



CONNECTICUT DEPARTMENT OF AGRICULTURE

450 Columbus Blvd, Suite 701 | Hartford, Connecticut 06103 | 860.713.2500

Office of the Commissioner

Affirmative Action/Equal Employment Opportunity Employer



March 6, 2023

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

Re: USS Somers Solar LLC – 360 Somers Road, Ellington, proposed 4-Megawatt AC solar project

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 at 360 Somers Road in Ellington, on a portion of the larger Ellington Airport Property. The entire 127-acre parcel contains approximately 32.15 acres of prime farmland soils and 29.72 acres of statewide important farmland soils. The proposed solar facility will occupy approximately 30.8 acres in the northern and western portions of the parcel. The areas are currently used to grow hay and corn for a local dairy operation.

In a letter to the Department of Agriculture (DoAg), dated March 3, 2020, and a follow up letter dated October 15, 2022, the developers (USS Somers Solar LLC) have agreed to design and manage the solar facility for the rotational grazing of sheep. USS Somers Solar has provided the Department with a site-specific grazing plan prepared by the United States Solar Corporation.

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

This determination is conditioned upon:

1. The co-uses described above operating on the project site for the life of the project.
2. The solar developer adhering to the *Requirements for Solar Grazing Properties* (enclosed).
3. That there will be no grading, cutting or filling, topsoil removal, or other actions associated with the project’s installation and ultimate deconstruction after 20 to 30 years.

The Department of Agriculture will continue to monitor the proposed project and should changes or additions to the proposal raise concerns to the Department, we reserve the right to modify our position on this project, including opposing it, as detailed plans are provided by the developers.

If you have any questions, please feel free to contact Holly Lalime of my staff. Holly can be reached at [Holly.Lalime@ct.gov](mailto:Holly.Lalime@ct.gov) or at (860) 969-7053.

Sincerely,



Bryan P. Hurlburt  
Commissioner

Enc.

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection  
Peter Schmitt, USS Somers Solar LLC



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### Requirements for Solar Grazing Properties

Below is a list of requirements for the co-location of sheep on solar array sites. Solar developers and grazers must adhere to the requirements below to ensure that the sheep on site are provided with the appropriate management and care to promote and sustain their health.

#### Site Requirements

1. Proper site preparation must be completed by solar developers to create a safe and productive environment for livestock. No debris from construction should be left in the array and panels should be designed for maximum grazing efficiency.
2. Proper soil preparation must take place including preliminary soil testing, followed by repeated testing every 2-3 years and the incorporation of soil amendments as needed.
3. If herbicides or pesticides will be used on the property, the solar developer must share application areas and plans with the solar grazer and a plan for animal safety must be established.
4. Exterior fencing around the solar site must completely enclose the overall array without any holes or gaps.
  - a. Eight-foot-tall chain link fencing with a curl back underground and tension wire running along the bottom should be installed.
  - b. Gates with opening should be tight enough to prevent predators.
5. The solar developer shall provide the necessary fencing identified by the farmer within the solar site to create grazing paddocks. Fencing is also necessary to keep livestock out of hazardous areas including roads, catch basins, transformers, drainage ditches, and containment ponds.
6. In addition to exterior fencing, best practices for flock protection other than dogs, includes llamas or donkeys. If you are planning to utilize guardian dogs, you should be aware of the significant training required to implement such a program. Texas A&M has created an introduction to using guardian dogs that can be found here: <https://sanangelo.tamu.edu/research/lgd/>
7. Signs must be installed around the exterior fencing of the solar site announcing the presence of livestock and providing contact information for the solar grazer.

#### Livestock Health and Wellness

8. A reliable water source will be provided by the solar developer. The water source, whether surface or groundwater, shall be tested for contaminants prior to livestock being brought to the site. The solar developer is responsible for ensuring that the water

source has sufficient yield throughout the season when sheep are grazed on the property.

9. Livestock cannot have access to waterways, ponds, etc. Water shall be pumped from its source and provided to the sheep via a trough or stock tank.
10. A productive and nutritious forage needs to be established and maintained. This shall include regular mowing to keep fields from becoming overgrown. The developers shall work with a grazing expert to select a forage mix that is suitable for the climate, soil quality, and livestock. The solar developer should not expect to graze sheep on the site until the forage has had a full growing season to establish. A forage sample analysis shall be completed yearly to ensure the crop meets livestock nutritional needs.
11. Solar grazers will use proper stocking rates to ensure that a sufficient quantity and quality of forage is available for the livestock.
12. Solar grazers will be required to perform mandated health checks on their sheep which shall include:
  - a. All animals should be officially identified with either an 840 tag or Scrapie tag [https://eregulations.ct.gov/eRegsPortal/Browse/RCSA/Title\\_22Subtitle\\_22-278-A/](https://eregulations.ct.gov/eRegsPortal/Browse/RCSA/Title_22Subtitle_22-278-A/)
  - b. Regular monitoring of body condition, foot health, and visible signs of injury or illness.
  - c. Mandatory, at least annually, health check performed by a veterinarian including all vaccinations deemed necessary at the veterinarian's discretion including a yearly rabies vaccine that is labeled for use in sheep - [https://eregulations.ct.gov/eRegsPortal/Browse/RCSA/Title\\_22Subtitle\\_22-359/](https://eregulations.ct.gov/eRegsPortal/Browse/RCSA/Title_22Subtitle_22-359/)
13. If sheep come from out of state, all imported animals need to meet all importation requirements. [CTImportRequirements2021.pdf](#)
14. If a dog or any animal other than sheep will be on site, they must be vaccinated for rabies. Dogs must be licensed. Records must be kept up to date and provided upon request. [https://www.cga.ct.gov/current/pub/chap\\_435.htm#sec\\_22-338](https://www.cga.ct.gov/current/pub/chap_435.htm#sec_22-338)
15. Department of Agriculture staff must be allowed to visit the site with notice to check on the welfare of the livestock.

### **Education and Training**

16. Developers need to ensure there is an adequate plan for care and management of the sheep and training for anyone working at the site to ensure that both worker and animal welfare is effectively managed.
17. The solar developer will work with the grazer to create a contingency plan for unforeseen events such as flooding, drought, or other natural disasters.

18. Training must be provided to solar employees who regularly access the site regarding how to interact with the sheep on site.
19. Solar developers are expected to hire and financially compensate solar grazers/farmers for the vegetation management services they are providing.
20. Solar grazers must have 24/7 access to the site.
21. The solar developer shall allow a representative of the Commissioner of Agriculture to conduct a site visit on an as needed basis to confirm compliance with solar grazing activity on the site.

March 3, 2022 (revised October 14, 2022)  
Sent via Electronic Mail (Holly.Lalime@ct.gov)

Holly Lalime  
Farmland Preservation Program  
Connecticut Department of Agriculture  
450 Columbus Boulevard, Suite 701  
Hartford, CT 06103

**RE: Solar Energy Project Considerations, USS Somers Solar LLC, Somers Road,  
Ellington, Tolland County, Connecticut**

Dear Ms. Lalime:

On behalf of our client, USS Somers Solar, LLC (“Petitioner”, USS), Westwood Surveying and Engineering, P.C. (Westwood) is gathering information and requesting agency comments for the proposed Somers Solar Project (Project) in Ellington, Tolland County, Connecticut. The purpose of this letter is to inform you of the proposed Project, and request comments and/or input from the Department regarding the proposed development of the Project with respect to material effect on prime, statewide, and/or locally important farmland soils on the site. This revised letter is a follow-up to our previous email correspondence in May 2022 regarding the project. As further detailed in Information Section 3c. and the attached Grazing Plan, the Petitioner is proposing to utilize rotational sheep grazing following the construction of the proposed solar energy generating facility.

As you know, section 16-50k(a) of the Connecticut General Statutes requires that for a solar photovoltaic facility with a capacity of two or more megawatts to be located on prime farmland, “excluding any such facility that was selected by the Department of Energy and Environmental Protection in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j”, the Department of Agriculture must represent, in writing, to the Connecticut Siting Council that such project will not materially affect the status of such land as prime farmland. It is our hope that once the Department has reviewed this information, it would agree that the Project will not materially affect the status of prime farmland on the site.

The Project will be located on a portion of the larger Ellington Airport property at 360 Somers Road, Ellington, Connecticut (Site). Figure 1, *Site Location*, depicts the location of the Site and surrounding area and Figure 2, *Existing Conditions*, depicts the existing land cover of the Site along with a superimposed outline of the proposed development area.

Per the January 16, 2020 guidance on Solar Energy Project Considerations that has previously been posted by the Department, USS is providing additional information on the Project for the Department’s review. Our answers to the Department’s request for information are provided in the responses below.

1. **Farm/Property Information:** Provide a description of the farm property, including but not limited to the following (include appropriate maps and surveys to allow evaluation):
  - a. Farm owner(s), farm name and location;

*The property is located at 360 Somers Road, Ellington, CT (Parcel ID 105-002-0000). The property's primary use is the Ellington Airport. The landowner is: JLM Associates LLC d/b/a Ellington Airport (JLM Associates). Agricultural activities on the property are leased month to month to: Seth Aborn*

- b. Total acreage, identification of prime, statewide and/or locally important farmland soils & acreage; and

*The Property consists of The Site consists of an approximately 127 acre parcel with a mixed use including an airport facility with related development open space, buildings, and impervious surfaces ("Ellington Airport"), agricultural/cultivated crops, hay fields/grassland, and deciduous and evergreen wooded (mixed forest) areas. The 127 acre parcel contains 32.15 acres mapped as Prime Farmland Soils and 29.72 acres mapped as Farmland of Statewide Importance.*

*The Project will occupy approximately 30.8 acres of the 127 acres and will be located in the northern and western portions of the parcel. These development areas are predominantly utilized for cultivated crop (corn) and hay field. The buildings and facilities associated with Ellington Airport are located in the eastern and central portions of the Site and will remain undisturbed by the proposed solar development. The portions of the Site outside of the developed airport facility are a combination of cultivated crop, pasture/hay, mixed forest, and barren land areas. The wooded areas are predominantly located in the northern portion and along the western perimeter of the Site. The barren land centrally located within the Site consists of a gravel surfaced contractor's yard facility with metal building, storage trailers, material stockpiles, and vehicle/equipment parking. The area in the vicinity of the building and storage trailers is outside of the proposed development. The Site is privately-owned and zoned Industrial (I) under the Town of Ellington's Zoning Code. The attached Figure 2, Existing Conditions, depicts the existing land cover of the Site, including farmland soils.*

- c. Current production agriculture on the farm and the approximate location of crops, farm buildings, etc. used to support the farming operation

*Currently approximately 40 to 45 acres of the northern, western and southern portions of the 127 acre parcel are utilized for agricultural production (corn and/or hay). Agricultural activities on the parcel extend onto adjacent parcels to the south and southeast. No buildings on-site are utilized for the agricultural operations.*

## **2. Energy Project Information**

- a. Describe the energy project, including but not limited to, the size of the project in megawatts (MW), the footprint being proposed as it relates to prime farmland on the property, # of panels (if known), and a description of infrastructure needed to support the project;

*Based on the current design, the overall proposed system size of the solar energy generating facility (Facility) is 4.0 MWac. The project will consist of approximately 10,368 Jinko Solar Eagle 72HM G5B photovoltaic modules (panels), 32 Delta M250HV-US inverters, two (2) switchboard and transformer pads, and approximately 1,700 lf of new gravel access roads. There will be approximately 2,640 lf of underground medium voltage electrical cables*

connecting to one (1) service interconnection. The underground alignment will follow the proposed Project access roads and the existing gravel access road extending to Somers Rd. The proposed electrical interconnection will be located on new utility poles near the Site’s existing gravel entrance from Somers Rd. and will interconnect with Eversource’s electrical system in the Somers Rd. right-of-way. A ground-mounted tracker racking system will be used to secure the panel arrays. The Facility will be surrounded by a six (6)-foot tall chain-link security fence. The northern and southern development areas will be individually fenced. The Facility will occupy approximately 30.8 acres within its perimeter fence line (21 acres in the northern area and 9.8 acres in the southern area). The general array area will occupy a total of approximately 21.5 acres including the open space between racks. The remaining area within the fence lines will be utilized for storm water and drainage facilities, any necessary transition grading, and general areas needed for operations and maintenance.

<b>Farmland Soil Classification</b>	<b>Total Area within 127-acre Site Parcel (acre +/-)</b>	<b>Impacted Area within Project Limits (acre +/-)</b>
<b>Prime Farmland Soils</b>	32.15	3.76
<b>Farmland of Statewide Importance</b>	29.72	7.10

- b. Describe what the energy will be used for and how it will benefit the farming operation; and

*The energy will be sold to The Connecticut Light & Power Company, d/b/a Eversource Energy through a state approved power purchase agreement as part of the Shared Clean Energy Facility program. This site is unique in that the current use is row agriculture on an industrially zoned site (airport), with large portions of the project footprint falling on previously disturbed lands or barren lands.*

*The remaining acreage on this property may continue to be farmed and may also see increased per acre yields depending on the crop, due to the pollinator friendly habitat being installed at the project site. Soybeans have shown some, small yield increase from adjacent pollinator friendly habitat, but other pollinator dependent crops would see a larger yield increase.*

*Finally, the presence of year-round vegetation will increase the carbon sequestration potential of this property. The project acreage planted in pollinator friendly habitat will have significantly better carbon sequestration compared to traditional row crops.*

- c. Are there future plans to increase energy capacity beyond what is proposed? If so, please describe these future plans, and any impacts the increase may have on prime farmland or the overall farming operation.

*There are no expansion plans currently.*



### **3. Agricultural Resource Impacts**

- a. Describe any production agriculture currently being conducted within the footprint of the solar project;

*Of the 43 acres on the parcel utilized for crops, approximately 25 acres are within the proposed project limits.*

- b. Describe overall how the project will impact production agriculture currently being conducted on the farm; and

*Agriculture areas outside of the proposed Project will remain unaffected by the development. Agricultural crops, such as corn, are not compatible with solar array development and will not continue within the Project area.*

- c. Provide a description of any plans by the farm owner(s) to foster production agriculture within or as a result of the development (e.g., grazing animals in and around the solar project, providing pollinator habitat).

*The Project intends to provide "sheep ready" pollinator habitat and will work with the local community to offer apiary hosting within the project site to support production agriculture on other portions of the parcel and adjacent parcels. USS has years of experience developing and establishing pollinator friendly habitat under solar arrays and has hosted apiary operations on several, similar solar projects in Minnesota. Anecdotally, USS has found that beekeepers have seen increased honey yields on solar sites planted with pollinator friendly habitat compared to other locations.*

*USS is also proposing to implement rotational sheep grazing within the 30.8 acre fenced-in panel area following the completion of construction and vegetation establishment. Attachment 1 includes the site specific Grazing Plan developed for the Project.*

### **4. Alternatives to Locating the Energy Project on Prime Farmland**

- a. Provide a description of any alternatives considered by the farm owner(s) to developing the project on prime farmland soils (e.g., the option of selling agricultural development rights for the farm instead of developing for solar, or as a mitigation measure to reduce the size of the solar development);

*JLM Associates and USS selected this site through the evaluation process of successful projects and USS's experience on site selection criteria. The Ellington Airport is zoned Industrial and grid-connected solar is an approved use in an I-zone. The Project area is generally obscured from roadways and surrounded by mature treelines. Access to the Project will utilize existing gravel roadways from the existing paved driveway access from Somers Road (State Route 83) which minimizes creation of new impervious surfaces. The proposed site also provide the closest access to the existing three phase power grid which runs along the western side of Somers Rd. The site is located to not interfere with the existing airport runway and operations. The Project is located to avoid disturbance to existing on-site wetlands and minimize tree clearing.*

- b. Describe any alternatives examined which might enable placement of some or all of the solar panels in locations other than on prime farmland (e.g., elsewhere on the property or on farm buildings); and

*Alternate locations to avoid prime farmlands were considered the siting process, however, once all the siting criteria components, including technical, aesthetic, and airport operations, were combined, the Project area as proposed was deemed by both USS and JLM Associates as the optimal location.*

- c. Provide a description of any other form of mitigation considered by the farm owner(s) (e.g., farmland restoration, or a future commitment to preserve the farm).

*Given the parcel's primary operation as an airport facility, a commitment to preserve land as farmland has not been considered by the landowner. One of the benefits of solar development on the parcel as opposed to the construction of industrial buildings is that the existing farmland soils will not be permanently removed from the site. Upon expiration of the power purchase agreement and solar component decommissioning, production agriculture activities can easily return to the Project area.*

We welcome any comments or questions the Department may have at this time. Given the provided information, USS Somers Solar LLC requests that the Department provide a letter to the Siting Council indicating that if USS proceeds with the Project as described, it will not materially affect the status of prime farmland on the site.

We look forward to working with the Department on this matter. If you require further information or have questions, please contact me at your convenience.

Sincerely,

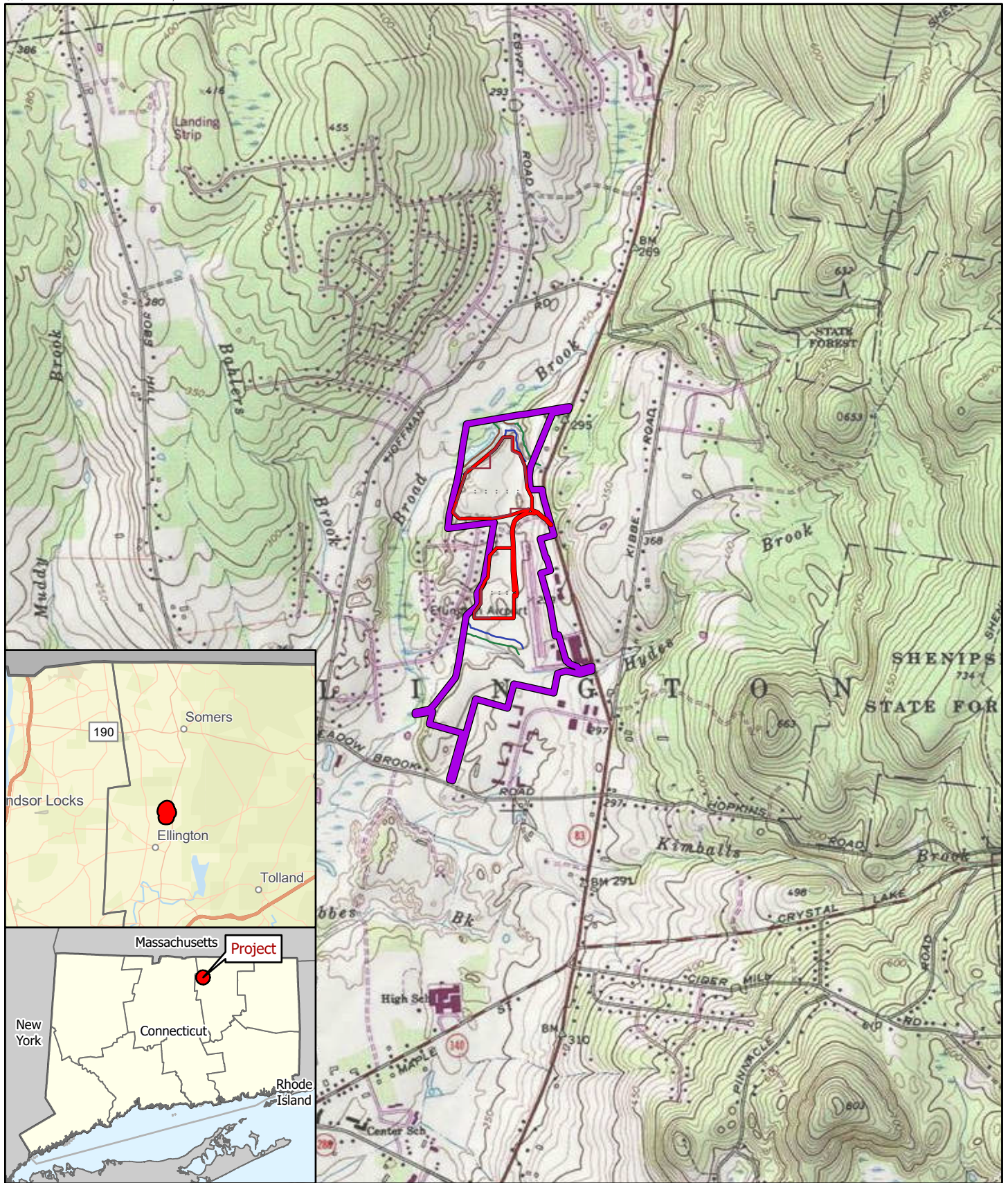
**Westwood Surveying and Engineering, P.C.**



Joe Dietrich, PE  
Senior Project Manager  
Joe.dietrich@westwoodps.com  
(610) 716-3853

Enclosure

Cc: Allen Tate, USS Somers Solar LLC, Allen.Tate@us-solar.com



Data Source(s): Westwood (2021); ESRI USA Topo Basemap (Accessed 2021); ESRI Streets Basemap (Accessed 2021); CT DEEP (2019).

**Legend**

- Development Area
- Property
- County Boundary



**Somers Solar Project**

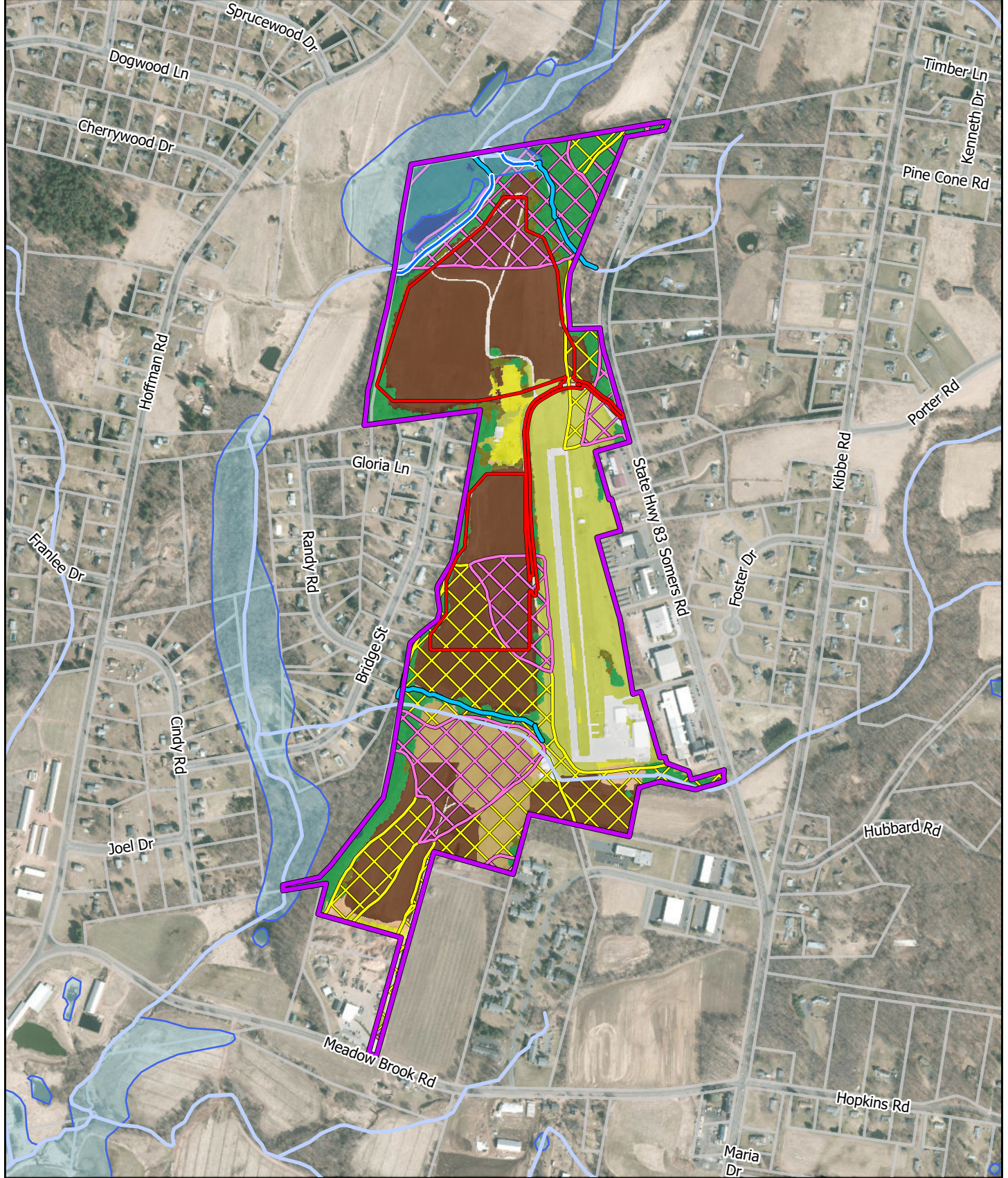
360 Somers Rd  
Ellington, Connecticut

**Site Location**

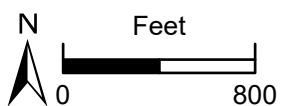
**Westwood**

Toll Free (888) 937-5150 westwoodps.com  
Westwood Professional Services, Inc.

FIGURE 1



Data Source(s): Westwood (2021); ESRI Imagery Basemap (Accessed 2021); CT DEEP (2019); USGS (2020); NOAA (2016); NRCS (Accessed 2021).



**Westwood**

Toll Free (888) 937-5150 westwoodps.com  
Westwood Professional Services, Inc.

**Legend**

- Development Area
- Property Line
- Parcel Boundary
- All areas are prime farmland
- Farmland of statewide importance
- Delineated Stream
- Delineated Wetland Boundary
- NHD Flowline
- NHD Waterbody
- Land Cover**
- Impervious
- Developed, Open Space
- Cultivated Crops
- Pasture/Hay
- Grassland/Herbaceous
- Mixed Forest
- Scrub/Shrub
- Palustrine Forested Wetland
- Palustrine Emergent Wetland
- Barren Land
- Open Water

**Somers Solar Project**

360 Somers Rd  
Ellington, Connecticut

**Existing Conditions**

FIGURE 2

Map Document: N:\0228111\_00\GIS\Analysis\210518\_EMB\Somers\_ Exhibits\_210518.aprx 8/5/2021 6:36 PM embolsen

# Attachment 1

## Grazing Plan



**Sheep Pasture Rotation and Grazing Plan for USS Somers Solar LLC in Ellington,  
Connecticut**

Prepared by: United States Solar Corporation  
2150 Post Road, Suite 505  
Fairfield, CT 06824  
203-505-6969



## Sheep Rotation and Grazing Plan for USS Somers Solar LLC

360 Somers Road, Ellington CT

### Summary

The purpose of this document is to present a specific sheep grazing plan for the USS Somers Solar LLC Project (“the Project”) to be constructed in Ellington, Connecticut, on a parcel owned by JLM Associates LLC. Mobilization for construction of the solar facility is expected to occur in mid-2023, with full installation taking place upon conclusion of the growing season, which will include an approximately 30.8 acre fenced-in panel area available for sheep grazing beginning in 2024.

The project site is uniquely situated to host sheep grazing in addition to solar energy production due to the following characteristics:

- The developer of the solar project, United States Solar Corporation, maintains a standard business practice of establishing pollinator habitat throughout solar sites, utilizing grasses and flowering plants native to respective project areas. Such seed mixes produce flora that are “sheep ready,” where fodder is appetizing to and nutritious for sheep;
- The site is generally obscured from roadways and surrounded by mature tree lines, offering sheep protection from any neighbors, noxious commercial uses, or potentially hazardous industrial activity;
- The project area is largely flat, offering a clear view of the entire project area for the grazer;
- Ellington, Connecticut gets approximately 50 inches of rain per year, which creates a favorable growing environment for the vegetative cover.

The practice of rotational sheep grazing is also conducive to the generation of solar energy, in how it acts as a vegetation control tactic to prevent panel shading, removes invasive species, and limits erosion of topsoil. Establishing a sheep grazing arrangement is immensely beneficial to this project in guaranteeing that the greatest levels of energy production are achieved throughout the lifetime of the solar facility. The solar maintenance team will work in concert with the sheep grazer to support the successful attainment of these outcomes.

The Project will utilize a rotational grazing system in order to maximize the benefits of sheep grazing on the establishment and growth of the vegetation. The grazer will create paddocks for the sheep to intermittently graze on a section basis via the use of the portable electric fencing. Within the 30.8 acre solar project, it is expected that nine (9) paddocks will be designated within the fenced in area. The sheep grazer will establish these paddocks as needed based on the frequency by which sheep exhaust the existing growth.

## **Establishment of Vegetative Cover**

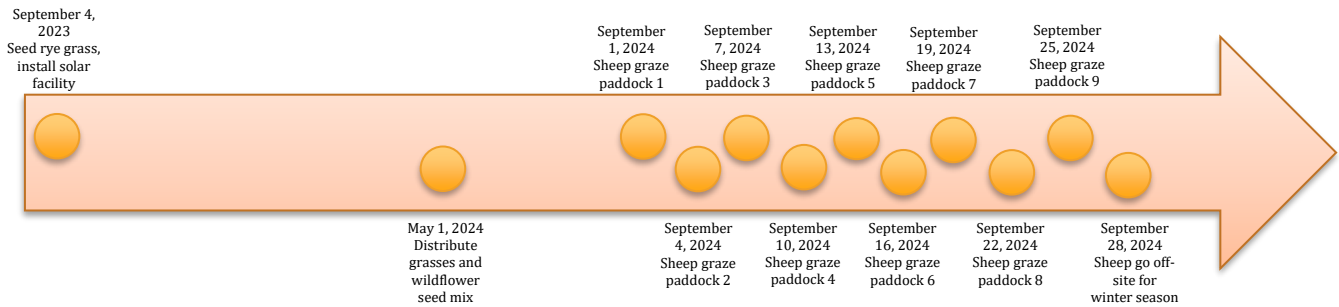
The Project will establish a vegetative cover within the fenced project area by utilizing plant species native to the Northeastern United States. The Project will seed the site prior to the outset of construction, in order to appropriately prepare the land to host sheep upon the 2024 season. The site will be seeded with rye grass in the fall of 2023, for the purpose of contributing to the ease of construction and the start of sheep grazing in 2024.

The parcel's primary use is an airport operation, with approximately 40 to 45 acres of the 127 acre parcel currently being utilized for agricultural production (i.e. corn and/or hay). Soils comprising the parcel's tillable acreage include gravelly loam (48.4%), Manchester gravelly sandy loam (34.5%), and Ellington silt loam (17.1%). Given the simultaneously rocky and loamy characteristic of the on-site soils, and particularly the fertile nature of well-draining loamy soils, there are several native wildflowers and grasses that could adequately establish a vegetative cover at the Somers Solar site. USS will assemble and later distribute a wildflower and grasses seed mix including, but not limited to, the following plant species (given by common name): Butterfly Weed, Wild Red Columbine, Sideoats Grama, New England Aster, Stiff Goldenrod, Yellow Stargrass, Bergamot, Pale-leaved Sunflower, Purple Coneflower, Blue Vervain, Purple Prairie Clover, Spiderwort, Broomsedge, and White Yarrow. Based on internal research, The Project believes that this collection of native grasses and flowers will benefit the project land base, support native pollinators, and provide sufficient bulk for rotationally grazing sheep. However, if the Department of Agriculture deems necessary, the Project is able and willing to consult an external seed vendor to garner site-specific expertise to achieve the aforementioned goals.

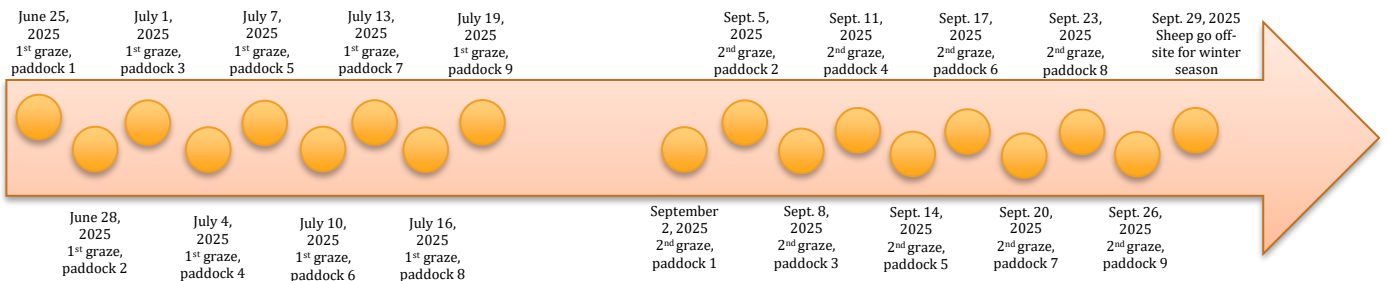
Further, the Project foresees planting alfalfa throughout the fenced solar project area, which is predicted to do well in the Ellington climate given its adaptability to a wide range of growing conditions. The alfalfa will provide nutritional benefit to the sheep, and will be a constructive supplement to the aforesaid list of native wildflowers and grasses. Further, the Project intends to establish a few climbing vegetables within the solar project area, including bush beans, soybeans, and peas. The Project recognizes the chance that these species do not proliferate; however, growth rate aside, the climbing vegetables will supplement the sheep's diet and contribute to soil health. Around the perimeter of the fenced solar project area, the Project will distribute the wildflower seed mix, which will also support the pollinators that will be incorporated outside of the array area.



### Proposed Timeline, Year 1



### Proposed Timeline, Years 2+



### Paddock Area

The Project was assessed for rotational sheep grazing in congruence with the proposed site plan, which includes the fenced solar project area of 30.8 acres. The fence constituting the perimeter of both areas of the solar facility will be a six (6)-foot tall chain-link security fence. Within the 30.8 acre solar footprint, nine paddocks will be created, which will act as discrete grazing units. The paddocks will be designated by use of electric poly fencing (i.e. poly tape), a portable fence that is commonplace in rotational grazing arrangements. The Project has chosen this fence given its ease in utilization, which appeals to grazers in a range of agricultural uses.

Seven fence lines will be established in creation of the 9 discrete paddocks within the solar project area. Fence line 1 is approximately 725 feet in length, fence line 2 is approximately 330 feet in length, fence line 3 is approximately 990 feet in length, fence line 4 is approximately 440 feet in length, fence line 5 is approximately 420 feet in length, fence line 6 is approximately 430 feet in length, and fence line 7 is approximately 490 feet in length. The selected fencing, poly tape fencing, is sold in units of 500 feet in length, and therefore the Project will purchase eight units for the purpose of forming the nine discrete paddock sections.

The Project site was delineated into nine paddocks on account of several factors, including but not limited to the proposed solar array layout and associated solar modules, racking, and associated equipment, proposed plant species to be interspersed in open rows between panels, and optimal acreage for intermittent sheep grazing over a specific time period. Reference Figure 1 for a project site layout portraying the nine proposed paddocks and fence line segments.



Figure 1. USS Somers Solar LLC Project Site Layout with discrete paddocks and fence lines identified. Note that this is a preliminary depiction and is subject to change.

- Paddock 1 (north): 3.5 acres
- Paddock 2 (north): 3.5 acres
- Paddock 3 (north): 3.5 acres
- Paddock 4 (north): 3.5 acres
- Paddock 5 (north): 3.5 acres
- Paddock 6 (north): 3.5 acres
- Paddock 7 (south): 3.25 acres
- Paddock 8 (south): 3.25 acres
- Paddock 9 (south): 3.3 acres

## Animal Quantity and Rotation

The quantity of sheep (i.e. the flock) has been determined based off of available acreage within the solar project area identified for grazing, over a time period of 60 days. The total number of sheep per acre, or the “stocking rate,” assumes a full rotation, meaning that there will be a sufficient number of sheep present on a paddock basis, not including rest days. Sheep will transition from one paddock to the following every three days. The table below depicts the stocking rate calculation for the Project site, and is subject to change based on weather and vegetative growth conditions. The need for adjustment and corresponding shifts in calculations shall be determined by the sheep grazer.

Table 1. Grazing Plan Somers Solar Facility

	<i>Item</i>	<i>Paddock 1</i>	<i>Paddock 2</i>	<i>Paddock 3</i>	<i>Paddock 4</i>	<i>Paddock 5</i>	<i>Paddock 6</i>	<i>Paddock 7</i>	<i>Paddock 8</i>	<i>Paddock 9</i>	<i>Total</i>
Acreage	Array size, ac										30.8
	# of paddocks										9
	Paddock size, ac	3.5	3.5	3.5	3.5	3.5	3.5	3.25	3.25	3.3	3.42
	Rest period, days										45
	Days in paddock										15
Sampling and analysis	Vegetative cover: %, ac	80%, 2.8	80%, 2.8	80%, 2.8	80%, 2.8	80%, 2.8	80%, 2.8	80%, 2.6	80%, 2.6	80%, 2.64	80%, 24.64
	DM/ac, lbs	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
	DM/paddock, lbs	3,640	3,640	3,640	3,640	3,640	3,640	3,380	3,380	3,432	32,032
	Utilization rate: %, lbs	50%, 1,820	50%, 1,820	50%, 1,820	50%, 1,820	50%, 1,820	50%, 1,820	50%, 1,690	50%, 1,690	50%, 1,716	50% 16,016
	Total paddock DM, lbs	1,820	1,820	1,820	1,820	1,820	1,820	1,690	1,690	1,716	16,016
Feed intake	Average sheep weight, lbs										170
	DM Intake: % BW, lbs										3.5% 5.95
Totals	<b>Total acreage</b>										30.8
	<b>Average paddock size, ac</b>										3.42
	<b>Total sheep, per paddock</b>										9
	<b>Stocking rate</b>										2.63

Assumptions utilized in Table 1: vegetative cover of 80% within the project footprint; dry matter of 1,300 pounds on a per acre basis; utilization rate of 50% (given plant density exceeding 75%); average dry matter intake of 3.5% and sheep weight of 170 pounds; Connecticut average stocking rate of 2.5 to 3 sheep per acre; expert recommended 2 to 3 day sheep rotation per paddock.

## Table 1 Analysis and Summary

The vegetative cover has been approximated to be 80%, given that plant species noted in section ‘Establishment of Vegetative Cover’ above will likely not reach maturity until year two or three. Upon commencement of sheep grazing after project construction and planting, the vegetative

cover will be estimated on a per-paddock basis, and the discrete percentage approximations will be monitored and adjusted accordingly. Further, vegetative growth samples will be collected and analyzed in order to continually refine the sheep stocking rate. The American Solar Grazing Association (“ASGA”) offers ample materials and recommendations relating to solar grazing mechanics, and USS will reference such resources when refining stocking rate calculations per maturation of proposed organic matter on-site.

The provided rotational grazing schema is intended to suffice as a preliminary guide to the flock grazer (who USS will select through a competitive procurement process in late 2022 or early 2023); while the detailed grazing management plan is a requisite component in guiding the sheep grazer, it is anticipated that revisions will be made upon solar facility commissioning and outset of grazing activities. Additionally, there will be variability in grazing rotation throughout the year in accordance with the seasons (e.g. increase in stocking rate following bouts of heavy rainfall between April and June), and thus Table 1 ought to be regarded as a precursory guide. Resources in support of successful deployment of the rotational grazing operation -- such as on-site water resources for the flock -- will be handled by the selected sheep grazer, with coordination-based support provided by USS as needed.

Per the calculations in Table 1, it is estimated that approximately nine sheep will graze the nine paddocks created within the 30.8 acre solar facility project site, at a stocking rate of 2.63 sheep per acre. This is based on an assumption of three grazing days per paddock, and 45 resting days.

## References

Community Power Group, LLC. May 2022. Sheep Pasture Rotation and Grazing Plan for 24 Middle Solar Facility in Ellington, Connecticut. [Adobe Acrobat - GrazingPlan\\_24Middle](#)

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