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

October 2, 2025

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

Re: LSE Phobos, LLC, 166 South Street in Morris, CT, Proposed 4.05-Megawatt AC Solar Generating Facility – No Material Affect Letter from the Department of Agriculture

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 166 South Street in Morris, CT. The entire 37.3-acre parcel contains approximately 19.7 acres of prime farmland soils. The proposed solar facility would occupy approximately 20.02 acres, of which 14.9 acres are classified as prime farmland soils.

In a letter to the Department of Agriculture, dated July 28, 2025, the Petitioner (LSE Phobos LLC) has agreed to collaborate with Thy Neighbors Farm, LLC from Torrington, CT to incorporate a sheep grazing program throughout the lifespan of the project within the Project Site Implementation will take place within the first two years post-construction and upon completion of soil testing, forage analysis, signage being posted, and grazing infrastructure is finalized on the site. Approximately 20 sheep will be grazed May through October, utilizing rotational grazing through the establishment of five paddocks roughly four acres each. Additional information can be found in the attached Grazing Plan provided by the Petitioner prepared in conjunction with Steven Thompson of Thy Neighbors Farm, LLC.

Based on preliminary information provided to the Agency (enclosed), and the successful implementation of the co-uses described above, 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 our agency at AGR.Solar@ct.gov

Sincerely,

Bryan P. Hurlburt
Commissioner

Enc. 166 South Street – Morris – Prime Farmland Figures
Grazing Plan – 166 South St Morris CT
Bina and Abraham Solar Farm Dept of Ag Correspond

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection
Sam Valone, Lodestar Energy

LODESTAR ENERGY

July 28, 2024

Bryan P. Hurlburt, Commissioner
c/o Jaime Smith
Department of Agriculture
450 Columbus Boulevard, Suite 701
Hartford, CT 16103

Ms. Smith:

We are pleased to submit this information for your consideration in review of the proposed solar project by LSE Phobos LLC ("Lodestar") located at 166 South St in Morris (the "Property"). Included in this correspondence is a copy of the current site plans for the proposed Project.

The Project will utilize approximately 20.02 acres of the 37.3-acre Property. Of the total acreage, approximately 19.7 acres are classified as "Prime Farmland Soils," and approximately 8.6 additional acres are classified as "Farmland of Statewide Importance". The proposed Project's footprint will impact approximately 14.9 acres of Prime Farmland and 4.8 acres of Farmland of Statewide Importance.

While the project is proposed to occur on these farmland soils, production agriculture will not be adversely affected. During the construction, operation, and decommissioning of the proposed project, the integrity of the existing farmland soils will be maintained. Primarily, soil disturbance, soil compaction, and soil organism habitat loss will be minimized to the greatest extent possible. This will be done through the installation and maintenance of soil and sediment eroson control features, tracked machines to displace weight and minimize compaction, and a phased construction plan. Further, proposed grading is minimal and all soils manipulated during site preparation will remain onsite (i.e., no cut material will be exported and no fill material will be imported). At the end of the array's useful life, the system will be decommissioned, and the site will be fully restored to its original condition.

The Project is designed as a 4.05 MW AC single-axis tracker solar photovoltaic generating facility with associated interconnection infrastructure. It will include the installation of ground-mounted solar panels, security fencing, and an access road off South Street. Construction activities will involve limited clearing and grubbing, minimal grading, placement of foundations, racking systems, PV modules, utility pads, electrical conduit and support structures, poles, overhead wiring, and fencing. The modules to be installed will be mounted on posts driven into the ground. As such, soil organism habitat loss will be de minimis. Following decommissioning, holes will be backfilled with local (onsite) soil to match existing soil conditions.

As the site is currently used for production agriculture (and located on farmland soils) the project will support the goals of “dual-use” and proposes an agrivoltaics plan. Lodestar is collaborating with Thy Neighbors Sheep Farm of Torrington, Connecticut to incorporate a sheep grazing program though the life of the project. The dual use will provide a source of organic matter content for the existing soils and serve as vegetative maintenance, all while supporting a small local farm. A detailed grazing plan is attached for reference.

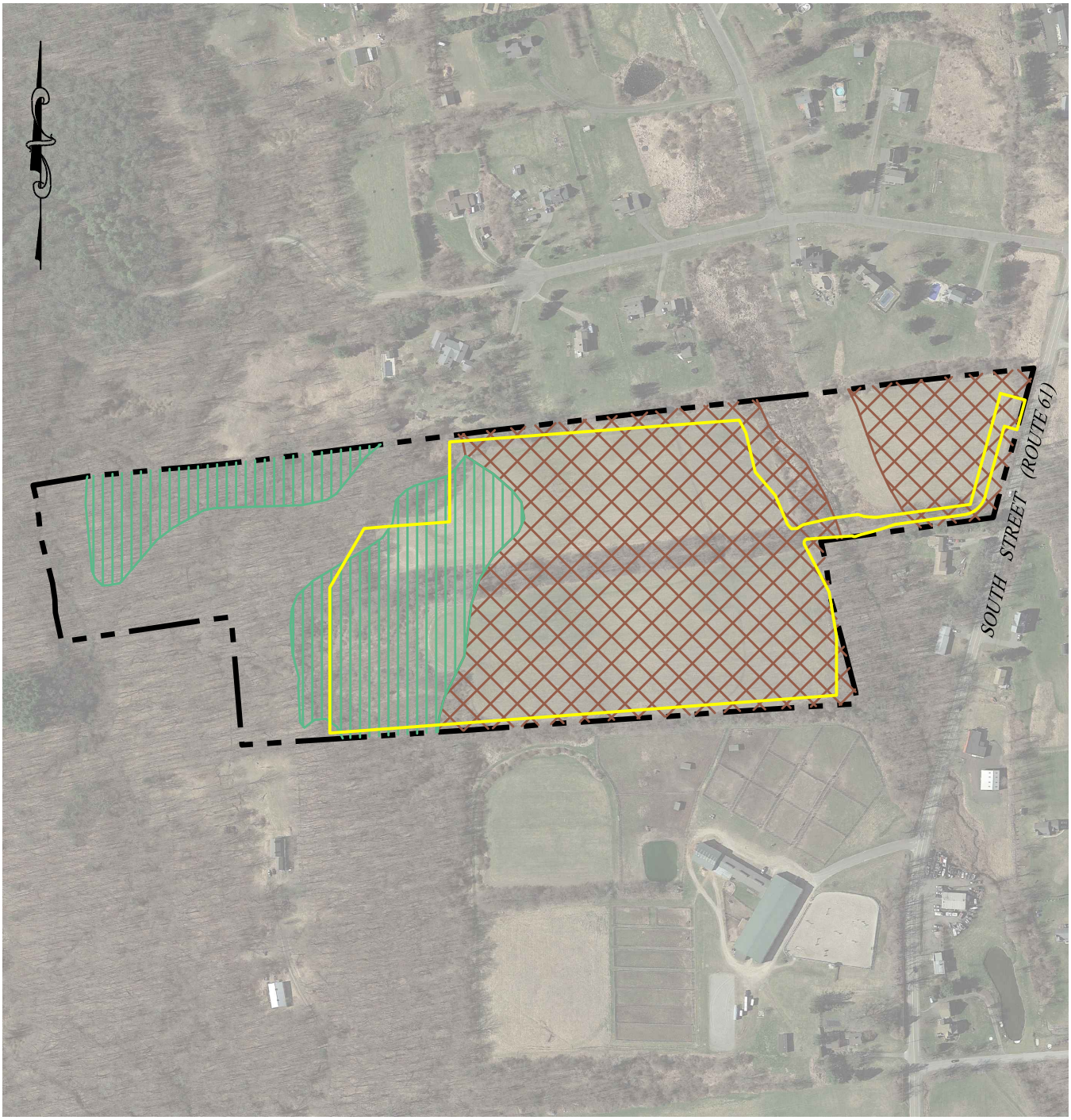
We believe that the proposed project will maintain the integrity of existing Prime and Statewide Importance Farmland soils throughout the construction and operation of the array and will not cause adverse impacts to production agriculture through the proposed agrivoltaics plan. We respectfully request confirmation from the Department that this approach is consistent with your interpretation.

Please contact me directly if you have any questions or require any additional information.

Sincerely,

Sam Valone

Sam Valone
Project Manager



LEGEND

- PROPERTY LINE
- PROJECT AREA
- PRIME FARMLAND SOILS
- FARMLAND SOILS OF STATEWIDE IMPORTANCE

MAP NOTES:

1. BASE MAP TAKEN FROM CT ECO 2019 AERIAL PHOTOGRAPHY.
2. PRIME FARMLAND INFORMATION TAKEN FROM CT ECO ADVANCED VIEWER.

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PRIME FARMLAND MAP

166 SOUTH STREET
MORRIS, CONNECTICUT

Project #:	24118701
Plan Date:	07/18/25
Scale:	1" = 400'
Figure:	5

SHEEP SOLAR GRAZING PLAN

BINA AND ABRAHAM SOLAR FARM

166 South Street, Morris, CT 06763

Prepared For:

LSE PHOBOS LLC

18 North Main Street, 2nd Floor
West Hartford, Connecticut 06107

Prepared By:

Steven Thompson
Owner, Shepherd

Thy Neighbors Farm, LLC
www.thyneighborsfarm.com

Introduction

This Sheep Solar Grazing Plan has been developed by “Thy Neighbors Farm, LLC” for “LSE PHOBOS LLC” in regards to their proposed 20.2 Acre “Bina and Abraham Solar Farm” project located at 166 South Street, in Morris, Connecticut.

This Sheep “Grazing Plan” includes all required information from the Connecticut Department of Agriculture’s “Agrivoltaics Farm Plan for Solar Energy Generating Facilities located in whole or in part on Prime Farmland “Agrivoltaics Farm Plan for Solar Energy Generating Facilities located in whole or in part on Prime Farmland” document, specifically found under the “Property Management” portion, subsection 3, D (a.- g.).

LSE PHOBOS LLC plans to utilize the agrivoltaic practice of “Sheep Solar Grazing” on this future 20.2 acre site in Morris as the primary means of vegetation management. This plan helps meet increasing energy demands, and promotes local food production, the local agricultural economy and surrounding foodshed. Thy Neighbors Farm, LLC has been contracted to develop this Grazing Plan, and is also able to physically implement this plan as the future flock manager.

Overview

The proposed sheep grazing vegetation management will begin approximately 1-2 years after seeding and site construction is completed, allowing ample time for the pasture underneath the panels and inside the perimeter fence to fully establish. Grazing operations will commence after soil testing is completed, a forage analysis is done, the required signage is posted, grazing infrastructure is set up on the site, and a local sheep farmer is contracted for the job.

This grazing plan will utilize approximately 60 Katahdin hair sheep, owned and shepherded by a local Connecticut farmer. These sheep will be brought on site at the beginning of the grazing season in May, and will ideally remain on site until the end of October. At the end of the grazing season they will return to their home farm for processing, overwintering and lambing.

During the duration of their stay on site, the practice of rotational grazing will be implemented to reduce internal parasite load, ensure optimal vegetation management, and maintain ideal health conditions of the sheep. Continually free access to fresh water, pasture forage, sodium bi-carbonate, salt, and sheep appropriate minerals will be managed by the shepherd.

Prior to the beginning of the grazing season and being brought to the solar site, the sheep are prepared by undergoing a specific pre-season care routine. Every sheep has a thorough health inspection including FAMACHA and Body Condition Scoring. They are individually weighed, vaccinated appropriately, ear tagged with SCRAPIE identification tags, have their hooves trimmed, and are dewormed as required. Dewormed sheep are also kept on a dry-lot for 24 hours afterwards. If any health issues are identified, those particular sheep are held back at the home farm for further observation and treatment. Healthy sheep may be brought to the solar site at a later date if needed to maintain the proper stocking rate (approx. 3 sheep per acre).

Within the external perimeter fencing of the solar site, the solar array will be divided into five (5) equally sized paddocks (Approx. 4 acres each) by electric netting fence set up by the shepherd. This electric netting fence provides additional on-site predator protection, as well as maintains positive control over which areas the sheep are allowed to graze. The sheep will be moved into subsequent paddocks once they have eaten through their current forage, which will be approximately every 9-14 days. This may vary based on the amount of available forage, the rate of growth, and the exact number of sheep and lambs. Conditions for movement are based on the Shepherd's observations of rate of consumption, height and amount of remaining available pasture, sheep body condition scoring, and consideration of other environmental factors.

The aim of rotational grazing is to allow for a rest period for each section of pasture previously grazed. This plan allows for a minimum 45 day period before the sheep return to any previously gazed area and begin consuming new vegetative growth there. This not only allows for an appropriate amount of time for regrowth, but also is enough of a time delay for any internal parasite eggs, which are present in the manure droppings, such as Barber Pole Worm, to die off, therefore greatly reducing the risk of consumption and increased worm load for the sheep.

While the sheep are on-site, the managing Shepherd will visit the sheep in person an average of 2-3 days per week. The shepherd will also monitor site access, sheep drinking water levels, and the flock in general. The flock manager will also remotely monitor the sheep through the use of strategically positioned solar powered, cellular network, PTZ (Pan-Tilt-Zoom) cameras on site. This ensures 24/7, 365 ability to check on the sheep and site conditions at any moment, to be aware of anyone gaining access to the site, and ensures the sheep never go without fresh water. This additional surveillance and observation allows the shepherd to intervene if any issues are seen during routine morning and nightly checks of the cameras. The use of such technology does not replace the necessity of on-site visits and weekly in-person inspections by an experienced shepherd. Issues that arise in sheep health are often only spotted by an experienced eye, during in-person inspections and longer observations of the sheep. Sheep tend to isolate themselves when feeling unwell, so it is equally important to walk the pasture.

During each transition into a new paddock, the shepherd will utilize portable sheep handling and corralling equipment to conduct a full flock health inspection. Each sheep will be FAMACHA scored (visually inspecting the inner eyelid mucus membranes for color, indicating varying levels of anemia caused by internal parasites), Body Condition Scored, checking for any hoof issues, lameness, cuts or bruising, missing hair, swelling, signs of scours, flystrike or any other potential issues. If any health issues are discovered, proper treatment will be rendered and veterinary assistance will be scheduled if required. Annual on-site flock inspections will be done by the farm's veterinary partner, followed up by fecal parasite egg count testing.Throughout the grazing season, any unwell sheep may be returned to the home farm for treatment and observation, and may be returned to the solar site when fully recovered. Individual digital sheep records are kept based on ear tag number recording general health, weight, medical treatments, movements, mortalities and any other notable observations about each sheep for future review.

The Shepherd will ensure new paddocks have the electric fencing set up, and the sheep have access to fresh water, minerals and supplements available to them as they previously did. This process takes some time and requires repositioning, refilling, and testing the related equipment.

Throughout the grazing season, the shepherd will also conduct any necessary additional vegetation maintenance through means of traditional mowing and string trimming as required. Areas inaccessible to the grazing sheep still need to be maintained such as around various electrical equipment, concrete pads, inverters, around gates, underneath and outside the perimeter fence, as well as near storm water retention ponds, and other water features. The sheep will selectively graze past particular weeds, some wetland grasses, and other woody vegetation they find less desirable. There are also some invasive plants and species that are poisonous to small ruminants that may be present which need to be removed and managed to improve the pasture. The shepherd is always looking for these plants, and taking action when found to protect the sheep and improve their forage conditions. As recommended in the CT Department of Agriculture guidance, some initial mowing may be required to be done ahead of the sheep, or after the sheep move through the pasture to maintain ideal grazing conditions.

In event there are any sheep mortalities on-site, a thorough on-site investigation will be done to determine the cause of death, and a full flock health inspection and FAMACHA scoring may be done. Any carcass will be promptly removed from the solar site, and returned to the home farm location for proper disposal in accordance to the farms mortality and carcass disposal plan, typically by burial or composting on farm. If the cause of death is not immediately determined, a necropsy will later be performed by the shepherd or by UCONN Department of Pathobiology and Veterinary Science, Connecticut Veterinary Medical Diagnostic Laboratory. If multiple deaths are observed a veterinary visit to the site will be done for assistance. Any cause of death will be immediately remedied to prevent similar incidents.

Ram lambs will be appropriately banded and no intact rams will be raised on site, this will prevent any untimely pregnancies or unattended lambings. Lambs will be appropriately weaned and separated from Ewes to allow the Ewes to recover and consume forage at the dry/open rate and reduce the strain and demand on their body for additional unnecessary milk production.

Standards kept in accordance with the Connecticut Department of Agriculture's "Requirements for Solar Grazing Properties" document:

(https://portal.ct.gov/-/media/DOAG/ADaRC/Solar/Requirements-for-Solar-Grazing_Final.pdf)

-Signage will be installed on exterior fencing with the contact information of the grazer.
-Annual Veterinarian inspections and any required vaccinations.
-All sheep will be identified with proper SCRAPIE tags.
-Livestock will not have access to any on-site waterways or storm water retention ponds.
-Stocking rates will be maintained based on available forage to ensure nutrition needs are met.

Grazing Plan

CT Department of Agriculture “Agrivoltaics Farm Plan” “Grazing Plan” requirements: (https://portal.ct.gov/-/media/DOAG/ADaRC/Solar/DOAG-Agrivoltaics-Farm-Plan-FINAL.pdf”)

(A) “Type and Number of Animals Used” : 60 Katahdin Sheep (3 sheep/acre)

(B) “The time and duration of grazing, and the decision making process for ensuring that vegetation is not over-grazed” :

- **Grazing Method:** Rotational grazing
- **Grazed Acreage:** Approx. 20 acres
- **Rotation Duration & Rest period:** 45-day minimum full cycle
- **Paddock Count:** 5
- **Paddock Size:** ~4 acres each
- **Grazing Period per Paddock:** 9-14 days
- **Stocking Density:** 3 mature sheep per acre
- **Over-grazing prevention:** Visual / physical in-person inspection and height measurement. Pasture forage not to go below 4” of height.

(C) “Forage and vegetation mix establishment and maintenance” : Recommended initial seeding and maintenance seeding with Ernst Seeds “Fuzz and Buzz - Standard Mix” (ERNMX-146) or “Fuzz and Buzz Premium Mix” (ERNMX-147), in accordance to their recommended seeding rates per acre. This mix was developed specifically with Sheep Solar Grazing and Bee Keeping in mind, in conjunction with the American Solar Grazing Association (ASGA) who also recommend this mix for solar sites in our region. Annual soil testing should be conducted and applications of pelletized ag lime as needed to maintain proper soil pH over time.

(D) “Plans for fencing” : Recommended perimeter fencing to meet CT Department of Agriculture recommendations for Solar Grazing. Specifically having the bottom fencing tensioned at or below grade, to ensure it is non-permissible to local predatory mammals such as black bears, coyotes, foxes and bobcats. Having a raised bottom edge is counter-productive to the purposes of solar grazing, and promotes predation. Internal paddocks will be established utilizing temporary electric netting fences charged by a mobile, solar charged, battery powered fence charger, properly grounded to the solar system racking. Proper electric fence warning signs, and a live fence indicator light will be utilized to prevent accidental shock to personnel.

(E) “Plans for a water source” : Fresh potable well water will be transported to the site in clean food-grade, 275 gallon IBC totes. This water is then transferred via pump, into an identical, 275 gallon IBC tote located on-site, raised on concrete blocks, beneath the shade of the solar array. This water source has a 2-inch camlock to garden hose thread adapter. A 3/4 inch hose connects the water source to a 55 gallon stock tank via a “Trough-O-Matic” automatic float valve. This system ensures the stock tank remains full and level with 55 gallons of fresh

water, continually supplied by the 275 gallon reservoir. Water levels of the stock tank and reservoir are monitored, and more water is transported to the site to refill the reservoir as needed. A water consumption rate of 1.5 gallons per sheep per day is planned for, although these numbers tend to be much lower in actuality as a lot of the moisture the sheep consume comes from the forage itself. Typically rates of .5 gallons per sheep per day are more often observed during a normal grazing season. During periods of extreme heat, or drought, extra attention is given to water consumption and additional on-site visits are done to inspect for heat-stress, as well as to ensure ample water is available for the sheep.

As previously noted, in addition to water, the sheep are also provided free choice granulated sodium-bicarbonate as a rumen buffer to prevent any bloating, as well as an appropriate sheep salt and mineral mix to supplement any other nutritional mineral deficiency. These supplements are provided in water resistant containers, underneath the panels to prevent moisture contamination and spoilage while allowing access as needed by each individual sheep.

(F) “Plans for soil testing” : Annual soil testing will be conducted by taking soil samples from across the site per sampling instructions, and submitting them to the University of Connecticut’s College of Agriculture, Health and Natural Resources: Soil Nutrient Analysis Laboratory for their “Standard Nutrient Analysis (Modified Morgan)” test. Follow-on actions will be taken as needed based on results as to ensure optimal soil health and nutrition is maintained to grow and maintain the best sheep pasture possible.

(G) “Contingency plan for unforeseen climate events” : The flock manager is always keeping an eye on the current and pending weather, the amount of forage available, the rate of growth, and overall sheep health. Unforeseen climate events as we have more recently seen in the State of Connecticut can certainly impact Sheep Solar Grazing operations. These can be categorized into two main categories, one-time major weather events, and seasonal anomalies.

A one-time major weather event could be a severe rain and lightning storm, hurricane, tornado, hail storm, flooding or fire. Whereas seasonal anomalies would consist of abnormal periods of drought, excessive rain, and prolonged extreme temperatures, whether high or low.

Any of these climate or weather events can seriously threaten animal safety, overall health, and available pasture forage, altering grazing conditions. Depending on the specific unforeseen climate event and surrounding situation, the flock manager will take the following actions:

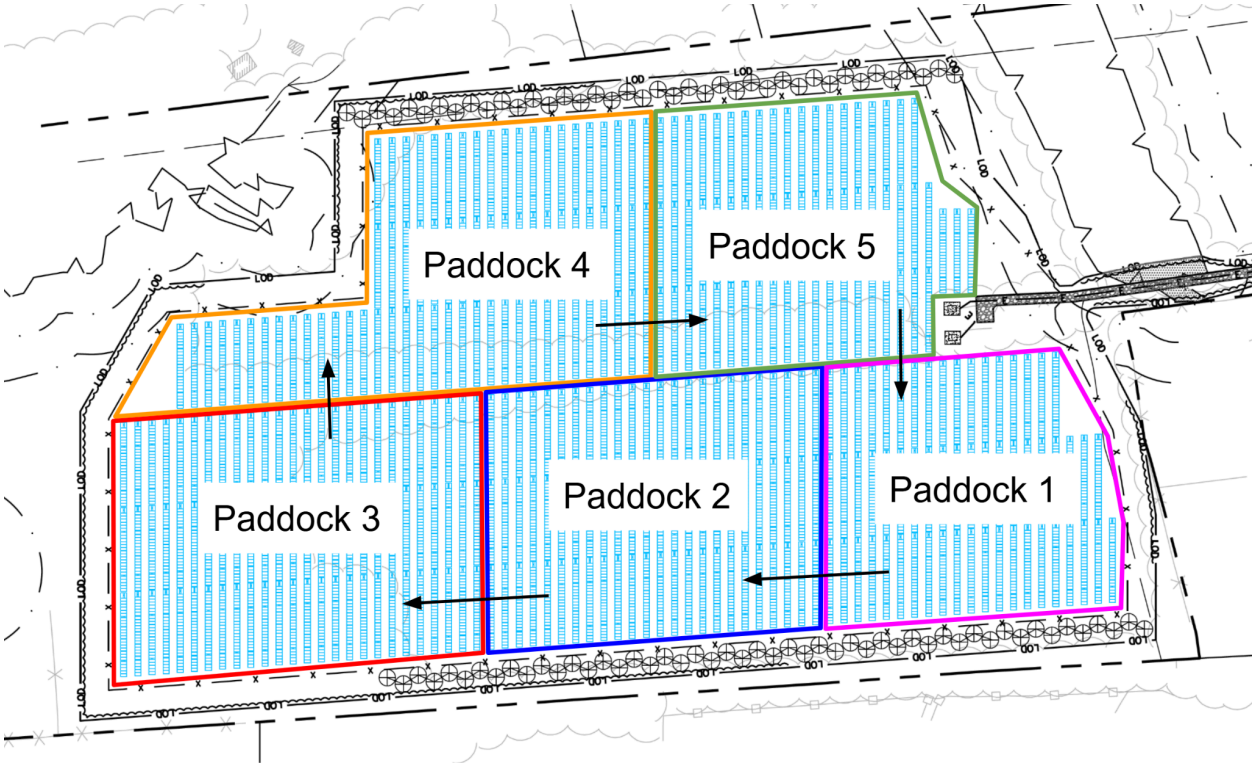
Access impending weather patterns, take notice of any emergency weather warnings, decide on the appropriate measure and act preemptively as necessary, access aftermath, and respond.

For one time emergencies threatening sheep health, based on reporting and the local conditions, sheep will either shelter in place, or be moved off-site based on severity and urgency of the situation. The flock manager will have additional grazing pasture, or stored hay available to sustain the flock should they all need to be moved temporarily, or maintained off-site for the duration of the rest of the grazing season.

For prolonged and seasonal climate events, the flock manager may alter stocking density based on stunted or increased forage growth rates, increase internal parasite checks and dewormings in the event of a very wet season, increase available water on site in case of prolonged heat, supplement forage with additional feed if necessary while reducing stocking rates, remove sheep from the site all together, or other appropriate actions as the individual situation dictates.

Site Map Depicting Proposed Paddock Layout for Rotational Grazing

(All paddocks are approximately 4 acres in area)



Nutritional Requirements of Katahdin Hair Sheep

Table 1

Breed	Stage of Production	Body Weight in Pounds (BW)	Feed Intake, Dry Matter % BW	Feed Intake in Pounds of Dry Matter
Katahdin Hair Sheep	Growing Lamb, 50% Mature BW	65	2.5	1.6
	Yearling	110	3.0	3.3
	Open, Dry Ewe	130	3.5	4.6

Calculated Forage Production & Estimated Stocking Density : 3 Sheep /acre

Table 2

Total Acres	Avg. Forage Production	Total Forage Production	Refusal & Waste	Total Forage for Consumption	Animal	Avg. lbs	Grazing Days	**Total Sheep**
20.2	2,500 lbs	50,500 lbs	30%	35,350 lbs	Sheep	110	180	**60**

Photographic Examples: Sheep Grazing

(Photo Credit: Thy Neighbors Farm, LLC Sheep Solar Grazing Operations in Connecticut 2024 & 2025)

Left Above: Vegetation prior to sheep grazing

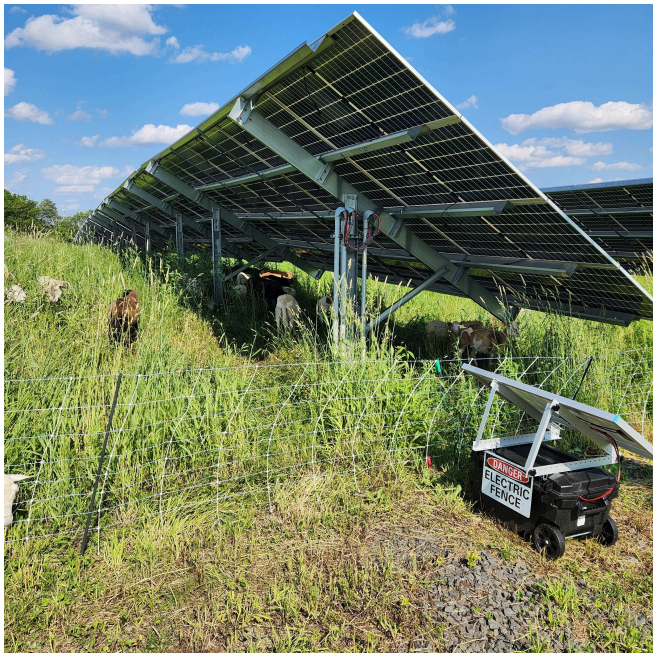
Right Above: Vegetation post sheep grazing

Left Above: Sheep grazing under and beside solar panels

Right Above: Sheep grazing infrastructure - Water System, Electric fencing, Electric Fencing Charger

Photographic Examples: Grazing Infrastructure

(Photo Credit: Thy Neighbors Farm, LLC Sheep Solar Grazing Operations in Connecticut 2024 & 2025)



Left Above: Portable, Solar-Powered Electric Fence Charger

Right Above: Electric Fence Charger Internals

Left Above: Sheep water system, Sodium-Bicarb & Minerals

Right Above: Transportation and refilling water reservoir

Photographic Examples: Animal Healthcare

(Photo Credit: Thy Neighbors Farm, LLC Sheep Solar Grazing Operations in Connecticut 2024 & 2025)

Left Above: Pre-Season Vaccination, Ear-Tagging, De-worming

Right Above: Pre-Season Hoof Trimming & Coat Maintenance

Left Above: Sheep handing system corral on site

Right Above: Sheep health inspection during paddock

References

CT Department of Agriculture. (2023). *Agrivoltaics Farm Plan for Solar Energy Generating Facilities located in whole or in part on Prime Farmland*. CT.gov Department of Agriculture. portal.ct.gov/-/media/DOAG/ADaRC/Solar/DOAG-Agrivoltaics-Farm-Plan-FINAL.pdf

CT Department of Agriculture. (2023, April). *Requirements for Solar Grazing Properties*. CT.gov Department of Agriculture. portal.ct.gov/-/media/DOAG/ADaRC/Solar/Requirements-for-Solar-Grazing_Final.pdf

National Research Council, Division on Earth and Life Studies, Board on Agriculture and Natural Resources, & Committee on Nutrient Requirements of Small Ruminants. (2006). *Nutrient Requirements of Small Ruminants: Sheep, Goats, Cervids, and New World Camelids*. National Academies Press.

South Dakota State University. (2025, March). *Grazing Calculator*. South Dakota State University Website. https://extension.sdstate.edu/grazing-calculator

Thompson, J., & Meyer, H. (1994, April). *Body condition scoring of sheep*. OregonState.edu. agsci.oregonstate.edu/sites/agscid7/files/ec1433.pdf

Thompson, S. (2025). *Photo Credit: Thy Neighbors Farm, LLC*. Torrington, Connecticut.

Van Wyk, J. A., & Bath, G. F. (2002). The FAMACHA system for managing haemonchosis in sheep and goats by clinically identifying individual animals for treatment. *Veterinary Research*, *33*(5), 509–529. 10.1051