PULLMAN & COMLEY 100 YEARS

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March 8, 2020

**ELECTRONIC MAIL & U.S. MAIL**

Melanie Bachman
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

**Re: Petition 1347A - GRE GACRUX LLC Petition for a Declaratory Ruling, Pursuant to Connecticut General Statutes §4-176 and §16-50k, for the Proposed Construction, Maintenance and Operation of a 16.78 MW AC Solar Photovoltaic Electric Generating Facility Located at 117 Oil Mill Road and Associated Electrical Interconnection to Eversource Energy's Existing Substation at 325 Waterford Parkway North in Waterford, Connecticut. Reopening of this Petition Based on Changed Conditions Pursuant to Connecticut General Statutes §4-181a(b).**

Dear Ms. Bachman:

I am writing on behalf of my client, GRE GACRUX LLC ("Greenskies"), in connection with the above-referenced Petition. With this Letter, I am enclosing Greenskies' Response to the Connecticut Siting Council's February 22, 2021 Interrogatories.

Should you have any questions concerning this submittal, please contact me at your convenience. I certify that copies of this submittal have been made to all parties on the Petition's Service List as of this date.

Sincerely,

Lee D. Hoffman

Enclosures:

**STATE OF CONNECTICUT**
**CONNECTICUT SITING COUNCIL**

**Petition of GRE GACRUX LLC for a Declaratory Ruling pursuant to C.G.S. §4-176 and § 16-50k, for the proposed construction, maintenance and operation of a 16.78 MW AC ground-mounted solar photovoltaic electric generating facility located at 117 Oil Mill Road and associated electrical interconnection to Eversource Energy's existing substation at 325 Waterford Parkway North in Waterford, Connecticut**

**Petition No. 1347A**

**March 8, 2021**

## GRE GACRUX LLC'S RESPONSES TO THE CONNECTICUT SITING COUNCIL'S SET OF INTERROGATORIES

The petitioner, GRE GACRUX LLC ("Greenskies"), respectfully submits this response to the Council's Interrogatories, dated February 22, 2021, in the above-referenced Petition. In response to the Council's Interrogatories, Greenskies states as follows:

**1. Has the Department of Energy and Environmental Protection Stormwater Program specified a time frame for the Project relating to Pre-Construction Sequence Work, Growing Season and Site Stabilization and Construction Sequence work? If so, what submitted documents contain this information?**

The Petitioner consulted with representatives of the Connecticut Department of Energy and Environmental Protection ("CTDEEP") Stormwater Division prior to filing the Project's application for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("Stormwater General Permit"). CTDEEP's Stormwater Division staff was also consulted during the Stormwater General Permit application review process; and, ultimately, the Project's Stormwater General Permit application was approved on November 3, 2020, as Permit No. GSN003573. The SWPPP and Site Plans associated with this approval were revised through July 28, 2020.

On February 25, 2021, a pre-construction meeting was held (the "Pre-construction Meeting") at the Project Site with Neal Williams, Chris Stone, and Laura Gaughran in attendance, representing CTDEEP Stormwater Division, as well as Maureen Fitzgerald and Dan Matheson, representing the Town of Waterford. At the Pre-construction Meeting, a meeting agenda containing a tentative construction schedule was presented, with the only proposed change being that earthwork within the solar array would be performed during site grubbing and prior to mass-seeding. The schedule included tentative dates/months, which were discussed and found to be agreeable to all parties present at the meeting. A copy of this agenda is enclosed herewith as Exhibit A. The SWPPP and Site Plans have been revised through March 8, 2021. Specifically, as part of these revisions, the Construction Sequencing found in Section 3 of the SWPPP and Sheet C-5.0 of the Site Plans were revised to reflect this agreed-upon information/sequencing for construction documents. The revised narrative for the SWPPP for the Project is included herein as Exhibit

B, and the revised Sheet C-5.0 is being submitted as Exhibit C. Due to file sizes, the entirety of the SWPPP and the revised drawings for Exhibit C are not included with this submission, but can be accessed at the a remote file sharing site. For ease of access, please go to the following site: https://vhb-my.sharepoint.com/:f:/p/skochis/EoujRk6NKmhIr8VFs_gSwaEBQ31wDVdsZOKNHdIh6aLyJQ?e=BBrTNV

**2. The Pre-Construction Sequence Schedule Narrative indicates that Pre-Construction Sequence Work would be completed in June 2021, followed by stabilization through a growing season, with remobilization for Construction Sequence Work in September 2021. Site Plan 5.0 contains reference to Construction Sequence Work beginning in 2022. Please clarify when Construction Sequence Work will commence. The growing season described in the narrative appears to be limited to the summer rather than a longer period of time as established in the Council's Decision and Order Condition 5. Please clarify.**

The SWPPP and Site Plans have been revised through March 8, 2021. Specifically, the Construction Sequencing found in Section 3 of the SWPPP and Sheet C-5.0 of the Site Plans have been revised to reflect the Project construction sequencing that was agreed upon by the parties at the Pre-construction Meeting. The Petitioner anticipates that tree-clearing at the Project Site will take place in March of 2021, followed by the installation of the erosion and sediment controls for the Site, and Site grubbing/regrading activities. Areas that have been grubbed and regraded will be seeded with tackifier within 72 hours, as the other areas onsite are completed during the spring/summer of 2021. It is then intended to allow this seed to germinate and grow until no earlier than October 2021. At that point, it is the Project's intent that solar installation work should be allowed to proceed. The revised construction sequence calls for seeding to happen such that vegetation growth will take place during the end of the spring growing season, all of the summer season, and the fall season. Thus, growth will be allowed to take place in more than only the summer season and is in accordance with the Council's Decision and Order Condition 5.

**3. Site Plan 5.0 contains reference to work beginning in 2020 with completion in 2021. Please revise.**

The SWPPP and Site Plans have been revised through March 8, 2021. Specifically, the Construction Sequencing found in Section 3 of the SWPPP and Sheet C-5.0 of the Site Plans have been revised to reflect the agreed-upon sequencing from the Pre-construction Meeting.

**4. Site Plan 5.0 Pre-Construction Sequence Work Note 15 references a single growing season. Please revise in accordance with the Council's Decision and Order Condition 5 and/or any DEEP Stormwater Permit stipulation.**

The SWPPP and Site Plans have been revised through March 8, 2021. Specifically, the Construction Sequencing found in Section 3 of the SWPPP and Sheet C-5.0 of the Site Plans have been revised to reflect the agreed-upon sequencing from the Pre-construction Meeting. The Petitioner anticipates that tree-clearing at the Project Site will take place in March of 2021, followed by the installation of the erosion and sediment controls for the Site, and Site grubbing/regrading activities. Areas that have been grubbed and regraded will be seeded with tackifier within 72 hours, as the other areas onsite are completed during the spring/summer of 2021. It is then intended to allow this seed to germinate and grow until no earlier than October 2021; at which point, solar installation work will be allowed to proceed. The revised construction sequence calls for seeding to happen such that vegetation growth will take place during the end of the spring growing season, all of the summer season, and the fall season. Thus, growth will be allowed to take place in more than only the summer season and is in accordance with the Council's Decision and Order Condition 5.

**5. The Limits of Work shown on the Site Plans is inclusive of the elevated logging crossing over Wetland 1. What work will be occurring at the elevated crossing? If no work is proposed, how will construction traffic be prohibited from using the crossing?**

Under the revised Site Plans, the Limits of Work now depict the elevated logging crossing over Wetland 1 as being outside of the contemplated work zone for the Project. The Site Plans have also been revised, with notes added to each side of the wetland crossing, that state that the contractor shall install a movable barrier (compost filter sock, etc.) to dissuade construction traffic from using the logging road, but will not prevent Eversource from using this road if/as needed to access its respective utility easement area located on the Site.

**6. Site Plan 5.0 Construction Sequence Work Note 3 states regraded areas will be hydroseeded, followed by Note 4 which specifies pile driving. There is no information regarding the stabilization of hydroseeded areas prior to commencement of pile driving. Please revise.**

As stated above, the Construction Sequencing found in Section 3 of the SWPPP and Sheet C-5.0 of the Site Plans have been revised to reflect the agreed-upon sequencing from the Pre-construction Meeting. Specifically, Note 16 of the Pre-Construction Site Protection Sequence has been changed such that it now provides that all disturbed areas onsite shall be seeded with tackifier and allowed to grow through a growing season prior to the initiation of construction sequence work for the Project.

**7. The Pre-Construction Sequence Schedule Narrative and the Pre-Construction Sequence Work on the Site Plan 5.0 and on Stormwater Pollution Control Plan p. 7 appear to contain differing information regarding site grubbing and the establishment of sediment basins. Would grubbing occur before or after the establishment of sediment basins and traps?**

Pursuant to the changes that Greenskies made to the SWPPP and Site Plans, respectively, the Pre-Construction Site Protection Sequence now states that the sediment traps and perimeter erosion controls for the Project will be installed prior to the contemplated grubbing and earthwork activities at the Site.

**8. The Site Plans specify numerous infiltration basins. How will these basins be isolated from the work areas to ensure sediment or compaction from construction related activities does not impact the filter media?**

The respective locations for the infiltration basins proposed at the Site (Stormwater Basins 2, 5, 7, 13, and 14) are planned outside of the panel arrays and outside of the perimeter access roads. They will be located in areas that are not anticipated to be heavily trafficked in connection with the construction of the array. As proposed, each of the infiltration basins will have the majority of construction stormwater runoff from the array-area filtered by a permanent sediment trap—which has been sized in accordance with the guidance document, *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*—that will be located upstream of each basin.

**9. The Site Plans depict numerous temporary sediment traps but outlet structures are not shown. Revise the plans to show the outlet structures. Would stormwater outflow from the temporary sediment basins be diverted away from the infiltration basins?**

The revised Site Plans now depict the proposed location(s), dimensions, and elevation(s) of the Project's outlets to the sediment traps. As the anticipation is that stormwater runoff exiting the sediment traps will be adequately cleaned of sediment, and to ensure that all stormwater from the array-area(s) passes through

the stormwater basins for rate-of-runoff mitigation purposes, the Project proposes discharging stormwater from the sediment traps to the stormwater basins prior to release from the Site.

**10. Are swales proposed to direct flows into the temporary sediment traps that are located upgradient of the infiltration stormwater basins? If so, revise the plans to show swale locations. If not, can stormwater flows partially bypass the traps and contaminate the infiltration basins?**

Sediment Trap 14A is the only sediment trap proposed to receive construction runoff via swale. The remaining swales for the Project will permanently convey stormwater runoff to the infiltration stormwater basins. As the anticipation is that stormwater runoff exiting the sediment traps will be adequately cleaned of sediment, and to ensure that all stormwater from the array-area(s) passes through the stormwater basins for rate-of-runoff mitigation purposes, the Project proposes discharging stormwater from the sediment traps to the stormwater basins prior to release from the Site.

Furthermore, it can be concluded from the Project's Stormwater Report that, between the number of sediment traps proposed, they will have approximately fourteen (14) acres of construction runoff collectively directed to them. It can also be adduced that the five (5) infiltration stormwater basins for the Project are expected to receive approximately twenty-three (23) acres of total watershed; however, of that acreage, only twenty (20) acres are expected to be disturbed for array construction and the remaining three (3) acres are perimeter areas, which are not to be graded and/or constructed upon. Therefore, approximately fourteen (14) of the twenty (20) disturbed acres (70%) tributary to infiltration basins will be treated by sediment traps. It is Greenskies' opinion that this design strategy far exceeds the standard that has been practiced in the State of Connecticut for years, and this arguably small amount of disturbed acreage that would be discharging to the infiltration basins should not affect the performance of the basins. Any further modifications to the layout of swales, sediment traps, and stormwater basins would likely result in a loss of panels and/or an enlargement to the proposed Limits of Work for the Project.

**11. Has GRE consulted with Eversource regarding the construction of a facility access road across the existing transmission line right-of-way? If so, what specific Eversource recommendations or requirements are necessary to cross the right-of-way?**

Greenskies has discussed the crossing of the transmission line area with Eversource personnel. It is Greenskies' understanding that Eversource needs to provide an encroachment approval for the Project's distribution feeders that will cross that area. This is handled by Eversource's respective Transmission and Real Estate groups. Currently, Greenskies is in the process of providing Eversource with an updated *Application for Activities within a Utility Corridor* document for the Project's updated design and equipment locations. Based on Greenskies' recent conversations with Eversource personnel, Greenskies expects that its application will be approved in a timely manner.

**12. Would tree clearing be required to establish the laydown area? If so, include clearing limits on the site plans.**

It is anticipated that no tree clearing is required to establish the laydown area for the Project. The area that has previously been cleared for use as a laydown area during the historic timber harvest will be satisfactory in size for purposes of the Project.

Respectfully Submitted,

GRE GRACRUX LLC

Lee D. Hoffman

By:_____
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Fax (860) 424-4370
Its Attorneys

## CERTIFICATION

I hereby certify that a copy of the foregoing document was delivered by e-mail to the following service list on March 8, 2021:

The Honorable Robert J. Brule
First Selectman
Waterford Town Hall
15 Rope Ferry Road
Waterford, CT 06385
rbrule@waterfordct.org
apiersall@waterfordct.org

Jean-Paul La Marche
Development Manager
Clean Focus Renewables, Inc.
jean-paul.lamarche@cleanfocus.us

Deborah Moshier-Dunn
VP, Save the River-Save the Hills, Inc.
P.O. Box 505
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21 Oak Street, Suite 601
Hartford, CT 06106
(860) 785-0545
(860) 838-9027 -fax
emily@eaglawllc.com

Waterford Solar
117 Oil Mill Road, Waterford, CT
Site Pre-Construction Meeting
February 25, 2021

**Tentative Agenda**

1. Project Team
    a. Developer – Greenskies Clean Energy
        i. Jean-Paul LaMarche, Development Director (858)349-2666
        jean-paul.lamarche@cleanfocus.us
    b. Construction Manager – Greenskies Clean Energy
        i. Chip Florio, Project Manager (860)839-2256
        cflorio@greenskies.com
    c. Design Consultant Engineering & Environmental – VHB
        i. Steve Kochis, Senior Project Engineer (860)807-4375
        skochis@vhb.com
        ii. Jeff Shamas, Director of Environmental Services (860)807-4388
        jshamas@vhb.com
    d. SWPPP Inspector – CLA Engineers
        i. Bob Russo (860)227-4895
        brusso@claengineers.com
    e. General Contractor – Earth Dynamics
        i. Jim Galey (860)966-9302
        earthdynamicsllc@gmail.com
        ii. Justin (JB) Kaldy
        earthdynamicsllc@gmail.com
2. Municipal Entities
    a. Connecticut Siting Council
        i. Melanie Bachman, Executive Director (860)827-2951
        melanie.bachman@ct.gov
    b. CTDEEP
        i. Neal Williams (860)335-0072
        neal.williams@ct.gov
        ii. Chris Stone (860)424-3850
        chris.stone@ct.gov
    c. Town of Waterford
        i. Maureen Fitzgerald, Environmental Planner (860)444-5813
        mfitzgerald@waterfordct.org
        ii. Daniel Matheson, DPW Assistant Director (860)444-5864
        dmatheson@waterfordct.org
        iii. Waterford Police Department (860)442-9451
        iv. Emergencies – Dial 911
3. Latest Revised Site Plans and SWPPP – January 12, 2021
4. Wildlife Protection
    a. Eastern Ribbon Snake
        i. VHB preparing protection plan
        ii. VHB to perform contractor training of species

iii. Snakes found within work zone shall be safely transplanted outside of work zone

b. Vernal Pools
   i. E-fence to be installed around top of Basins 1 & 16 following construction completion to prevent ponds from acting as decoy pools
   ii. VHB to perform post-construction vernal pool monitoring for 3 years

c. All other wildlife
   i. Any State-listed species encountered shall be reported to NDDB (CTDEEP Wildlife Division)

5. Historic Preservation
   a. SHPO concluded no likely significant resources on site following team's Phase 1B study
6. Traffic/Mobilization
   a. Traffic Management Plan revised through January 29, 2021
   b. Employee/contractor parking/staging area as designated on site plans (±1,000 feet into site from Oil Mill Road)
   c. Construction trailer to receive temporary power from Oil Mill Road
7. Inspections
   a. All contractors who disturb earth shall sign contractor certification in SWPPP
   b. CLA Engineers to perform weekly inspections and/or following 0.5" rainfall events
      i. Written reports shall be sent to and reviewed by VHB
      ii. Written reports distributed to CTDEEP
   c. VHB to perform monthly plan implementation inspections for duration of construction
      i. Written reports distributed to CTDEEP
8. Tentative Construction Schedule
   a. Official Construction Schedule is found in SWPPP and on Site Plan Sheet C-5.0
   b. February 2021 – Flag tree clearing limits (VHB)
   c. February 2021 – Pre-construction meeting
   d. February/March 2021 – Contractor mobilization
   e. March 2021 – Install stabilized access road from Oil Mill Road to laydown area
   f. March 2021 – Clear trees
   g. Spring 2021 - Install access roads and E&S controls
   h. Spring 2021 - Perform earthwork and grubbing
   i. Spring/Summer 2021 – Seed entire site
   j. Fall/Winter 2021 - Drive piles for solar racking
   k. Winter 2021/2022 through Fall/Winter 2022 - Install racking and panels
   l. Fall/Winter 2022 – Install sand filters
   m. Re-seed disturbed areas to maximum extents practicable following racking installation
9. Questions / Discussion

# Waterford Solar

## 117 Oil Mill Road
## Waterford, Connecticut

PREPARED FOR

Greenskies Clean Energy, LLC
111 W Jackson Boulevard
Suite 1901
Chicago, Illinois 60604

PREPARED BY

100 Great Meadow Road
Suite 200
Wethersfield, Connecticut 06109

March 12, 2020

REVISED March 8, 2021

# Table of Contents

# 1

# Introduction

As it is proposed to disturb approximately 75 acres and clear 75 acres of wooded areas, this Stormwater Pollution Control Plan (SWPCP) has been prepared in accordance with Section 22a-430b of the Connecticut General Statutes and the General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (the "General Permit"), effective date October 1, 2018. This SWPCP addresses pre- and post-construction issues associated with stormwater management during construction. All actions required by this plan shall be followed by the permittee per the conditions of the General Permit.

# 2

# Project Summary

This Stormwater Pollution Control Plan (SWPCP) has been developed for the proposed construction of the proposed Waterford Solar project (Greenskies Clean Energy, L.L.C.), a ±16 MW-AC photovoltaic solar energy facility (the "Project" or "Facility"). The Project will consist of ground-based solar racks, panels, combiner boxes, power conditioning systems (i.e. inverters), and buried conduit. The Project will also have access roads, perimeter security fences, and paths around the perimeter. The Project will be sited on one (1) parcel of land in Waterford, Connecticut, with access provided from Oil Mill Road. The Site is generally bounded by forest with residential developments to the northwest on Oil Mill Road. Stony Brook flows approximately 700 feet from the east of the property line. Refer to Figure A for a map of the Site.

The Project development will be on approximately 75 acres of forest that has been cleared for timber harvest. There are wetlands associated with the Stony Brook, and other parts of the Site.

The project filed a motion to reopen Petition 1347 from the Connecticut Siting Council on January 23, 2020 as Petition 1347A. Representatives of the project team have conducted multiple meetings with Connecticut Department of Energy & Environmental Protection (CTDEEP) Stormwater staff. A site walk was also conducted with CTDEEP Stormwater staff on January 27, 2020, and written comments were received from CTDEEP Stormwater staff on February 26, 2020.

Existing Conditions

Most of the Project is situated in the watersheds of the Stony Brook and wetlands that are within or adjacent to the Site. Therefore, most of the stormwater runoff generated in the current forest flows overland towards wetlands systems. Refer to USGS Locus Map in Appendix A.

While most of the Site occupies a near level to gently sloping terrace position, there exists a steeply-faced rock slope along portions of the southern and eastern face of the Site. Most of the Site consists of forest that has been timber harvested with forest remaining around the site perimeters.

Proposed Conditions

Under proposed conditions, Site grading has been designed to maintain as much of the existing topography and drainage patterns as practicable to preserve the Site's

existing hydrologic characteristics. Stormwater best management practices (BMPs) will be implemented throughout the Site to utilize natural processes of infiltrating rainfall and filtering runoff as close to its source as possible. The plan also avoids impact to ecologically sensitive areas and preserves existing vegetation cover to the maximum extent practicable. The Project avoids the creation of any new significant effective impervious areas.

Under proposed conditions, most of the stormwater runoff generated within the Project will continue to flow overland off the Site. Multiple conservatives measures were taken into consideration in the redesign of the stormwater management system in terms of maintaining pre- and post- peak rates and water quality. A hydrologic soil map unit geotechnical survey was performed around the Site, a loss of Hydrologic Soil Group (HSG) was taken into consideration in the stormwater modelling, and a significant geotechnical investigation was undertaken within the locations of the proposed stormwater basins. In accordance with State regulations, the net result of the design is that the post-development peak flow rates will be mitigated to pre-development rates up and including the 100-year storm event, water quality will be treated, and channel protection of low-flow storms will be provided as well.

No work is proposed within an inland wetland or watercourse. Most work in the vicinity of wetlands will maintain a minimum 100 foot undisturbed buffer with the exception of the preexisting access road that runs through wetlands and next to a vernal pool.

Estimated Site Area and Total Area to be disturbed during Construction

The total anticipated site area to be disturbed during construction is approximately 75 acres. Therefore, the Project will require a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from the CTDEEP. It is proposed to clear approximately 75 acres of existing wooded areas. It is intended to perform tree clearing and site stabilization and then allow the site to vegetate across a growing season prior to construction of site improvements.

Estimated Runoff Coefficients

Although a timber harvest was performed over a majority of the Site, an existing cover type of “forest” has been considered in the hydrologic model, and “grass” is proposed under the solar panels. A loss of hydrologic soil group within the development area has been taken into consideration in the model as well. Accordingly, stormwater basins are proposed to manage long-term stormwater peak runoff.

Water Quality Treatment

The Project proposes not to grub removed trees outside the limits of the physical solar development and to maintain a meadow condition for this buffer between the improvements and the treeline, to the maximum extents practicable. The Project proposes to meet or exceed water quality goals of the State regulations by design of the stormwater basins and incorporation of the results of the geotechnical surveys.

Stream Channel Protection

Stream channel protection is provided at the discharge point of each permanent stormwater basin, in accordance with the guidance in 2004 CTDEEP Stormwater Quality Manual, and also by use of the Minnesota Drainage Manual Solar Panel Calculator. The 2-year, 24-hour pre-development peak flow for each watershed is mitigated to 50% of the 2-year, 24-hour pre-development peak flow for each watershed containing development. This will assist in protecting the base flow streambanks in Oil Mill Brook and Stony Brook.

NDDB Consultation

A Preliminary Assessment was received from CTDEEP Wildlife Division on July 5, 2019. Over the summer/fall of 2019, the species listed in this assessment were addressed by VHB environmental staff by field survey, conservation measures, or other. A comprehrensive wildlife survey addressing each of these species was prepared, dated October 2, 2019, and a Final Determination was received from CTDEEP Wildlife Division on February 28, 2020. The recommended eastern ribbonsnake conservation measures were incorporated into the site plans, and VHB is currently working with Wildlife Division to clear up the fact that the Virginia copperleaf species was written in error in the wildlife report. Documentation received from NDDB is enclosed herewith in Appendix C.

SHPO Consultation

A Phase 1A historic/archaeological study was performed by Heritage Consultants and provided to SHPO for their review and reference. A letter dated March 3, 2020 was provided to CT Siting Council from SHPO requesting a Phase 1B survey of the site. Heritage Consultants performed a Phase 1B survey and SHPO provided a letter dated April 7, 2020 noting that no further field investigations were warranted. Doccumentation received from NDDB is enclosed herewith in Appendix D.

# 3

# Construction Sequencing

All construction activities are expected to begin in the spring of 2021 and completed by the end of 2022. The general construction notes are as follows:

1. The site contractor shall be fully responsible to control construction such that sedimentation shall not affect roads/highways and their drainage system, neighboring properties, wetlands and regulatory protected areas, whether such sedimentation is caused by water, wind, or direct deposit. Designated access drives must be used to the maximum extents possible. It is required that the site contractor perform a daily inspection of all erosion and sediment control measures employed at the site.
2. A CTDEEP-approved qualified inspector shall be assigned to be responsible for performing inspections and preparing reports in accordance with Section 5(B)(4)(B) of the Construction General Permit. These inspections shall take place weekly, at a minimum, and shall be required within 24 hours of a rainfall event exceeding 0.5 inches. The engineer of record shall be required to review and counter-sign the prepared weekly reports. It is also anticipated that representatives from CTDEEP and/or the State Conservation District will perform periodic inspections.
3. Engineer of record will perform monthly plan implementation inspections throughout the duration of construction and will prepare reports of the findings.
4. Throughout the course of the construction project, additional sediment and erosion control measures may be warranted at the discretion of the qualified inspector and/or design engineer. These improvements must be implemented in a timely fashion in accordance with the requirements of the Construction General Permit. Additionally, areas of proposed compacted native soil roads shall be converted to stable gravel roads if/as determined by the qualified inspector or engineer of record.
5. Prior to construction, the applicant shall provide the Town of Waterford with the name of contact and 24-hour contact information.
6. Contractor shall adhere to 2002 Connecticut Guidelines for Erosion and Sediment Control, as amended.
7. The contractor shall flag the limits of clearing necessary to facilitate the pre-construction meeting.
8. The contractor shall hold pre-construction meeting(s). Attendees shall include, but not be limited to, representatives of the general contractor, site contractor, CTDEEP, Town of Waterford, engineer of record, and qualified SWPPP inspector.
9. The contractor shall contact Call-Before-You-Dig (1-800-922-4455) prior to engaging in any excavation activities at the Site.

10. The contractor shall notify the Town of Waterford agent, Zoning Enforcement Officer, and Engineering Department, 48 hours prior to commencement of any construction activity.
11. No construction of site improvements may begin until the proper erosion control measures serving the area to be disturbed are in place.
12. Anticipated work hours will be between 6:30 AM and 5:00 PM.
13. High flotation tire equipment shall be used to the maximum extents practicable in lieu of track construction equipment in an effort to avoid compaction of the native soils.

Pre-Construction Site Protection Sequence (Spring/Summer 2021)

1. Survey and mark all woodland clearing limits.
2. Install stabilized vehicle construction exit at the existing road intersecting with Oil Mill Road to construction laydown area.
3. Access roads shall be designated as early as feasible and used primarily for construction traffic.
4. Field survey and mark boundary between clearing limits and grubbing limits.
5. Fell trees but do not grub areas until erosion controls are in place.
6. Install erosion and sediment controls following the CT Guidelines and manufacturer's directions. During construction, the contractor shall install measures as required by the engineer of record or qualified inspector, to prevent sediment-laden runoff from reaching wetlands or discharging offsite.
7. Install stormwater basins and sediment traps in accordance with the approved site-specific SWPCP and CT Guidelines. The engineer of record shall inspect features to confirm required storage capacities are provided and that outlets and/or spillways are constructed correctly. Discharge areas below outfalls must be inspected to confirm flow will be over stable ground and sheet flow is encouraged. If disturbed soils are present, the engineer of record to provide correct measures to address condition.
8. Seed and protect disturbed soils around sediment traps and basins within 72 hours of completion. Secure seed with a thermally-treated BFM applied following manufacturer's specifications for use at specified application rates. An anionic polyacrylamide product may be included with the tackifier to promote soil stability. All other amendments should be prescribed based on the result of soil tests.
9. The use of a tub grinder is recommended for the mulching of felled trees.
10. As trees are grubbed, grind tops and root balls in tub grinder to create material for wood chip mulch berm.
11. As material is produced, install mulch berm at the limit of disturbance generally in areas of cleared forest. Mulch berm has nominal dimensions of 1.5 to 2 feet high by 4-foot wide.
12. Perform mass earthwork on the site. Mass earthwork shall only mean regrading to meet the proposed grading depicted on the plans. Topsoil shall be stripped and stockpiled from areas proposed for regrading. Excess soil which is not reused in proposed site grading as depicted on plans shall be hauled off-site.

13. Topsoil shall be replaced to 3" minimum depth over regraded areas upon completion of mass earthwork activities and areas which were disturbed by mass earthwork operations shall be reseeded within 72 hours of completion.
14. Throughout construction, the contractor shall address ongoing erosion problems using temporary diversions and filling and grading gullies. Track gullies up and down slope and hydroseed with a thermally-treated wood bonded fiber matrix (BFM) mulch with tackifier. A stapled biodegradable erosion control blanket without monofilament mesh is an acceptable alternative for hydroseed and BFM.
15. Spreaded mulch and felled branches from pre-existing timber harvest on site shall be cleaned and areas seeded. Material cleaned in this way may be repurposed for the use of wood chip mulch berms along the site perimeter or removed from the site. The use of hydroseed combined with tackifier and polyacrylamide (PAM) is recommended for this reseeding. The cleanup areas shall be left undisturbed through a full growing season before initiation of the construction sequence can take place.
16. Upon completion of this construction phase, all disturbed areas shall be seeded with tackifier and allowed to grow through a growing season prior to initiation of construction sequence.

<u>Construction Sequence (October 2021 at earliest)</u>

1. Install ground screws for solar panel racking.
2. The installation of racking shall follow the foundation installation by roughly one week starting from the same point. It is anticipated that approximately 13 acres of piles will be in ahead of racking on average.
3. Reseed and regrade all areas disturbed by construction traffic within the arrays where racks are installed as early as possible. Ruts and rills shall be smoothed and graded as discovered.
4. Install solar panel modules in the racking. Much of this work is anticipated to be performed by hand and light construction equipment which will cause minimal disturbance compared to the use of heavy equipment. Designated access roads shall still be used to the maximum extents possible.
5. Upon completion of construction, re-seed all disturbed areas within 72 hours and prevent vehicular trafficking over these areas. Install final landscaping.
6. After site is stabilized, and after inspection by design engineer, or other owner's representative, remove temporary erosion and sediment controls. Entire site shall be checked for and cleaned of sediment as needed.

# 4

# Erosion and Sedimentation Control Measures

The following erosion and sedimentation controls are for use during the earthwork and construction phases of the Project. The following controls are provided as recommendations for the site contractor and do not constitute or replace the final Stormwater Pollution Control Plan that must be fully implemented by the Contractor in compliance with the DEEP General Permit for the discharge of stormwater and dewatering wastewater from construction activities, and 2002 Connecticut Guidelines for Erosion and Sediment Control as amended.

## Silt Fencing

This semi-permeable barrier made of a synthetic porous fabric will provide additional protection. The silt fences will be repaired or replaced as determined by periodic field inspections.

## Permanent Sediment Trap/Basin

These stormwater settling basins will be installed at the locations shown on the E&S plans and will have the majority of runoff from the on-site construction area diverted to them. The temporary sediment basins must have a safe outlet for excess stormwater. Additional temporary sediment traps may need to be installed during construction depending upon final phasing of improvements.

## Permanent Diversions

These swales shall be constructed generally as depicted on the site plans and adjusted to work for field conditions. They shall be installed upon completion of the tributary sediment trap/basin and fitted with erosion control blankets and check dams in accordance with the details and standard practices.

## Construction Entrance/Exit

Temporary crushed-stone construction entrances/exits will be installed at access points off of town roads.

Street Sweeping

Adjacent streets affected by sediment runoff from vehicle tires shall be swept at a minimum of bi-weekly intervals or on an as-needed basis as required by the qualified inspector.

Flocculent Logs

Flocculent logs shall be placed in the bottom of diversion swales to assist in reducing total suspended solids.

Straw Wattles

Straw wattles are compressed weed-free straw encased in jute, nylon, or other biodegradable materials. The intended location for these are along slopes and at the edges of travel ways to intercept runoff.

Stockpile Management

Active stockpiles shall be topped with hay at the end of each work day. Stockpiles intended to be left dormant for more than 14 days must be stabilized with erosion control blankets and/or hydroseed. Stockpiles shall be completely surrounded with silt fence.

Compost Filter Socks

These media-filled mesh socks shall be installed in the areas depicted on the site plans primarily to act as check dams and/or perimeter control depending upon the area. Care should be taken that these socks do not divert flow, but rather allow it time to settle without modifying intended drainage patterns.

Erosion Control Blankets

Straw fiber or jute netting roll blankets designed for use on moderate slope and channel applications. Material type shall be selected to ensure no danger to wildlife.

Hydroseeding

Disturbed areas shall be hydroseeded at the intervals outlined in the construction sequence. Hydroseed shall be combined with an application of polyacrylamide (PAM) to assist.

Stone Check Dams

Stone check dams shall be constructed to the dimensions as detailed on the site plans and are intended to be left in place permanently to act as velocity dissipators downstream of the stormwater basins. In areas where they are proposed outside the limits of work, the stone check dams shall be constructed by hand without the use of heavy construction machinery.

Keeping Disturbance to a Minimum

Construction traffic shall utilize the existing timber harvest paths around the site (or designated access routes once they are established) and avoid travel across undisturbed areas to minimize soil compaction. The contractor shall also strive to limit areas of exposed soil in each sub-watershed as much as feasible during construction. Areas that have been regraded to final grade shall be seeded within 10 days.

Maintenance

The contractor or subcontractor will be responsible for implementing, at minimum, each control shown on the Site Plan. Refer to the Site Plans in Appendix F.

The qualified inspector will inspect all sediment and erosion control structures periodically and after each rainfall event. Records of the inspections will be prepared and maintained on-site by the contractor.

- Silt shall be removed from behind barriers if greater than 6-inches deep or as needed.
- Damaged or deteriorated items will be repaired within 48 hours of identification, or sooner if a significant rainfall event is predicted.
- Sediment that is collected in sediment traps and basins shall be removed in accordance with the details.
- Erosion control structures shall remain in place until all disturbed earth has been securely stabilized. After removal of structures, disturbed areas shall be regraded and stabilized as necessary.

# 5

# Water Quantity and Quality Controls Long Term Maintenance

The following maintenance program is proposed to ensure the continued effectiveness of the structural water quality controls previously described.

Low Water Crossings

- Soil stability of rip-rap road crossings shall be checked and repaired, as necessary, once annually or after damaging rainfall events

Infiltration/Detention Ponds

- Pond shall be checked for and cleaned of sediment once annually or after damaging rainfall events
- Sediment shall be cleaned from the pond any time it affects the overall performance and infiltration capabilities of the system
- Any structural damage or other indication of malfunction will be reported to the site manager and repaired as necessary

Diversion Swales

- Swales shall be checked for and cleaned of sediment once annually or after damaging rainfall events
- Sediment shall be cleaned from a swale any time it affects the overall performance of the system
- Any structural damage or other indication of malfunction will be reported to the site manager and repaired as necessary

Vegetated Perimeter Filter Areas

- Vegetated filter areas shall be checked for and cleaned of sediment once annually or after damaging rainfall events
- Sediment shall be cleaned from the filter areas any time it affects the overall performance and infiltration capabilities of the system

Stone Check Dams

- Stone check dams shall be checked for and cleaned of sediment once annually or after damaging rainfall events, and repaired as necessary
- Sediment shall be cleaned from the stone check dams any time it affects the overall performance and infiltration capabilities of the system

# 6

# Site Inspections

Qualified personnel (provided by the permittee) shall inspect disturbed areas of the construction activity that have not been finally stabilized, erosion and sediment control measures, all structural controls, soil stockpile areas, washout areas and locations where vehicles enter or exit the site. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site shall also be inspected for evidence of off-site sediment tracking.

The permittee shall maintain a rain gauge on-site to document rainfall amounts. For storms that end on a weekend, holiday, or other time after normal working hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of the subsequent normal working hours. Where sites have been temporarily or finally stabilized, such inspection shall be conducted at least once every month for three months. The engineer of record shall perform monthly plan implementation inspections for the duration of construction.

Any and all violations to the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Actitivities and/or the approved SWPCP, including, but not limited to sediment discharges and chemical spills, shall be reported to the Water Permitting and Enforcement Division of the Connecticut Department of Energy and Environmental Protection (attention: Neal Williams – neal.williams@ct.gov or 860-424-3356).

Reports

A report shall be prepared and retained as part of the Plan. This report shall summarize: the scope of the inspection; name(s) and qualifications of personnel making the inspection; the date(s) of the inspection; weather conditions including precipitation information; major observations relating to erosion and sediment controls and the implementation of the Plan; a description of the stormwater discharge(s) from the site; and any water quality monitoring performed during the inspection. The report shall be signed by the permittee or his/her authorized representative in accordance with the "Certification of Documents" section (subsection 5(i)) of this general permit. Copies of the reports must be provided to the contractor, site owner, CTDEEP, and the design engineer.

The report shall include a statement that, in the judgment of the qualified inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the Plan and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised Plan within three (3) calendar days of the date of inspection unless another schedule is specified in the Guidelines. Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised Plan within ten (10) days of the date of inspection, unless another schedule is specified in the Guidelines or is approved by the commissioner. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants from the site.

# 7

# Termination Requirements

Notice of Termination

At the completion of a construction project registered of this general permit, a Notice of Termination must be filed with the Commissioner. A project shall be considered complete after all post-construction measures are installed, cleaned and functioning and the site has been stabilized for at least three months following the cessation of construction activities. A site is considered stabilized when there is no active erosion or sedimentation present and no disturbed areas remain exposed for all phases.

# 8

# Contractors

Each Contractor and Subcontractor who will perform actions on the site that may reasonably be expected to cause or have the potential to cause pollution of the waters of the State shall sign the certification statement below:

## Certification Statement

*"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that, as a Contractor or Subcontractor at the site, I am authorized by this General Permit, and must comply with the terms and conditions of this General Permit, including, but not limited to, the requirements of the Stormwater Pollution Control Plan prepared for the site."*

List of Project Contractors

1. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

2. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

3. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

4. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

5. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

6. Contractor Name:_____
   Address:_____
   Telephone Number:_____ Fax Number:_____
   Contractor Specialty to be used on this Project:_____
   Contractor's On-site Representative:_____

_____
Signature Date

# 9

# Reporting and Record Keeping Requirements

The permittee shall retain copies of the SWPCP and all reports required by this General Permit, and records of all data used to complete the registration to be authorized by this General Permit, for a period of at least five (5) years from the date that construction at the Site is completed, unless the Commissioner specifies another time period in writing.

The permittee shall retain an updated copy of the SWPCP required by this General Permit at the construction site from the date construction is initiated at the site until the date construction at the site is complete.

## Stormwater Pollution Control Plan Permit Drawing

| DRAWING TITLE | NO. OF SHEETS |
|---|---|
| Cover Sheet | 1 |
| Legend and General Notes | 1 |
| Key Plan | 1 |
| Layout and Materials Plan | 13 |
| Grading and Drainage Plan | 13 |
| Erosion and Sediment Control Plan | 13 |
| Site Details | 2 |
| Property Survey | 2 |