

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Greenskies Clean Energy, LLC petition for a declaratory ruling for the proposed construction, maintenance and operation of a 3.0-megawatt-AC solar photovoltaic electric generating facility on two parcels at the Elmridge Golf Course located to the east and west of North Anguilla Road at the intersection with Elmridge Road, Stonington, Connecticut

Petition No. 1410

September 24, 2020

**GREENSKIES CLEAN ENERGY, LLC'S RESPONSES TO THE SEPTEMBER 17, 2020 SET OF INTERROGATORIES DIRECTED TO GREENSKIES CLEAN ENERGY, LLC FROM PROPONENTS FOR RESPONSIBLE EMPLACEMENT OF STONINGTON SOLAR ("PRESS")**

Petitioner Greenskies Clean Energy, LLC ("GCE" or "Petitioner") hereby submits the following responses to the Interrogatories that were directed to GCE by Proponents for Responsible Emplacement of Stonington Solar ("PRESS") on September 17, 2020.

- 1. Was an accurate boundary survey to Class A-2 standards was prepared by a licensed land surveyor? If no, why do the site plans state that "Boundary lines shown hereon were taken from plans & deeds of record and monuments found" (Sheet LD, survey note #3)?**

The property boundary shown on the project drawings is based on plans and deeds of record. A boundary survey was not conducted to Class A-2 standards and is not necessary at this stage of the project. A boundary survey will be conducted by a licensed land surveyor in a future phase of this Project, assuming the Project is approved, to depict the facility lease area with respect to the site parcels.

- 2. On Sheet LD, survey note #4 states that the topography was taken from Lidar information distributed by NOAA. Was the topographic information verified by field survey to confirm the accuracy of the Lidar mapping? If the answer is no, please explain why.**

A partial topographic survey was conducted within the areas of the proposed facilities to verify the topographic information shown on the Lidar mapping.

- 3. On Sheet LD, survey note #9 states the wetlands were delineated by Milone and MacBroom. Were the wetland flags located by field survey? If the answer is no, please explain why.**

Yes, the wetland boundary flags were field located using a survey grade GeoX Trimble 7 Handheld global positioning system. The coordinates of each point were incorporated into the CAD drawing using a .csv file format.

- 4. On Sheet LD, grading note #7 states that “grading will be completed to 95% compaction per the specifications.” Does this requirement only apply to those areas being regraded or to all portions of the solar array?**

This requirement only applies to areas that will be regraded.

- 5. On Sheet LD, sediment and erosion control note #8 states “all dewatering waste waters shall be discharged in a manner which minimizes the discoloration of the receiving waters.” How will this be accomplished?**

This is a typical requirement if groundwater is encountered during excavation. Any discharger of dewatering activities will be directed to a temporary dewatering basin to filter turbidity and sediment.

- 6. For Sheets EX-1, EX-2, and EX-3, were these maps prepared by a licensed land surveyor? Was the location and accuracy of the boundary verified by field survey?**

The base information shown on EX-1, EX-2, and EX-3 is based on a field survey conducted by a licensed land surveyor. Property monumentation was located as found to verify property boundaries based on land records.

- 7. For Sheets EX-1, EX-2, and EX-3, why are no soil types are shown?**

Soil types within the project limits are described in the Stormwater Report.

- 8. On Sheet LA-1, what type of stormwater practice is Basin #1?**

Stormwater Basin #1 is designed as a dry detention basin.

- 9. On Sheet LA-2, what type of stormwater practice is Basin #2?**

Stormwater Basin #1 is designed as a dry detention basin.

- 10. On Sheet LA-2, there appear to be 3:1 side slope just above the eastern side of Basin #2. How will these areas be protected from the concentrated runoff from the solar panels?**

The slopes within the basins will be covered with an erosion control blanket as shown on Sheets SE-1 and SE-2.

- 11. On Sheet LA-2, an earth diversion berm is shown south of Basin #2 to divert runoff from the area of the panels immediately south of Basin #2 to the basin. Why did Greenskies not include the grading for that berm, or details for its construction?**

Grading and a detail of the diversion berm was included in the updated plan set submitted to DEEP for the Stormwater General Permit application. That plan set is attached as Exhibit A

to these interrogatory responses. The Channel Report for that berm is attached as Exhibit B hereto.

- 12. With respect to the earth diversion berm shown on Sheet LA-2, please provide the hydrologic calculations that demonstrate the berm can divert the runoff from the area of the panels immediately south of Basin #2 to the basin without overtopping.**

Peak flow at the diversion berm for the ten (10)-year storm event is approximately ten (10) cfs with a flow depth of 0.5 feet. The overall height of the berm is 1.25 feet. Please also refer to Exhibit B attached hereto.

- 13. On Sheet SE-1, the soil stockpile is shown in the middle of the array. Is the topsoil being stripped from the area of the array? How will the array be installed in the stockpile that is shown in the middle of the panels?**

Final grading, including construction of the stormwater basins and access roads, will be completed prior to the construction of the PV racking. The soil stockpiles are intended to be temporary for placement of excess soil during site grading. The stockpiles will be removed before the installation of the PV racking.

- 14. On Sheet SE-3, the soil stockpile is shown in the middle of the array. Is the topsoil being stripped from the area of the array? How will the array be installed in the stockpile that is shown in the middle of the panels?**

Please see the response to Interrogatory No. 13, above.

- 15. On Sheet SD-2, there appears to be a conflict between the detail of the Outlet Weir Wall and the Weir Wall Schedule. The detail shows that the invert of the lowest weir will be set 6" above the bottom of the basin. For Basin #1, the bottom is at 52.5', and the lowest weir is specified at 54.0' (1.5' higher than the bottom of the basin), while the detail would have the weir at 53.0. Which elevation is correct?**

The weir wall schedule is revised and shown on Sheet SD-3 in the updated plan set submitted to DEEP for the Stormwater General Permit application. *See* Exhibit A, attached hereto, for additional information.

- 16. Please provide the dimensions of (1) the vegetated area receiving runoff between rows of solar panels and (2) the average width of the row of solar panels draining to the vegetated area. Why are those dimensions not included on the site plans?**

The intra row spacing between PV array rows is 13-feet and the horizontal width of the PV array row is approximately 11.9 feet. Panel and intra row dimensions are shown on the plan set, attached as Exhibit A.

- 17. Page 5 of the Stormwater Report references an assessment letter from DEEP recommending a survey of the site by a qualified biologist due to the presence of state-listed species in the vicinity of the project site. Was this study conducted? If yes, please indicate where that study may be found in the record. If not, please explain.**

Following correspondence with NDDDB personnel at CT DEEP, MMI biologists evaluated the ecological attributes of the proposed work area to determine if habitat for the two faunal species identified within proximity of the Project – the eastern spadefoot (*Scaphiopus holbrookii*) and nine-spotted lady beetle (*Coccinella novemnotata*) - was present in the work area. MMI did not identify preferred habitat for either species. These observations were provided to NDDDB and a final determination was received from NDDP on April 24, 2020.

- 18. On page 10 of the Stormwater Report, Milone & MacBroom notes that five test pits were dug by hand on November 26, 2019 to a depth of approximately 24” below existing grade. On page 14, Milone & MacBroom states that five deep test pits were dug on March 31, 2020. Were both the hand holes and the deep test pits excavated in the same locations?**

The hand dug holes were dug solely for the purposes of assessing hydrologic soil conditions throughout the site and were dug to a depth of approximately 24”, whereas deep hole test pits were excavated with a loader-backhoe at the locations of the stormwater basins to observe subsurface soil conditions and presence of groundwater.

- 19. On page 11 of the Stormwater Report, Milone & MacBroom states that there were no observations of any semi-confining layers of silt or clay with the sub-soil that would impede downward flow through the soil profile within the test pits completed. Given that the test pits were only dug by hand to a depth of 24” and no infiltration testing was done, what is the factual evidence for this statement?**

The hand dug holes were dug solely for the purposes of assessing hydrologic soil conditions and not to assess the actual infiltration capacity of subsoils. Deep hole test pit observation logs are included in Appendix D of the Stormwater Report. In-situ infiltration testing at stormwater basin 1 showed infiltration rates in excess of 6”/hour with the medium sand and gravel subsoils found in Test Pit 2. In-situ infiltration testing at Stormwater Basin 2 showed an average infiltration rate of 0.4”/hour with much tighter subsoil conditions with fine to medium sand and some silt.

- 20. It appears from Section 6.2 of the Stormwater Report (page 20) that Greenskies plans to construct the stormwater basins first and to use them as temporary sediment traps or basins during construction. Is that accurate? If so, please provide the sizing computations showing that the basins may be used as temporary sediment traps, as well as detail for an outlet control structure for their use as temporary sediment traps or basins.**

A sediment storage analysis was prepared to assess the sediment capacity of the basins below the weir wall notch at the outlet of the basins. The calculations for this (attached as Exhibit C) show that there is adequate storage capacity for sediment during construction. A detail for outlet control will be provided with the construction drawings, if the Project is approved.

- 21. Section 7.9 on page 24 of the Stormwater Report lists many types of non-stormwater discharges which could occur on the site, such as uncontaminated air conditioning or compressor condensate, and foundation or footing drains where flows are not contaminated with process materials such as solvents. Where can these activities be found**

**on the site plans? Please either list their locations on the site plans or explain where these activities should be located on the site plans.**

This section is prepared as part of the Stormwater Construction Waste Management Plan and is intended to address management of non-stormwater discharges that refer to various examples of non-stormwater discharges which may not be necessarily applicable to this project.

**22. On page 27 of the Stormwater Report, there are maintenance requirements for grass swales, but there are no grass swales shown on the site plans. Are the swales missing from the plans, or are the maintenance requirements in error?**

This maintenance requirement refers to the grass diversion berm (swale).

**23. How many solar sites has Greenskies decommissioned? For any such site, please provide the following: (a) site location; (b) site size (acres and number of panels); (c) the actual cost of recycling the panels; (d) the actual costs of excavating the site to decommission it.**

Given that the useful life of solar PV projects is intended to exceed twenty-five (25) years, Greenskies has not yet decommissioned any of its sites.

**24. Please provide any update with respect to meetings between Greenskies and DEEP, including copies of any written correspondence, since Greenskies' August 17, 2020 responses to interrogatories from party Doug Hanson (see response to Q40). Has a site visit occurred or been scheduled? If yes, please provide details.**

A site visit has not been scheduled by DEEP.

Respectfully submitted,  
GRE GRACRUX LLC

By:  \_\_\_\_\_

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## CERTIFICATION

I hereby certify that on this 24<sup>th</sup> day of September 2020, the foregoing was delivered by electronic mail, in accordance with § 16-50j-12 of the Regulations of Connecticut State Agencies, to the following parties and intervenors of record:

Counsel for Douglas Hanson  
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A handwritten signature in black ink that reads "Lee D. Hoffman". The signature is written in a cursive style and is positioned above a horizontal line.

Lee D. Hoffman

## **Exhibit A**

Please see attached file labeled Exhibit A.

## Exhibit B

### Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Wednesday, Sep 23 2020

#### Elmridge Golf Diversion Berm - East Site

##### Trapezoidal

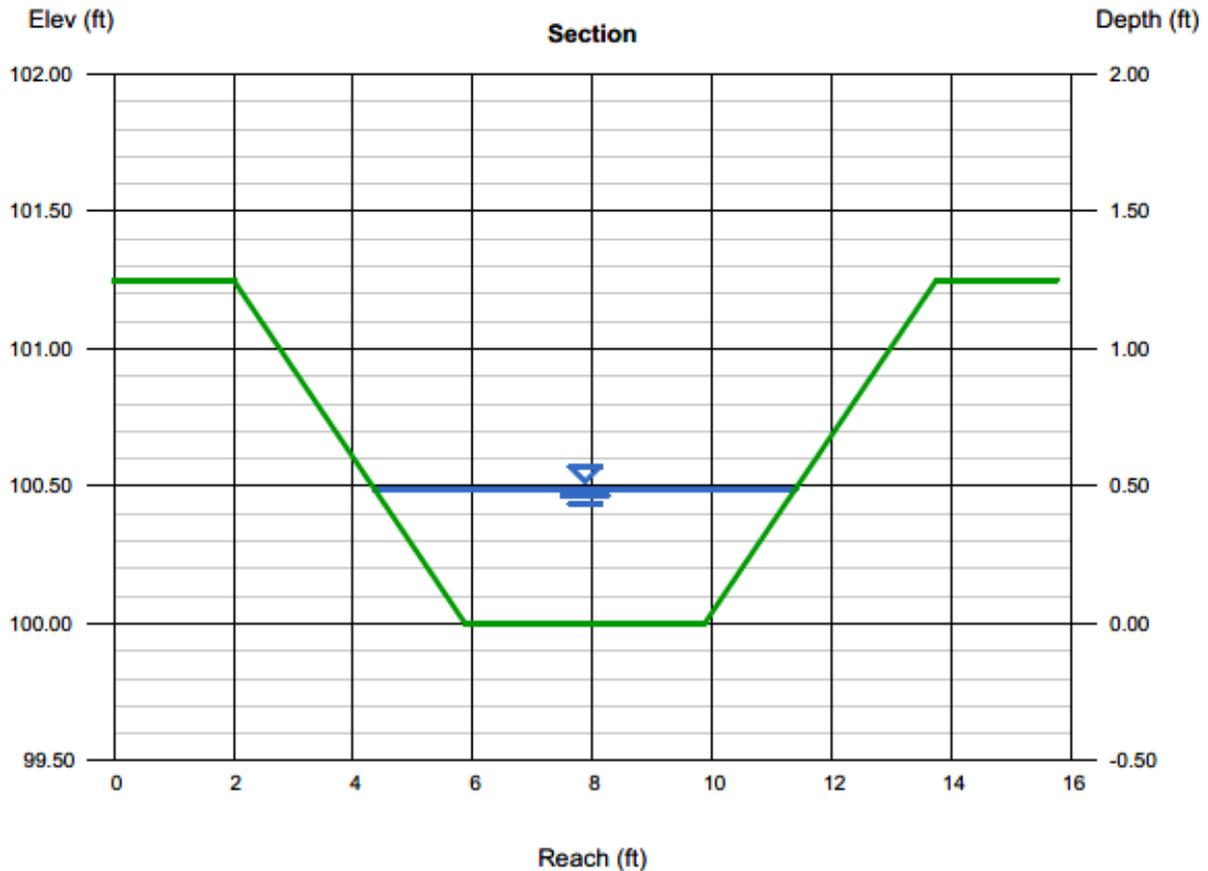
Bottom Width (ft) = 4.00  
Side Slopes (z:1) = 3.10, 3.10  
Total Depth (ft) = 1.25  
Invert Elev (ft) = 100.00  
Slope (%) = 3.00  
N-Value = 0.035

##### Highlighted

Depth (ft) = 0.49  
Q (cfs) = 10.00  
Area (sqft) = 2.70  
Velocity (ft/s) = 3.70  
Wetted Perim (ft) = 7.19  
Crit Depth, Yc (ft) = 0.51  
Top Width (ft) = 7.04  
EGL (ft) = 0.70

##### Calculations

Compute by: Known Q  
Known Q (cfs) = 10.00



## Exhibit C

### Sediment Storage Analysis

Elmridge Golf Solar

Proj No. 6763-10

By: MRG

Date/Rev: 8/13/2020

Reference: 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, Chapter 5-11

#### WEST SITE - Stormwater Basin 1

##### 1. Temporary Condition - Construction

DA	4.3
a <sup>1</sup>	30 Fig SB-1
DR	0.4 Fig SB-12
TE	0.8
y	90 Fig SB-2
V	0.0211 Ac-FT/Yr 917 CF 4,371 Total volume below weir notch (CF) SWB-1

**OK-Min Sediment Storage Provided**

##### Notes

1. Six month construction duration, 80% site disturbance, and assume 9 months for stabilized site  $50 \times 0.8 \times 9 / 12 = 30$  ton/ac

##### 2. Permanent Condition Stabilized Site

DA	4.3
a	1
DR	0.4
TE	0.8
y	90
V	0.0007 Ac-FT/Yr 31 CF

**EAST SITE - Stormwater Basin 2**

**1. Temporary Condition - Construction**

DA	8.8
a <sup>1</sup>	10 Fig SB-1
DR	0.4 Fig SB-12
TE	0.8
γ	90 Fig SB-2
V	0.0144 Ac-FT/Yr
	626 CF
	6,213 Total volume below weir notch (CF) SWB-2

OK-Min Sediment Storage Provided

**Notes**

1. Six month construction duration, 25% site disturbance, and assume 9 months for stabilized site  $50 \times 0.25 \times 9 / 12 = 30$  ton/ac

**2. Permanent Condition Stabilized Site**

DA	8.8
a	1
DR	0.4
TE	0.8
γ	90
V	0.0014 Ac-FT/Yr
	63 CF