

**RESPONSES OF WINDHAM SOLAR, LLC  
TO  
CONNECTICUT SITING COUNCIL INTERROGATORIES - SET TWO**

On November 30<sup>th</sup>, 2020, the Connecticut Siting Council (“Council”) issued Interrogatories, Set Two to Windham Solar, LLC (“Petitioner” or “Windham”), relating to Petition No. 1395A. The Petitioner provides the following responses.

**Project Development**

52. The response to interrogatory 25 states sheep would be allowed to graze within the solar field. Was the grazing of sheep recommended at the site by any state or local entity? If so, which one and when?

**RE:**

No. Solar grazing is a desire of the petitioner to perform at this facility. Solar arrays need vegetation management throughout the life of the project. This is typically performed with traditional mowing practices. There are plenty disadvantages to this type of vegetation management:

- Poor Mower access under panels
- Damage to panels by thrown rocks
- Damage to mowers by uneven terrain and rocky sites
- Minimizes value of the land use
- Additional Carbon emissions from mowing equipment

Solar grazing is an element of Agrivoltaics or Agrophotovoltaics (APV), which co-develops the same area of land for both solar photovoltaic power as well as for agriculture. Solar grazing is an ecological way to maintain the facility from a vegetation standpoint. Sheep are a wonderful tool to maintain solar facilities. Sheep physically fit under the solar panels and can graze all parts of the land areas more effectively than traditional mowing and weed whacking practices. In a 2018 Atkinson Center report by Cornell University (*Exhibit A – Atkinson Center Grazing Report*) researchers summarized survey responses submitted by solar grazers, concluding that utilizing sheep for site vegetation resulted in “2.5 times fewer labor hours than mechanical and pesticide management on site.”

Solar grazing is also compatible with pollinator habitats and is just one practice under the larger umbrella of “agrivoltaics”: combining agricultural and renewable energy production on the same piece of land. The American solar grazing association (<https://solargrazing.org/>) is another wonderful resource for additional information on the benefits of solar grazing including several research documents on the subject.

53. Please provide the following information regarding sheep grazing:
- a. anticipated rotational schedule and length of grazing season;

**RE:**

The grazing season is typically April through October. The sites will be grazed monthly, Sheep will not graze or have access to detention basins, swales, roadway, or steep slopes and embankments. Rotational grazing will utilize temporary fencing throughout the facility to ensure even groundcover maintenance throughout the site.

- b. description and location of livestock outbuilding, if necessary;

**RE:**

No livestock outbuildings will be necessary, sheep for grazing will be transported to and from the site by trailer.

- c. describe potential for damage to the panels/wiring from grazing;

**RE:**

This is not a concern, for Sheep graze grasses, legumes and forbes. Unlike goats, they do not climb on or chew on equipment. Sheep are grazing solar sites all over the world, and this is not an issue.

- d. description of seed mix necessary to provide enough livestock forage;

**RE:**

Seed mix for this site will be similar to mixes applied to non-grazed solar facilities, with most of the species being, ryegrass, bluegrass, and fescue. The seed mix will also include pollinator mix for additional ecological benefits. A typical Seed mix is attached as (*Exhibit B – Fuzz & Buzz Seed Mix*)

- e. estimated cost to the Project to allow livestock grazing; and

**RE:**

The Applicant is predicting that over the life of the project, grazing will provide an overall savings in operations and maintenance costs versus traditional mowing of the sites.

- f. indicate if the grazing of livestock is allowed at the site per local zoning regulations.

**RE:**

The local zoning regulations in Ansonia, CT do not directly address the temporary use of livestock to control vegetative growth. The closest provision is section 720.1:

Farming, Truck Gardens, and Greenhouses: All structures for the keeping and feeding of livestock and the open or covered storage of manure, fertilized, lime, or herbicides and pesticides and associated equipment, shall be at least one hundred (100) feet from any property line, and one hundred (100) feet from any residential structure on the same lot.

t. The Petitioner will comply with this provision and has attached that section of the zoning code as (*Exhibit C – Ansonia Zoning*)

54. Has the Petitioner had any meetings with the Department of Energy and Environmental Protection (DEEP) Stormwater Division regarding the Stormwater design?

**RE:**

No.

If so, when and with whom?

**RE:**

N/A.

Were any DEEP Stormwater Division recommendations incorporated into the revised site plans?

**RE:**

N/A. The petitioner has designed the facility with documents prepared by a licensed Connecticut Professional engineer per the latest requirements of the DEEP general permit. The petitioner has successfully submitted the DEEP General permit document on 12/30/20. (*Exhibit D – General Permit Registration Form*)

Is there an option within the agreement to allow for changes in the total output of the facility based on unforeseen circumstances or resulting from a reduced site footprint?

**RE:**

If there are unforeseen circumstances and a slight footprint reduction would be required, the AC/DC ratio of the project would simply be reduced. The applicant is requesting approval of a 1MW AC project and 0.99MW AC project withing the solar module envelope provided in “Exhibit A – Updated Civil Documents” submitted with Interrogatory Set One, Plan sheet 3, Site Plan.

55. Revised Site Plan Sheet 10 indicates site construction would occur in 2 Phases. At what point will Phase 2 commence in relation to the Phase 1 construction schedule?

**RE:**

Phasing notes have been revised, to better represent the construction phasing and the requirements of the SWPCP.

*(Exhibit E – Updated Civil Document Sheet 10)*

56. Approximately what percent of the solar field area would need to be re-graded? What is the desired maximum slope in these areas?

**RE:**

Approximately 1.2 acres of the solar envelope will need to be regraded and the maximum slope in these areas will be approximately 12%.

57. Given the shallow, rocky soil at the site, was there an analysis to determine if there will be enough clean native soil from site grading activities to construct stabilized temporary and permanent stormwater basins, and for the application of enough topsoil to ensure seed has sufficient soil depth to promote stormwater infiltration? If so, provide soil information.

Within “Exhibit A – Updated Civil Documents” submitted with Interrogatory Set One, Plan sheet 4, Grading and Erosion Control Plan, includes field verified soil data for 8 test pits were dug throughout the site to ensure constructability of the stormwater basins. The test pit data indicates, test depth from existing grade, topsoil depth, subsurface soil types and groundwater water elevations. This is sufficient information for the engineer to design the stormwater basins as required by the general permit.

If not, how does the petitioner know enough clean, reusable soil is on site?

**RE:**

Topsoil depth associated with the test pits ranged between 8 and 16 inches throughout the site, and the engineer feels that is enough soil, to be reused on site to ensure appropriate topsoil coverage. It is up to the selected grading contract to handle the soil and rocks on site and ensure that the facility is constructed per the approved civil documents associated with the General Permit.

58. An eastern box turtle was recorded at the site during the 2020 wetland survey. Has the Petitioner contacted the DEEP Wildlife Division to determine if seasonal restrictions during construction are recommended to reduce potential impacts to the box turtle?

**RE:**

The 2020 Wetland Survey also outlined monitoring provisions for the site which includes measures to protect the easter box turtle. The applicant will address any additional measures as required by the DEEP Wildlife Division, upon the submission and review of the General Permit application.



# DAVID R. ATKINSON CENTER

for a Sustainable Future

## The agricultural, economic and environmental potential of co-locating utility scale solar with grazing sheep

Nikola Kochendoerfer – Cornell University, Animal Science Department

Lexie Hain – Agrivoltaic Solutions LLC

Michael L. Thonney – Cornell University, Animal Science Department

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Cornell University

This report summarizes the results of a Rapid Response Fund project "Have Your Cake and Eat It Too  
Can grazing sheep on solar farms evolve to a profitable and climate resilient agrivoltaic strategy?"  
funded by the Cornell University David R. Atkinson Center for a Sustainable Future

# The agricultural, economic and environmental potential of co-locating utility scale solar with grazing sheep

Large-scale solar encompasses multi-acre solar sites of ground-mounted solar panels, feeding electricity to wholesale buyers or community-based consumers. Currently, 1,462.93 megawatts (MW) of utility scale solar is installed in NYS, equating to approximately 10,200 acres of solar sites (5 to 8 acres are required per MW) powering 260,884 homes with 1.33% of the total state's electricity demand met by solar energy. An increase of utility scale solar sites is forecasted to reach another ~3,200 MW (~22,000 acres) between 2020 and 2023.<sup>1</sup>

New York State made a commitment in 2016 to obtain 50% of the state's electricity from renewable energy by 2030. Due to the commitment of New York State government to the Clean Energy Fund in 2016, the NYS solar industry has projected steady growth for the next decade. The goal of a variety of funding opportunities is to incentivize the growth of renewable energy sources with major funding managed by NYSERDA, New York State's Energy Research and Development Authority. The funding is designed to fast-track and sustain the growing solar electric market.

Site leases for solar fields are long term (25 to 40 years). Ideal site characteristics include treeless, flat, low-value land with easy road access for construction and low lease costs. Project developers use a host of criteria to find this land, searching for land that meets the criteria of the electrical grid, proximity to transmission capacity and ease of permitting. Environmental concerns during construction, operation, and decommission include soil erosion and compaction, stormwater runoff, herbicide contamination, the introduction of invasive species, and aesthetics.<sup>2</sup> Project developers must comply with a host of requirements by government authorities and the local land owners in order to successfully bring a solar project to operation.

Operation of solar sites in summer, which is the prime period for electrical generation, hinges on ensuring that the vegetation does not shade the panels. Typically, sites in warm, humid, summer continental climate zones are mowed two or three times per year and undergo one string trimming to remove the vegetation underneath the panels. To limit environmental impacts of vegetation management, a different system for solar sites was tested: grazing sheep.

*The aim of this study was to compare economic and agricultural benefits and challenges of traditional land management strategies (mowing, string trimming) with rotationally grazed sheep on solar sites.*

Data were collected from the Cornell University Musgrave Research Farm solar site located in Aurora, NY. Sheep were grazed between May and November 2018 to obtain agronomic and economic data, as well as to gather knowledge of the feasibility of grazing sheep on solar sites. Data for traditional management (labor and equipment running hours) were obtained from a landscaping contract for a comparable Cornell University solar site at Harford, NY.<sup>3</sup> Additionally, a survey was sent to three entities: 1) sheep farmers grazing solar sites; 2) landscapers maintaining solar sites; and 3) solar site managers. The survey collected data to assess economics of solar sites across NYS and the Eastern US and to gain a better understanding of co-located, agrivoltaic systems and the emerging solar grazing industry. The survey results were used to underpin agricultural and economic analyses of solar grazing for sheep farmers.

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<sup>1</sup> SEIA. 2018. Utility Scale Solar Power. Solar Energy Industries Association, <https://www.seia.org/initiatives/utility-scale-solar-power>.

<sup>2</sup> Ifft, J. 2017. Large-Scale Solar Information and Research Needs for NYS, Cornell University David R. Atkinson Center for a Sustainable Future, Ithaca, NY.

<sup>3</sup> Scott Land & Yard Services, P.O. Box 13, Slaterville Springs, NY 14881.

**Agricultural results**

The 22-acre Musgrave solar site used for this study was established in 2017. It was abandoned as cropland by the research farm due to poor drainage. Three years prior to installation, the field had been used to grow wheat with legume cover crops. After installation of the panels, the site was reseeded with creeping red fescue and perennial ryegrass in areas where seeding was needed. Legume varieties like red, white, and Alsike clover, as well as alfalfa and birdsfoot trefoil volunteered throughout the site in the grazing season of 2018 and provided nutritious forage for the sheep. Honeoye-Lima silt loam is the typical soil of the area. A soil sample was collected and tested on January 20<sup>th</sup>, 2015. The sample contained low phosphorous, medium potassium, and very high calcium and magnesium levels. The soil pH was 7.5 and the organic matter content 4.5%. The soil sample drawn after a season of sheep grazing on November 16<sup>th</sup>, 2018 had pH of 7.6 and an organic matter of 6.6%. However, due to the limited duration of the grazing trial (1 grazing season), we cannot conclude that sheep grazing increased soil organic matter.

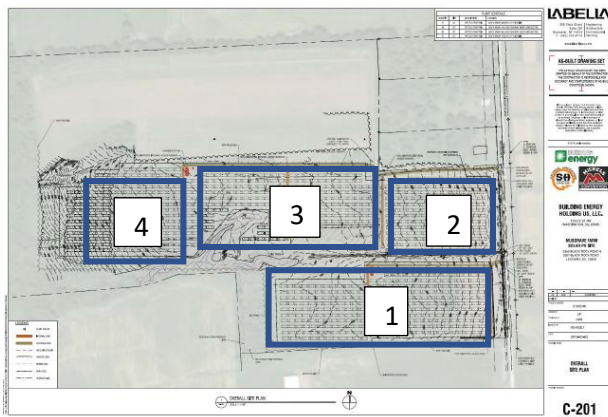


Figure 1. Site plan.

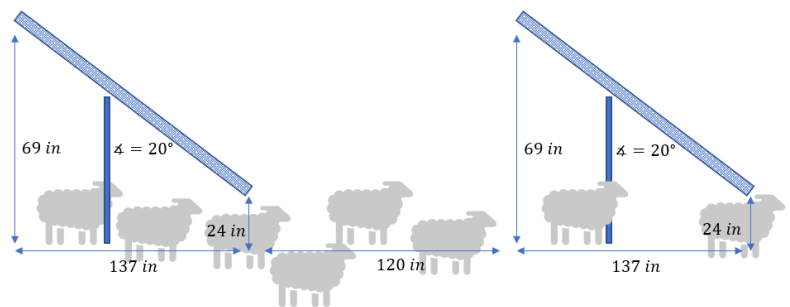


Figure 2. Panel dimensions.

The site was divided by permanent and Electronet® fencing into 4 plots for the grazing trial (Figure 1). The 56 Katahdin ewes (medium sized sheep less than 3 feet high with an average weight of 120 pounds) were rotated 8



Figure 3. Water access and Electronet®.

times through the plot from the first time they were put on site on May 1<sup>st</sup>, 2018 until they were removed on November 5<sup>th</sup>, 2018. The *stocking rate* (total sheep on the site, per acre) was 2.5. The *stocking density* (number of sheep over a certain timeframe in subplots of the site, per acre) varied between 3 and 7 sheep per acre. The site was checked every three days. Each visit had a duration of ~45 minutes and included adding water to the water tank (Figure 3), checking animal health and welfare, and – when necessary – movement of the sheep into a new plot. All ewes were dry (non-lactating) when they were moved on site and breeding rams were introduced in September 2018 for January 2019 lambing. No health incidents were observed. No signs of internal parasites were detected.

The sheep were FAMACHA scored (checking inner eyelids for color as an indication of anemia) on May

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28<sup>th</sup>, 2018; no barber-pole worm-caused anemia was detected. Additional 5-point checks for internal parasites<sup>4</sup> were conducted throughout the grazing season and did not lead to concerns about internal parasites. There was no need to conduct fecal egg counts. The ewes’ body condition scores remained stable throughout the season, suggesting adequate levels of intake and nutrients. No predator issues were recorded, the chain linked fence proved to be enough protection; no guard-animals were necessary. The sheep had access to water and sheep mineral *ad libitum*. The water was provided from water tanks that flowed into troughs (Figure 3). Rest periods for the grazed forage varied between 18 and 48 days for plots 1 and 2, and between 21 and 29 days for plots 3 and 4. The rest periods were chosen to be relatively short due to fast growing vegetation and the priority of preventing panel shading. Shade prevention and vegetation management was successful; at no time throughout the grazing season did the vegetation shade the panels (Figure 4).



Figure 4. Vegetation management success.

Prior to each rotation, the vegetation in each plot was sampled and analyzed for the nutritive value for sheep. Throughout the grazing season the forage consisted of 39% grass (61% legumes and forbs) with more than adequate suggested levels of feed components for dry ewes (Table 1).

The sheep left the site healthy at the end of the season, with good body condition and low parasite load. The goals for both the solar company and the shepherd farmer were met in this grazing trial. Vegetation never shaded the panels, and the farmer was compensated at a profit for extra work at a remote location.

The sheep farmer, landscaper, and electrical operations contractors communicated regularly throughout the study period, resulting in full compliance with safety and profitable arrangement for all the solar site O&M providers.

Table 1. Stocking density, days grazed, dry matter consumed, and forage components compared with suggested component levels for dry ewes.

Date	Plot	Sheep	Time, days	DDM per head, lb	DM, % of forage	% of dry matter							
						DDM	CP	NDF	Ca	P	Mg	K	S
5/24/18	2	23	25	2.54	18.4	61.0	17.8	54.0	0.67	0.34	0.31	2.53	0.23
5/24/18	4	33	29	1.92	15.2	58.7	18.1	50.5	0.89	0.33	0.34	2.20	0.24
6/18/18	1	23	25	15.35	23.3	68.3	14.6	47.2	0.96	0.32	0.28	2.06	0.19
6/22/18	3	33	71	3.38	24.3	60.0	14.1	50.8	0.90	0.22	0.23	1.71	0.28
7/16/18	2	23	18	7.40	28.3	63.3	12.8	51.2	1.08	0.27	0.31	1.73	0.21
7/16/18	4	33	65	1.45	25.1	62.0	14.3	48.4	1.17	0.27	0.25	1.86	0.23
8/2/18	1	23	48	3.46	23.5	56.3	14.1	57.8	0.60	0.38	0.27	2.13	0.19
9/19/18	2	23	49	1.77	19.9	62.3	19.9	42.5	1.23	0.34	0.35	2.35	0.27
Suggested levels for 150-lb dry ewes				3		55.0	10.0		0.40	0.20	0.18	0.80	0.26

<sup>4</sup> <https://www.wormx.info/>.

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### Economic results

During the grazing trial at the 22-acre Musgrave site, all farm-side economic data for vegetation management (grazing) were recorded. Investment costs, income, and operating costs to establish benchmarks per head of sheep and per acre are shown in Table 2.

Investment costs included: water tanks, troughs, and a small water transfer pump water pump to fill the troughs, as well as Electronet® fencing and a charger to divide sections for rotational grazing. Mileage included depreciation and was calculated at \$0.54 per mile. The sheep were checked every three days amounting to 63 checks in the 188-day grazing season. 47 hours were spent on-site checking the sheep; 139 hours were spent including the drives to and from the site. Labor was valued at \$15 per hour. The site was subcontracted from a landscaping business, and Lexie Hain received \$250 per acre for her grazing efforts. Income statements for both scenarios (contracted directly and subcontracted) are shown in Table 2. General liability insurance was covered by the landscaping business and was subtracted as a cost only in the directly-contracted scenario. In the subcontracted scenario the insurance was covered by the landscaping business. Ideally, sheep farmers would contract directly with the site O&M contractor because, given an ideal stocking rate, sheep alone will be enough to provide vegetation management and prevent panel shading so that the tools of a landscaping company would not be needed.

Table 2. Income statement for grazing 56 sheep on 22 acres.

Item	Total	Per acre	Per head of sheep
<i>Investment</i>	\$1,690	\$77	\$30
<i>Grazing income</i>			
Directly contracted	\$11,000	\$500	\$196
Subcontracted	\$5,500	\$250	\$98
<i>Grazing expenses</i>			
Mileage	\$2,125	\$97	\$38
Labor	\$2,084	\$95	\$37
General liability insurance	\$1,500	\$68	\$27
Directly contracted total	\$5,709	\$260	\$102
Subcontracted total	\$4,209	\$191	\$75
<i>Net</i>			
Directly contracted	\$5,291	\$241	\$94
Subcontracted	\$1,291	\$59	\$23

### Labor

Landscaping data obtained from the comparable 10-acre Harford site<sup>3</sup> were used to establish values for required labor per acre for traditional management (mowing and string trimming). The 10-acre site required 16 hours of mowing (8 hours, twice per year), as well as 140 h of string trimming underneath the solar panels (Figure 5) per year. That amounts to a total labor requirement of 156 hours per year for a 10-acre site. Extrapolating to the 22-acre Musgrave site, the traditional vegetation management requires 36 hours (18 hours twice a year) of mowing and 308 hours of string trimming per

year, amounting to 344 total labor hours on site. Mowing was conducted with equipment comparable to a 70-horsepower skid steer machine and a 72-inch mower at 3 mph speed. The ground can be uneven, especially in newly established solar sites. Depending on the design of the site, the panel rows are narrow, making it time consuming to navigate without damaging the solar panels. Five-point turns are needed at the end of panel rows to navigate to the next row for mowing. Mowing occurs two times per year. Heavy duty string trimmers are used to string trim underneath the solar panels.

*Utilizing sheep for site vegetation management required a total of 139 hours including travel time, resulting in 2.5 times fewer labor hours than traditional vegetation management (mowing and string trimming) on site.*

### Contracts and insurance

Solar site owners range in corporate size, hierarchy, and site management structure. Some have an internal division that manages the operations and maintenance (O&M) while others hire a specialty firm to execute these functions. The O&M managers are responsible for the year-round performance of the array, including vegetation management. During the growing season, prevention of shading will be the key focus of an O&M manager's job with respect to power production and module performance, while operating cost-consciously. Many O&M



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managers have business management or electrical engineering backgrounds and operate entirely remotely – from urban offices – and may only make an annual site visit. They tend not to be familiar with farms, farmers, or vegetation, and often lean heavily on landscape subcontractors for knowledge in this area.

Contracts for the vegetation maintenance may be expressly for single passes of a mower or may be comprehensive multiyear agreements. Where solar sites are dispersed geographically, regional solar O&M managers may contract for the vegetation management with local firms, typically landscape contractors or sheep farmers in each region. A formal legal contract is typically required by the solar operator. The legal departments at O&M firms that review outside contracts can insist on a lengthy review process. As the solar asset itself is quite valuable once operational, this sometimes-meticulous review process is justified in the eyes of the operator. The downside for a sheep farmer or small landscaping business is that they are entirely at the mercy of these contracts and may not be able to afford legal support of their own. This risk of liability is why emerging industry associations such as the *American Solar Grazing Association* now offers free contract examples to sheep farmers who wish to become solar graziers. This legal support should prevent farmers from unnecessary exposure to liability and potential expense. The best contracts for sheep farmers will offer a regular payment schedule for their services at the site and automatic renewal for multiyear contract extensions.

Solar O&M firms typically require any contractors on their sites to carry insurance. They may have a suite of requirements that more closely resemble the liability needed for a construction firm than for small farm or local landscaper. Farmers may be able to negotiate different aspects of the coverage, using these added fees as leverage in negotiating their payments. Solar graziers typically find that, after a season or more, O&M managers gain trust in their performance and see that the liability is quite low from grazing sheep, waiving the more stringent insurance requirements and/or easing up on the stricter contract requirements as everyone gains familiarity with the arrangement.

### **Solar grazing in the Eastern United States and New York State**

In a survey of sheep farmers grazing solar sites, 14 total sheep farms responded, and of that 4 were in New York State. Survey respondents reported a total of 3,503 acres of utility solar grazed in the eastern US, with 79 acres in NYS. All grazed sites were established between 2012 and 2018. The grazing season was March to December, but in NYS it was April to November due to more extended grazing periods farther south. Average stocking rates were lower in the US average east of the Mississippi (3 sheep per acre) compared with NYS (4 sheep per acre). A variety of sheep were used for solar grazing; hair sheep like the Katahdin and Dorper breeds were most prevalent. On average, sheep farmers drove 42 miles (US) and 27 miles (NYS) from their home farms to the solar site grazed with sheep. The grazing contracts were mostly directly between the solar site O&M contractors and the sheep farmer. Less often, but also prevalent, the contracts were bid upon and obtained by landscaping contractors and then subcontracted to a sheep farmer. This system has the advantage of no additional insurance needs for the farmer, as well as the security of a landscaping company being available to remove invasive plant species. These contracts are renewed through a bidding process. With a few multi-year exceptions, sheep farmers obtained yearly contracts. From the survey, the O&M managers reported budgets of \$868 per acre per year for vegetation management in 2018. Per acre income and expenses for sheep farmers under direct or subcontracts in New York State and the Eastern United States are summarized in Table 3.

Table 3. Per acre income and expense of solar grazing in New York and across the Eastern United States.

	New York State		Eastern United States	
	Directly contracted	Subcontracted	Directly contracted	Subcontracted
Income	\$555	\$320	\$326	\$308
Expenses	\$46	\$46	\$64	\$64
Net	\$509	\$274	\$262	\$244

## Conclusions

*Grazing sheep on solar sites is a cost-effective method to control on-site vegetation and prevent panel shading (Figures 5 and 6). At no time in the growing season did vegetation shade the panels. It was less labor-intensive than traditional landscaping services and, thus, less expensive. The grazing trial at the Musgrave solar site was a full success for the site owners and operators, as well as the sheep farmer.*



Figure 5. After mowing, prior to string trimming.



Figure 6. Rotationally grazed with sheep.

invasive species should be explored. An important question for the successful management of solar sites with sheep will be determining what stocking rates and densities should be chosen. Future research is needed to establish sound recommendations.

Solar site developers should include amenities like on-site wells and power outlets as well as high quality, predator-proof fencing to reduce investment costs for sheep farmers. Multi-year contracts should be used to encourage more sheep farmers to become interested in grazing solar sites and to ensure that agricultural land will remain in production.

New marketing strategies could emerge for solar farm-raised, grass-fed lamb that can also be a direct benefit for small-scale sheep farmers from co-locating sheep grazing with renewable energy.

More thorough research is needed to investigate the environmental impact of traditional landscaping vs grazing to control vegetation on solar sites. Future studies are needed to assess long term impacts like soil response and pasture quality, and the effects of grazing on pollinator plants or invasive species. A broad variety of soil quality indicators should be measured, such as soil organic carbon sequestration and the possibility of creating carbon sinks through grazing, soil nitrogen responses, and changes in bulk densities. Herbicide use and run-off in traditional vegetation management systems on solar sites should be investigated. The suitability for co-locating grazing with pollinators by the enhancement of pollinator plant species, effective grazing management, and control of



## Fuzz & Buzz™ Seed Mix for Solar Arrays

Ernst Conservation Seeds, the largest producer of native grass and wildflower seeds in the eastern United States, has partnered with Ernst Pollinator Service, a leader in pollinator establishment in all types of habitats, and the American Solar Grazing Association (ASGA), a non-profit trade organization devoted to promoting the grazing of sheep on solar installations, to develop the new Fuzz & Buzz™ Seed Mix.

The Fuzz & Buzz™ seed mix was developed to address the unique nutritional needs of sheep, while providing a low-growing, easily maintained and sustainable vegetation solution for solar installations. The plant species chosen for the mix were vetted by experts at the Cornell University Sheep Program for their palatability to sheep.

The diversity of grass and flowering species in the mix adds the ecological benefit of providing pollen and nectar sources for honeybees, native pollinator species, birds and other wildlife.



*Robin Ernst, president of Ernst Pollinator Service, said, "We embrace new and inventive ways for America's farmers to make their land productive and profitable, sometimes in ways they might not have previously considered. Solar sites offer many landowners just such an opportunity on their property. The addition of grazing potential for sheep on these sites can multiply that profitability even further. And when those sites bring with them habitat for pollinators, it's a winning proposition on many fronts."*

*"What could be better than a seed mix designed for solar sites that is durable, intended for grazing and biodiverse enough to support a range of pollinator species," said Lexie Hain, executive director of the ASGA. She continued, "This is the launch of the newest in solar: solar pastures."*

*"Our mission is to provide seeds that solve problems ecologically," said Calvin Ernst, president of Ernst Conservation Seeds. "With the Fuzz & Buzz™ seed mix, we're able to offer a three-part solution that minimizes maintenance for solar operators, provides an opportunity for sheep graziers who need additional pasture, and improves soil health and biodiversity for the benefit of pollinators and wildlife."*

**A portion of the proceeds from the sale of the mix will be donated to the ASGA in support of its mission.**



Contact customer service at **Ernst Conservation Seeds** for current pricing and formulation.

Phone: 800-873-3321

Email: [sales@ernstseed.com](mailto:sales@ernstseed.com) or Fax: 814-336-5191



## Fuzz & Buzz™ Mix — Premium

(ERNMX-147)

*Lolium perenne, Tetraploid* (Perennial Ryegrass, Tetraploid)

*Dactylis glomerata*'(Orchardgrass)

*Festuca elatior* (Meadow Fescue)

*Poa pratensis* (Kentucky Bluegrass (pasture type))

*Trifolium hybridum* (Alsike Clover)

*Trifolium pratense, Medium* (Red Clover, Medium)

*Trifolium incarnatum* (Crimson Clover)

*Chrysanthemum leucanthemum* (Oxeye Daisy)

*Cichorium intybus* (Blue Chicory)

*Lotus corniculatus* (Bird's Foot Trefoil)

*Aster prenanthoides* (Zigzag Aster)

*Coreopsis lanceolata* (Lanceleaf Coreopsis)

*Solidago juncea* (Early Goldenrod)

*Tradescantia ohiensis* (Ohio Spiderwort)

*Zizia aurea* (Golden Alexanders)

**Seeding Rate:** Expect to apply about 28 lbs per acre.

## Fuzz & Buzz™ Mix — Standard

(ERNMX-146)

*Lolium perenne, Tetraploid* (Perennial Ryegrass, Tetraploid)

*Dactylis glomerata* (Orchardgrass)

*Festuca elatior* (Meadow Fescue)

*Poa pratensis* (Kentucky Bluegrass (pasture type))

*Trifolium hybridum* (Alsike Clover)

*Trifolium pratense, Medium* (Red Clover, Medium)

*Chrysanthemum leucanthemum* (Oxeye Daisy)

*Cichorium intybus* (Blue Chicory)

*Lotus corniculatus* (Bird's Foot Trefoil)

*Coreopsis lanceolata* (Lanceleaf Coreopsis)

*Solidago juncea* (Early Goldenrod)

**Seeding Rate:** Expect to apply about 26.5 lbs per acre.



**Note:** Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

[ernstseed.com](http://ernstseed.com)

Dwelling-two family: A building containing two dwelling units.

Dwelling-multi-family: A building containing three or more dwelling units which may or may not share a common hall or entry.

Dwelling Unit: A self-contained building or portion of a building containing complete house-keeping facilities for one “family” only, including any domestic servants on the premises.

Districts: The term “Residence District” or “Residential District” shall mean any zoning district with the following prefixes: “AA,” “A,” “B,” “GA,” “MM,” or “BB;” the term “commercial district” or “business district” shall mean any zoning districts with the prefix “NR,” “RR,” “C,” or “SC;” the term industrial district” shall mean any district with the prefix “LI” or “HI.” A “non-residential district” shall mean any commercial or industrial district as defined in these Regulations.

Dumpsters: Storage container unit designed for waste materials of a size greater than 100 gallons, not including any of the containers provided by or approved for use by any waste disposal company hired by the City for garbage, yard waste or recycling.

Family: A “family” is a person or a group of related persons, plus guests and domestic servants thereof, or a group of not more than five (5) persons who need not be so related, who are living as a single housekeeping unit maintaining a common household. A roomer or boarder to whom rooms are let and/or board is furnished as permitted by these Regulations shall not be considered a member of a “family” for the purpose of this definition.

Farm: Three acres or more used for the raising of crops or pasture or both. Stock raising, dairying, poultry raising and kindred activities are to be considered as a part of and included within farming only when carried on in connection with the incidental and subordinate to, the tillage of the soil. (Note Paragraph 720.1)

Fancy Pigeon-means a pigeon which, through past breeding, has developed certain distinctive physical and performing characteristics as to be clearly identified and accepted as such by the National Pigeon Association, the American Pigeon Club, or the Rare Breeds Pigeon Club. Examples: Fantails, Pouters, Trumpeters.

## Section 720 – Special Requirements and Prohibitions

720.1 Farming, Truck Gardens, and Greenhouses: All structures for the keeping and feeding of livestock and the open or covered storage of manure, fertilized, lime, or herbicides and pesticides and associated equipment, shall be at least one hundred (100) feet from any property line, and one hundred (100) feet from any residential structure on the same lot.

720.1.1 Keeping of fancy pigeons and doves, subject to:

- (a) Any person seeking to keep doves or pigeons must obtain the approval of Zoning Enforcement Officer, after submission of an application and payment of a fee to the Zoning Department. The Zoning Enforcement Officer, or his/her designee, shall accept an application which shall include minimally the number of birds, the name of the organization in which they are registered, proof of registration of each bird, the name and address of the owner of the birds, the name and address of the applicant if different from the owner, a scaled map of the property indicating where the housing for the birds and the feed containers for the birds will be kept, and documentation from a recognized organization indicating the type of bird, i.e. racing, homing, fancy, competition. The applicant will be required to pay a fee according to the fee schedule at the time the application is submitted. If approved by the ZEO the applicant approval will be good for one year. The applicant shall be required to update the application annually, and pay any renewal cost.
- (b) Only Fancy Pigeons may be permitted by this regulation.
- (c) No lot of one (1) acre or less, shall exceed 30 birds (of breeding age). An additional 30 birds may be permitted for each additional acre. No lot of any size shall exceed 60 birds.
- (d) Fancy pigeons shall be housed in a structure meeting the setback requirements of the principal building in the district in which it is located.
  - ii. No structure for housing fancy pigeons shall be located in any front yard
  - iii. No structure for housing fancy pigeons or doves shall be visible from the street
  - iv. The loft shall be of such sufficient size and design, and constructed of such material, that it can be maintained in a clean and sanitary condition.
  - v. For every bird housed in a structure approved under these regulations, there shall be a minimum of one (1) square foot of floor space per bird, in any such housing structure.
  - vi. in addition to yard and setback requirements above, no structure shall be located closer than 25' (feet) from any residential dwelling or less than 10' (feet) from the property line.
- (e) All fancy pigeons shall be registered with a national pigeon organization and each bird shall be tagged by use of a seamless numbered leg band.

**P= Permitted, S=Site Plan Application, SP=Special Permit Application, T=Temporary Special Exception**

<b>Schedule B - Permitted Uses</b>	<b>AAA</b>	<b>AA</b>	<b>A</b>	<b>B</b>	<b>GA</b>	<b>BB</b>	<b>MM</b>	<b>NR</b>	<b>RR</b>	<b>C</b>	<b>SC</b>	<b>LI</b>	<b>HI</b>	<b>CP</b>
Depository institutions, non-depository credit institutions, insurance carriers, holding or other investment offices, business management and related services or miscellaneous business services, provided that such uses do not regularly involve direct business with or service to the general public on the premises.														S
Dwelling, One-Family	P	P	P	P					S	S				
Dwelling, Two-Family				P		S			S	S				
Dwelling, Multi-Family										S				
Dwelling, Multi-Family, GA					S						S			
BB						S								
MM							S				S			
RR									S					
Earth Removal, Filling and Excavation.	T	T												
<b>Farming (min. 3 acres)</b>	<b>P</b>	<b>P</b>												
Farm Equipment Sales and Service										S			S	
Funeral Home.				S						S				
Financial Institutions.									S	S				
Foundries and the use of drop forges and metal stamping machines													S	
Gasoline Stations (See Sec. 720.8)										S	S	S		
Grooming Facility/Canine.										S				
Golf Courses	S	S	S											
<b>Horses and other equines (See Sec. 720.6).</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>									
Hotels, Motels.										S	S			
Hospital Veterinary a. cats and dogs b. All other animals (min. size tract of land of 5 acres)										S	S			
Kennel - Home.	S	S	S											
Kennel - Commercial.										S				
Laundry and dry-cleaning operations.										S			S	
Landscape Nursery (on a tract of land at least three acres in extent).	S	S	S	S										

P= Permitted, S=Site Plan Application, SP=Special Permit Application, T=Temporary Special Exception														
Schedule B - Permitted Uses	AAA	AA	A	B	GA	BB	MM	NR	RR	C	SC	LI	HI	CP
Restaurants, with or without liquor.									S	S				
Retail sales (including the manufacture of food products for direct retail sale to consumers on the premises).									S	S				
Retail sales of goods that are manufactured, processed or assembled on the premises when such sales are located within an enclosed building and occupy a floor area equal to 10% or less of the manufacture, processing or assembly use.												S	S	
Sale of new and used automobiles.										S	S			
Scientific and engineering research and testing laboratories.										S	S	S	S	S
Sheet metal, blacksmith, and welding shops												S	S	
Scrap metal processor.													S	
Stables for the boarding and rental of horses, including blacksmithing (on a minimum size tract of 20 acres).	S	S												
Storage of house trailers.										S			S	
Storage in bulk for other than retail sale (use of required yards is prohibited).													S	
Storage of fuel oil for retail delivery and sale.													S	
Swimming pools, as accessory uses to residential uses subject to site plan approval by the Building Inspector	P	P	P	P	P	P	P							
Sports Stadium, civic center, dog racing track, any gambling or betting facilities and recreational facility.											S			
Tailor shop.								S	S	S				
Taverns.									S	S				
Tennis courts - Commercial										S				
Tennis courts - as accessory use to residential uses subject to site plan approval by the Building Inspector.	S	S	S	S	S	S	S							
Trucking and Freight Terminal.													S	
Truck gardens (on a tract of land at least 3 acres in extent).	S	S	S	S										
Warehouse and distribution facilities, provided that such uses do not regularly involve direct business with or service to the general public on the premises.														S
Wholesaling - including the maintenance of an inventory and distribution of the goods to retail establishments.												S	S	



P= Permitted, S=Site Plan Application, SP=Special Permit Application, T=Temporary Special Exception														
Schedule B - Permitted Uses	AAA	AA	A	B	GA	BB	MM	NR	RR	C	SC	LI	HI	CP
Wholesaling - in conjunction with retailing on premises.										S				
Signs as provided in Section 420.	P	P	P	P	P	P	P	P	P	P	P	P	P	
Off-street parking and loading facilities as provided in Section 410.								S	S	S	S	S	S	S
Off-street parking spaces and private garages shall be permitted as accessory to a permitted use, except that no unregistered motor vehicle or parts of motor vehicles shall be maintained on any lot unless located in an enclosed building.	P	P	P	P	P	P	P	P	P	P	P	P	P	
Except as accessory to a permitted farm, truck garden or commercial nursery, there shall be no more than one commercial vehicle parked or stored on any lot in a Residence District, when used in connection with a permitted use. Such vehicle shall not exceed 1-1/2 tons capacity and shall be stored in a garage.	P	P	P	P										
Customary home occupations and professional offices, as accessory to a dwelling, and as provided in Sections 430 and 410.	P	P	P	P		P			P					
Greenhouses on a tract of land of 40,000 square feet.	S	S	S	S										
Riding academies.	S	S												



**Connecticut Department of  
Energy & Environmental Protection**  
Bureau of Materials Management & Compliance Assurance  
Water Permitting & Enforcement Division

*General Permit Registration Form for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective 10/1/13 (electronic form)*

Prior to completing this form, you **must** read the instructions for the subject general permit at [DEEP-WPED-INST-015](#). This form must be filled out electronically before being printed. You must submit the registration fee along with this form.

The [status of your registration](#) can be checked on the DEEP's ezFile. Portal. Please note that DEEP will no longer mail certificates of registration.

CPPU USE ONLY	
App #:	_____
Doc #:	_____
Check #:	_____
Program:	<u>Stormwater</u>

**Part I: Registration Type**

Select the appropriate boxes identifying the registration type and registration deadline.

Registration Type		Registration Timeline	
<input type="checkbox"/>	<p><b>Re-registration Existing Permit No. GSN</b></p> <p>_____</p>	<p><b>On or before February 1, 2014*</b></p> <p>*Note: Failure to renew a permit by this date will require submission of new registration. Re-registrants must only complete Parts I, II, III, IV - Question 1, VII and submit Attachment A.</p>	
<input checked="" type="checkbox"/>	<p><b>New Registration</b></p> <p>(Refer to Section 2 of the permit for definitions of Locally Exempt and Locally Approvable Projects)</p>	<input type="checkbox"/> <b>Locally Approvable Size of soil disturbance:</b> _____	<p><b>New registration - Sixty (60) days prior to the initiation of the construction activity for:</b></p> <p>For sites with a total soil disturbance area of 5 or more acres</p>
		<input checked="" type="checkbox"/> <b>Locally Exempt Size of soil disturbance:</b> 9.97	<input checked="" type="checkbox"/> <b>New registration - Sixty (60) days prior to the initiation of the construction activity for:</b> Sites with a total disturbance area of one (1) to twenty (20) acres except those with discharges to impaired waters or tidal wetlands
			<input type="checkbox"/> <b>New registration - Ninety (90) days prior to the initiation of the construction activity for:</b> (i) Sites with a total soil disturbance area greater than twenty (20) acres, or (ii) Sites discharging to a tidal wetland (that is not fresh-tidal and is located within 500 feet), or (iii) Sites discharging to the impaired water listed in the "Impaired Waters Table for Construction Stormwater Discharges"



3. List primary contact for departmental correspondence and inquiries:  
 Name: JEFFERSON SOLAR LLC  
 Mailing Address: 222 S 9th St  
 City/Town: Minneapolis State: MN Zip Code: 55402  
 Business Phone: (612) 326-1500 ext. \_\_\_\_\_  
 Contact Person: Steven Broyer Title: Sr. Project Manager

4. List owner of the property on which the activity will take place:  
 Name: JEFFERSON SOLAR LLC  
 Mailing Address: 222 S 9th St  
 City/Town: Minneapolis State: MN Zip Code: 55402  
 Business Phone: (612) 326-1500 ext. \_\_\_\_\_  
 Contact Person: Steven Broyer

5. List preparer:  
 Name: ELLEN BARTLETT  
 Mailing Address: 317 MAIN ST  
 City/Town: NORWICH State: CT Zip Code: 06360  
 Business Phone: (860) 886-1966 ext. \_\_\_\_\_  
 Contact Person: . Title: \_\_\_\_\_

6. List design professional:  
 Name: Kyle Haubert  
 Mailing Address: 317 Main Street  
 City/Town: Norwich State: CT Zip Code: 06360  
 Business Phone: (860)886-1966 ext. \_\_\_\_\_  
 Contact Person: Kyle Haubert Title: Civil Engineer

7. List Reviewing Qualified Professional (for locally approvable projects only):  
 Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Business Phone: \_\_\_\_\_ ext. \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

**Part IV: Site Information**

1. Site Name: Benz Street Solar  
 Street Address or Description of Location: 31 Benz St  
 City/Town: Ansonia State: CT Zip Code: 06401  
 Brief Description of construction activity:  
1.99 MW Ground Mount Solar Facility  
 Project Start Date: 5 Apr 2021 Anticipated Completion Date: 1 Sep 2021  
 Normal working hours: 7 to 6

2. **MINING** : Is the activity on the site in question part of mining operations (i.e. sand and gravel)? Yes No

*If yes, mining is not authorized by this general permit. You must submit the Registration Form for the General Permit for the Discharge of Stormwater Associated with Industrial Activity.*

3. **COMBINED OR SANITARY SEWER:** Does all of the stormwater from the proposed activity discharge to a combined or sanitary sewer (i.e. a sewage treatment plant)?  Yes No

*If yes, this activity is not regulated by this permit. Contact the Water Permitting & Enforcement Division at 860-424-3018.*

4. **INDIAN LANDS:** Is or will the facility be located on federally recognized Indian lands?  Yes No

5. **COASTAL BOUNDARY:** Is the activity which is the subject of this registration located within the coastal boundary as delineated on DEEP approved coastal boundary maps?  Yes No

The coastal boundaries fall within the following towns: Branford, Bridgeport, Chester, Clinton, Darien, Deep River, East Haven, East Lyme, Essex, Fairfield, Greenwich, Groton (City and Town), Old Lyme, Guilford, Hamden, Ledyard, Lyme, Madison, Milford, Montville, New London, New Haven, North Haven, Norwalk, Norwich, Old Saybrook, Orange, Preston, Shelton, Stamford, Stonington (Borough and Town), Stratford, Waterford, West Haven, Westbrook and Westport.

If "yes", and this registration is for a new authorization or a modification of an existing authorization where the physical footprint of the subject activity is modified, you must provide documentation to the DEEP Office of Long Island Sound Programs or the local governing authority has issued a coastal site plan approval or determined the project is exempt from coastal site plan review. Provide this documentation with your registration as Attachment B. See guidance in Appendix D of the general permit. Information on the coastal boundary is available at the local town hall or on the [Connecticut Coastal Resources Map](#) . Additional DEEP Maps and Publications are available by contacting DEEP Staff at 860-424-3555.

6. **ENDANGERED OR THREATENED SPECIES:**

In order to be eligible to register for this General permit, each registrant must either perform a self-assessment, obtain a limited one-year determination, or obtain a safe-harbor determination regarding threatened and endangered species. This may include the need to develop and implement a mitigation plan. While each alternative has different limitations, the alternatives are not mutually exclusive; a registrant may register for this General Permit using more than one alternative. See Appendix A of the general Permit. Each registrant must complete this AND Attachment C to this Registration form and a registrant who does not or cannot do so is not eligible to register under this General Permit.

Each registration must perform a review of the Department's Natural Diversity Database maps to determine if the site of the construction activity is located within or in proximity (within ¼ mile) to a shaded area.

- a. Provide the date of the NDDDB maps were reviewed: 29 Dec 2020 (Print a copy of the NDDDB map you viewed since it must be submitted with this registration as part of Attachment C.)

- b. For a registrant using a limited one-year determination or safe harbor determination to register for this General Permit, provide the Department's Wildlife Division NDDB identification number for any such determination:

\_\_\_\_\_ (The number is on the determination issued by the Department's Wildlife Division).

For more information on threatened and endangered species requirements, refer to Appendix A and section 3(b)(2) of this General Permit, Visit the DEEP website at [Natural Diversity Data Base](#) or call the NDDB at 860-424-3011.

- c. I verify that I have completed Attachment C to this Registration Form.  Yes

7. **WILD AND SCENIC RIVERS:** Is the proposed project within the watershed of a designated Wild and Scenic River? ( See Appendix H for guidance)  Yes  No

8. **AQUIFER PROTECTION AREAS:** Is the site located within a mapped [Aquifer Protection Area](#) , as defined in Section 22a-354h of the CT General Statutes? (For additional guidance, please refer to Appendix C of the General Permit)  Yes  No

9. **Connecticut Guidelines for Soil Erosion and Sediment Control Guidelines:** Is the activity in accordance with Connecticut Guidelines for Soil Erosion and Sediment Control Guidelines and local erosion & sediment control ordinances, where applicable?  Yes  No

**10. HISTORIC AND/OR ARCHAEOLOGICAL RESOURCES:**

Has the site of the proposed activity been reviewed (using the process outlined in Appendix G of this permit) for historic and/or archaeological resources?  Yes  No

- a. The review indicates the proposed site does not have the potential for historic/ archaeological resources, OR  Yes  No

- b. The review indicated historic and/ or archaeological resource potential exists and the proposed activity is being or has been reviewed by the Offices of Culture and Tourism, OR  NA  Yes  No

- c. The proposed activity has been reviewed and authorized under an Army Corps of Engineers Section 404 wetland permit.  NA  Yes  No

**11. CONSERVATION OR PRESERVATION RESTRICTION:**

Is the property subject to a conservation or preservation restriction?  Yes  No

If Yes, proof of written notice of this registration to the holder of such restriction or a letter from the holder of such restriction verifying this registration is in compliance with the terms of the restriction, must be submitted as Attachment D.

**Part V: Stormwater Discharge Information**

**Table 1**

Outfall #	a) Type	b) Pipe Material	c) Pipe Size	d) Note: To find lat/long, go to: <a href="#">CT ECO</a> . A decimal format is required here. Directions on how to use CT ECO to find lat. /long. and conversions can be found in in Part V, section d of the <a href="#">DEEP-WPED-INST-015</a> .		e) What method was used to obtain your latitude/longitude information?
				Longitude (Format: -xx.xxxxx)	Latitude (Format: xx.xxxxx)	
sin #2 Ou	Other(Please fill in below) Level Spreader			-73.060910	41.342449	ezFile Portal Map
sin #1 Ou	Other(Please fill in below) Level Spreader			-73.061232	41.344012	ezFile Portal Map

Part V: Stormwater Discharge Information Continued

Table 2

2. Provide the following information about the receiving water(s)/wetland(s) that receive stormwater runoff from your site, either directly or through the storm sewer system:							
Outfall #	Dates when this outfall will be active:	a) To what system or receiving water does your stormwater runoff discharge? either "storm sewer or wetlands" or "waterbody" (If you select storm sewer or wetlands, columns c.1&2 of this table are not required to be completed)	b) What is your watershed ID (freshwater) or 305b ID (estuary)? (Section 3.b, of the <a href="#">DEP-GP-INST-015</a> explains how to find this information)	c.1) Is your receiving water identified as an impaired water in the <a href="#">"Impaired Waters Table for Construction Stormwater Discharges"</a> ?	<i>If you answered yes to question c.1, then answer the question below</i> c.2) Has any Total Maximum Daily Load (TMDL) been approved for your receiving waterbody?	For the drainage area associated with each outfall:  Effective Impervious Area Before Construction (sq ft)	For the drainage area associated with each outfall:  Effective Impervious Area After Construction (sq ft)
sin #2 Ou	Start: 19 Apr 2021 End: _____	Storm Sewer or Wetlands	_____	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	7600	7600
sin #1 Ou	Start: 5 Apr 2021 End: _____	Storm Sewer or Wetlands	_____	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	0	0
_____	Start: _____ End: _____	Select One	_____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	_____	_____
_____	Start: _____ End: _____	Select One	_____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	_____	_____
_____	Start: _____ End: _____	Select One	_____	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	_____	_____
<b>Provide the total effective impervious area for the entire site(sq ft):</b>						7600	7600



**Part V: Stormwater Discharge Information (continued)**

**Impaired waters:** If you answered "yes" to Table 2, question 2.c.1, **verify** that the project's Pollution Control Plan (Plan) addresses the control measures below in Question 1 or 2, as appropriate.

1. **If the impaired water does not have a TMDL**, confirm compliance by selecting 1.a. or 2.b. below:

a. No more than 3 acres is disturbed at any time;  Yes

**OR**

b. Stormwater runoff from a 2 yr, 24 rain event is **retained**.  Yes

2. **If the impaired water has a TMDL**, confirm compliance by selecting 2.a. and 2.b. below and either question 2.c.1. or 2.c.2. below:

a. The Plan documents there is sufficient remaining Waste Load Allocations (WLA) in the TMDL for the proposed discharge,  Yes

**AND**

b. Control measures shall be implemented to assure the WLA will not be exceeded,  Yes

**AND**

c. 1. Stormwater discharges will be monitored for the indicator pollutant identified in the TMDL,  Yes

**OR**

2. The Plan documents specific requirements for stormwater discharges specified in the TMDL.  Yes

**Part VI: Pollution Control Plan Availability** (check one of the following four categories)

I am registering a Locally Exempt project and submitting the required electronic Plan (in Adobe™ PDF or similarly publically available format) pursuant to Section 3(c)(2)(E) of this permit.

Plan is attached to this registration form

Plan is available at the following Internet Address (URL):

I am registering a Locally Approvable project and have chosen not to submit the Plan with this registration pursuant to Section 3(c)(1) of this permit.

I am registering a Locally Approvable project and have chosen to make my Plan electronically available pursuant to Section 4(c)(2)(N) of this permit.

Plan is attached to this registration form

Plan is available at the following Internet Address (URL):

I am registering a Locally exempt project and do not have the capability to submit the Plan electronically. Therefore, I am submitting a paper copy with this registration as Attachment E.

**Part VII: Registrant Certification**

The registrant *and* the individual(s) responsible for actually preparing the registration must sign this part. A registration will be considered incomplete unless all required signatures are provided.

**For New Registrants:**

"I hereby certify that I am making this certification in connection with a registration under such general permit, submitted to the commissioner by JEFFERSON SOLAR LLC for an activity located at 31 Benz St, Ansonia, CT 06401 and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b) (8) (B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

**For Re-registrants:**

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by \_\_\_\_\_ for an activity located at \_\_\_\_\_

and that all terms and conditions of the general permit are being met for all discharges which have been initiated and such activity is eligible for authorization under such permit. I further certify that all designs and plans for such activity meet the current terms and conditions of the general permit in accordance with Section 5(b)(5)(C) of such general permit and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I verify that the registration filed pursuant to this general permit is on complete and accurate forms as prescribed by the commissioner without alteration of their text. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this verification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and an other applicable law."

_____	
Signature of Registrant	
Steven Broyer	Sr. Project Manager
Name of Registrant (print or type)	Title (if applicable)
_____	
Signature of Preparer and Date (if different than above)	
_____	
Name of Preparer (print or type)	Title (if applicable)

**Part VIII: Professional Engineer (or Landscape Architect, where appropriate) Design Certification (for publically approvable and exempt projects)**

The following certification must be signed by a Professional Engineer, or Landscape Architect where appropriate.

<p>"I hereby certify that I am a _____ licensed in the State of Connecticut. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by _____ JEFFERSON SOLAR LLC _____ for an activity located at _____ 31 Benz St, Ansonia, CT 06401 _____.</p> <p>I certify that I have thoroughly and completely reviewed the Stormwater Pollution Control Plan for the project or activity covered by this certification. I further certify, based on such review and on the standard of care for such projects, that the Stormwater Pollution Control Plan has been prepared in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, the Stormwater Quality Manual, as amended, and the conditions of the general permit, and that the controls required for such Plan are appropriate for the site. I further certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I also understand that knowingly making any false statement in this certification may subject me to sanction by the Department and/or be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."</p>	
<p>_____</p>	
<p>Signature of Design Professional and Date</p>	
<p>Kyle Haubert</p>	<p>24329</p>
<p>Name of Professional (print or type)</p>	<p>License Number</p>
<p>Affix P.E./L.A Stamp Here</p>	

**Part IX: Reviewing Qualified Professional Certification**

The following certification must be signed by a) a Conservation District reviewer OR, b) a qualified soil erosion and sediment control and/ or professional engineer

**Review Certification by Conservation District:**

1.) District: \_\_\_\_\_  
Date of Affirmative Determination: \_\_\_\_\_

" I am making this certification in connection with a registration under General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, submitted to the commissioner by \_\_\_\_\_ for an activity located at \_\_\_\_\_.

I have personally examined and am familiar with the information that provides the basis for this certification, and I affirm, based on the review described in Section 3(b)(11)(C) of this general permit and on the standard of care for such projects, that the Stormwater Pollution Control Plan is adequate to assure that the activity authorized under this general permit will comply with the terms and conditions of such general permit and that all stormwater management systems: (i) have been designed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable and that conform to those in the Guidelines and the Stormwater Quality Manual; (ii) will function properly as designed; (iii) are adequate to ensure compliance with the terms and conditions of this general permit; and (iv) will protect the waters of the state from pollution."

\_\_\_\_\_  
Signature of District Professional and Date

\_\_\_\_\_  
Name of District Professional

\_\_\_\_\_  
License Number (if applicable)

**Or**

**Review Certification by Qualified Professional:**

Company Name: \_\_\_\_\_  
Name: \_\_\_\_\_  
License #: \_\_\_\_\_

**Level of independency of professional:**

**Required for all projects disturbing over 1 acre:**

1. I verify I am not an employee of the registrant.  Yes

2. I verify I have no ownership interest of any kind in the project for which the registration is being submitted.  Yes

**Required for projects with 15 or more acres of site disturbance (in addition to questions 1&2):**

3. I verify I did not engage in any activities associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant.  Yes

4. I verify I am not under the same employ as any person associated with the preparation, planning, designing or engineering of the soil erosion and sediment control plan or stormwater management systems plan for this registrant.  Yes

**Part IX: Reviewing Qualified Professional Certification (continued)**

"I hereby certify that I am a qualified professional engineer or qualified soil erosion and sediment control professional, or both, as defined in the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities and as further specified in Sections 3(b)(11)(A) and (B) of such general permit. I am making this certification in connection with a registration under such general permit, submitted to the commissioner by \_\_\_\_\_ for an activity located at \_\_\_\_\_.

I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(11)(C) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify, based on my review of all information described in Section 3(b)(11)(C) of such general permit and on the standard of care for such projects, that I have made an affirmative determination in accordance with Sections 3(b)(11)(D)(i) and (ii) of this general permit. I understand that this certification is part of a registration submitted in accordance with Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172, and is subject to the requirements and responsibilities for a qualified professional in such statute. I also understand that knowingly making any false statement in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under Section 53a-157b of the Connecticut General Statutes and any other applicable law."

\_\_\_\_\_  
Signature of Reviewing Qualified Professional

\_\_\_\_\_  
Name of Reviewing Qualified Professional

\_\_\_\_\_  
License No.

Affix P.E./ L.A. Stamp Here

Note: Please submit the fee along with a completed, printed and signed Registration Form and all additional supporting documents to:

**CENTRAL PERMIT PROCESSING UNIT  
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127**

