can be harmful to plants and may leach to ground water.

AMMONIUM NITROGEN: Soils generally do not contain high concentrations of ammonium unless they have been recently fertilized, over fertilized or received fresh manure. High ammonium levels are sometimes harmful to plants.

PHOSPHORUS: Optimal levels of phosphorus favor strong seedlings, abundant fruit and colorful flowers. Phosphorus can be over applied resulting in micronutrient deficiencies.

POTASSIUM: Plant hardiness is improved with proper amounts potassium. Over application of potassium can result in excessive soil salinity.

CALCIUM: Calcium levels in conjunction with the pH test, will determine the need for limestone or gypsum.

MAGNESIUM: This test identifies soils where magnesium treatments such as dolomitic limestone or Epsom salts may be beneficial.

SALTS: Measurements of soluble salts are sometimes reported on our tests where over-fertilization or other sources of salt may have injured plants.

CORRECTING DEFICIENCIES OR EXCESSES

The soil test suggests additions of fertilizers and other amendments based on site and crop specific needs.

pH ADJUSTMENT: Limestone suggestions are based on the use of dolomitic limestone. Rates of pelletized limestone are the same as pulverized limestone. Hydrated lime may be used if the rate is reduced to three-fourths of that for limestone. Aluminum sulfate or sulfur is suggested when soil acidification is needed.

FERTILIZER: The principal plant nutrients in mixed fertilizers are nitrogen (N), phosphorus (P) and potassium (K). Although they may be present in various forms, the formula is always expressed as percent of N, P (as P2O5) and K (as K2O) in that order. Thus a 5-10-5 fertilizer would contain 5 lbs. of N, 10 lbs. of P2O5 and 5 lbs. of K2O per 100 lbs. Fertilizers other than those suggested on the report may be used if the amounts of nutrients applied are similar.

Organic fertilizers are usually slower acting and lower in nutrients. They are often recycled waste products. Multiple materials such as cottonseed meal and bone meal are often needed. Recently, commercially prepared organic fertilizers containing various ratios of N, P and K have become available. These fertilizers can be substituted if the amount of nutrients applied is similar. Fresh manure may damage some plants and should be worked into the soil well in advance of planting.

https://portal.ct.gov/caes

https://portal.ct.gov/CAES/Soil-Office/Soil-Office/Soil-Testing-Offices-Instructions

10/20/23

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: 23240

Prepared For:

Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

availlancourt@vhb.com
860.807.4327

Sample Information:

Sample Name: Art-CS-A
Lab Number: 8481
Area Sampled:
Received: 11/18/2024
Reported: 12/3/2024

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**2583 lbs/acre**				
Magnesium	**> 500 lbs/acre**				
Phosphorus	**111 lbs/acre**				
Potassium	**> 600 lbs/acre**				

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

Soil pH (1:1, H2O)	7.0
Est. Cation Exch. Capacity (meq/100g soil)	9.8
Buffered pH (Mod. Mehlich)	6.6

Base Saturation	***%***	***Suggested***
Potassium	12	2.0 - 7.0
Magnesium	22	10 - 30
Calcium	66	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.5	0.1 - 2.0
Copper (Cu)	0.6	0.3 - 0.8
Iron (Fe)	1.9	1.0 - 40.0
Manganese (Mn)	5.7	3.0 - 20.0
Zinc (Zn)	2.4	0.1 - 70.0
Sulfur (S)	48.2	10 - 100
Aluminum (Al)	12.1	10 - 300
Est. Total Lead (Pb)	low	

UConn Soil Nutrient Analysis Laboratory
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soiltesting.cahnr.uconn.edu

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

Soil Test Report

Order Number: 23240

Prepared For:

Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

availlancourt@vhb.com
860.807.4327

Sample Information:

Sample Name: Art-CS-B
Lab Number: 8482
Area Sampled:
Received: 11/18/2024
Reported: 12/3/2024

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**2314 lbs/acre**				
Magnesium	**> 500 lbs/acre**				
Phosphorus	**88 lbs/acre**				
Potassium	**> 600 lbs/acre**				

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

Soil pH (1:1, H2O)	7.1
Est. Cation Exch. Capacity (meq/100g soil)	9.2
Buffered pH (Mod. Mehlich)	6.7

Base Saturation	***%***	***Suggested***
Potassium	14	2.0 - 7.0
Magnesium	23	10 - 30
Calcium	63	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.4	0.1 - 2.0
Copper (Cu)	0.8	0.3 - 0.8
Iron (Fe)	1.5	1.0 - 40.0
Manganese (Mn)	5.7	3.0 - 20.0
Zinc (Zn)	1.8	0.1 - 70.0
Sulfur (S)	42.5	10 - 100
Aluminum (Al)	14.2	10 - 300
Est. Total Lead (Pb)	low	

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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: 23240

Prepared For:

Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

availlancourt@vhb.com
860.807.4327

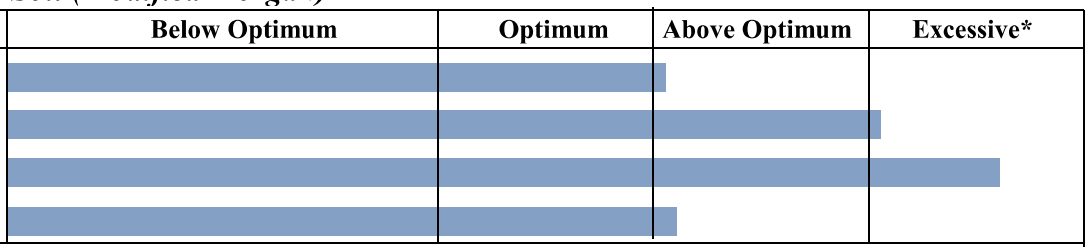
Sample Information:

Sample Name: Art-CS-C
Lab Number: 8483
Area Sampled:
Received: 11/18/2024
Reported: 12/3/2024

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**2489 lbs/acre**				
Magnesium	**> 500 lbs/acre**				
Phosphorus	**77 lbs/acre**				
Potassium	**369 lbs/acre**				



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

Soil pH (1:1, H2O)	7.2
Est. Cation Exch. Capacity (meq/100g soil)	8.8
Buffered pH (Mod. Mehlich)	6.6

Base Saturation	***%***	***Suggested***
Potassium	5	2.0 - 7.0
Magnesium	24	10 - 30
Calcium	70	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.4	0.1 - 2.0
Copper (Cu)	0.5	0.3 - 0.8
Iron (Fe)	1.5	1.0 - 40.0
Manganese (Mn)	3.2	3.0 - 20.0
Zinc (Zn)	2.9	0.1 - 70.0
Sulfur (S)	37.3	10 - 100
Aluminum (Al)	15.0	10 - 300
Est. Total Lead (Pb)	low	

UConn Soil Nutrient Analysis Laboratory
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Soil Test Report

Order Number: 23240

Prepared For:

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Wethersfield, CT 06109

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860.807.4327

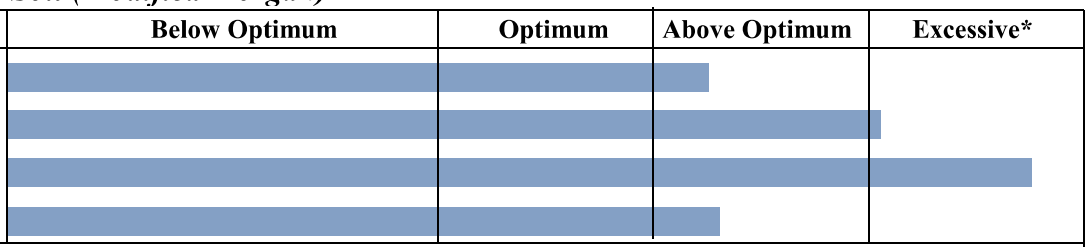
Sample Information:

Sample Name: Art-CS-D
Lab Number: 8484
Area Sampled:
Received: 11/18/2024
Reported: 12/3/2024

Results

Nutrients Extracted From Your Soil (Modified Morgan)

		Below Optimum	Optimum	Above Optimum	Excessive*
Calcium	**2803 lbs/acre**				
Magnesium	**> 500 lbs/acre**				
Phosphorus	**85 lbs/acre**				
Potassium	**429 lbs/acre**				



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

Soil pH (1:1, H2O)	7.2
Est. Cation Exch. Capacity (meq/100g soil)	9.7
Buffered pH (Mod. Mehlich)	6.7

Base Saturation	***%***	***Suggested***
Potassium	6	2.0 - 7.0
Magnesium	22	10 - 30
Calcium	72	40 - 50

Element	***ppm***	***Soil Range in CT***
Boron (B)	0.5	0.1 - 2.0
Copper (Cu)	0.6	0.3 - 0.8
Iron (Fe)	2.7	1.0 - 40.0
Manganese (Mn)	3.7	3.0 - 20.0
Zinc (Zn)	4.1	0.1 - 70.0
Sulfur (S)	44.8	10 - 100
Aluminum (Al)	13.5	10 - 300
Est. Total Lead (Pb)	low	

UCONN | COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES

PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

RESULTS REPORT

December 5, 2024

Name: Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

Order Number: **23240**

Lab Number: MA24-460

Sample Name: Artillery-CS-A

Textural Analysis

Percentages are based on the Fine Earth Fraction (Less than 2mm)

Sand:	66.2 %
Silt:	24.4 %
Clay:	9.4 %

According to USDA criteria, this sample classifies as a **SANDY LOAM**. Classification is based on particles that are sand size or finer (i.e. Less than 2 millimeters in diameter.)

Organic Matter

The organic matter as determined by loss on ignition is 3.7 %

University of Connecticut Soil Nutrient Analysis Laboratory

6 Sherman Place Unit 5102 Storrs, CT 06269-5102

Tel: (860) 486-4274 Fax: (860) 486-4562 Web: www.soiltest.uconn.edu

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PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

RESULTS REPORT

December 5, 2024

Name: Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

Order Number: **23240**

Lab Number: MA24-461

Sample Name: Artillery-CS-B

Textural Analysis

Percentages are based on the Fine Earth Fraction (Less than 2mm)

Sand:	67.6 %
Silt:	23.6 %
Clay:	8.8 %

According to USDA criteria, this sample classifies as a **SANDY LOAM**. Classification is based on particles that are sand size or finer (i.e. Less than 2 millimeters in diameter.)

Organic Matter

The organic matter as determined by loss on ignition is 3.1 %

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PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

RESULTS REPORT

December 5, 2024

Name: Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

Order Number: **23240**

Lab Number: MA24-462

Sample Name: Artillery-CS-C

Textural Analysis

Percentages are based on the Fine Earth Fraction (Less than 2mm)

Sand:	66.2 %
Silt:	26.8 %
Clay:	7.0 %

According to USDA criteria, this sample classifies as a **SANDY LOAM**. Classification is based on particles that are sand size or finer (i.e. Less than 2 millimeters in diameter.)

Organic Matter

The organic matter as determined by loss on ignition is 3.9 %

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PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

RESULTS REPORT

December 5, 2024

Name: Amy Vaillancourt
VHB
100 Great Meadow Road, Suite 200
Wethersfield, CT 06109

Order Number: **23240**

Lab Number: MA24-463

Sample Name: Artillery-CS-D

Textural Analysis

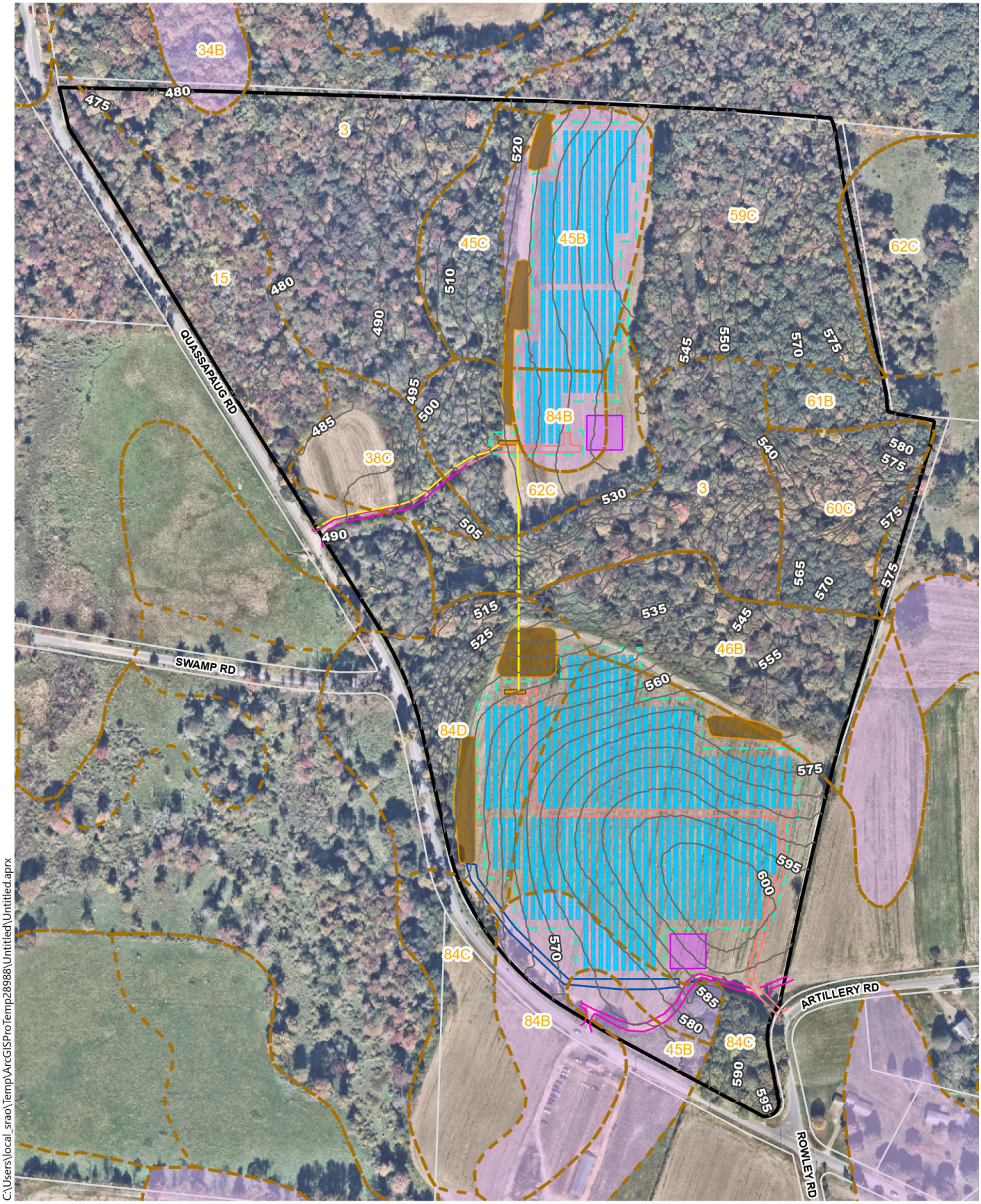
Percentages are based on the Fine Earth Fraction (Less than 2mm)

Sand:	66.6 %
Silt:	27.0 %
Clay:	6.4 %

According to USDA criteria, this sample classifies as a **SANDY LOAM**. Classification is based on particles that are sand size or finer (i.e. Less than 2 millimeters in diameter.)

Organic Matter

The organic matter as determined by loss on ignition is 4.1 %



GCE Solar | Woodbury, Connecticut

0 157.5 315 630 Feet

- Solar Panels
- Swale
- Proposed Soil Stockpile
- 5-foot Contour
- Dirt Road
- Underground Electric
- Property Boundary
- NRCS Soils Boundary
- Gravel Road
- Basin
- Parcel Boundary
- Prime Farmland
- Fence
- Equipment Pad

Proposed Project Layout

Source: VHB. CTDEEP, ESRI