STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 8, 2018

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **PETITION NO. 1342** – 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 4.98-megawatt AC solar photovoltaic electric generating facility located at 232 Rimmon Road and 700 Middletown Avenue, North Haven, Connecticut.

Dear Attorney Hoffman:

At a public meeting held on June 7, 2018, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal meets air and water quality standards of Department of Energy and Environmental Protection (DEEP) and would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

1. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Towns of North Haven and North Branford for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a) A final site plan including, but not limited to, final solar panel design, electrical interconnection, fencing and equipment pads;
    b) Final wetland and vernal pool report with associated mitigation/protection measures;
    c) The final wildlife survey results and a conservation/protection plan in accordance with the DEEP Natural Diversity Data Base Comments dated March 22, 2018;
    d) Final landscaping plan for screening abutting properties; and
    e) Final erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control.*

2. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;

3. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of North Haven;

4. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

5. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;

6. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and

7. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated April 10, 2018 and additional information received on April 19, 2018 and May 29, 2018.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,

Robert Stein MMB

Robert Stein
Chairman

RS/MP/lm

Enclosure: Staff Report dated June 7, 2018

c: The Honorable Michael J. Freda, First Selectman, Town of North Haven
Laura Magaraci, Zoning Enforcement Officer, Town of North Haven
The Honorable Michael J. Doody, Mayor, Town of North Branford
Michael T. Paulhus, Town Manager, Town of North Branford
Carey Duques, Town Planner, Town of North Branford
The Association of Catholic Cemeteries

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Petition No. 1342
GRE GACRUX LLC
232 Rimmon Road and 700 Middletown Avenue, North Haven
Staff Report
June 7, 2018

Introduction

On April 13, 2018, GRE GACRUX LLC (GRE or Petitioner) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 4.98 megawatt (MW) alternating current (AC) solar photovoltaic generating facility located at 700 Middletown Avenue and 232 Rimmon Road, North Haven, Connecticut.

GRE would be the owner of the proposed project. Greenskies (part of the Clean Focus group of companies) is an affiliated Connecticut-based solar developer and integrator that specializes in system design, financing, project implementation, operation, and maintenance. GRE would obtain necessary permits from Department of Energy and Environmental Protection (DEEP). GRE would also secure the necessary local building and electrical permits.

On April 16, 2018, the Council sent correspondence to the Town of North Haven and the Town of North Branford (because it is located within 2,500 feet of the proposed facility) stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by May 16, 2018.

On May 3, 2018, a field review of the project was held at the site that was attended by the following: Council member Robert Hannon; Executive Director Melanie Bachman; Michael Perrone, Siting Analyst; Attorney Lee D. Hoffman, Pullman & Comley LLC (representing GRE); Jean-Paul LaMarche, Development Manager, Greenskies; Ryan Linares, Development Manager, Greenskies; Chris Albino, Project Manager, BL Companies; Linda Brunza, Analyst, DEEP; Robern Burns, Operations Director, Catholic Cemeteries Association (CCA); and John Pinone, Executive Director, CCA.

The Council issued interrogatories to GRE on May 11, 2018. On May 25, 2018, the Petitioner submitted responses to Council interrogatories.

Municipal Consultation

The Petitioner and its representatives have met with the Town of North Haven for approximately six months prior to filing the Petition with the Council. Specifically, the first meeting took place on October 20, 2017, when representatives for the proposed project met with Mayor Michael J. Freda and the Town of North Haven's Clean Energy Task Force. On January 16, 2018, respresentatives of Greenskies met with First Selectman Freda again to discuss the project and answer questions. Representatives of the project continued to have email and telephone contact with First Selectman Freda, with the most recent occurring on April 3, 2018.

On March 15, 2018, Greenskies met with Carey Duques, Town Planner/Planning and Zoning Administrator, Town of North Branford. Ms. Duques did not object to the proposed project. Also, on March 15, 2018, Greenskies met with Sal Brancati, Director of Economic Development, Town of

East Haven. By letter dated March 20, 2018, Mayor Joseph Maturo, Jr. of the Town of East Haven[1] expressed support for the proposed project.

On or about April 4, 2018, the Petitioner notified Towns of North Haven and North Branford officials, state officials and agencies, the property owner and abutting property owners of the proposed project. Notice was provided to the Town of North Haven Conservation Commission on May 15, 2018. On or about April 4, 2018, the Petitioner also notified the Town of East Haven. To date, the Council has not received any comments from abutters or the municipalities.

GRE has not received any written comments from the Town of North Haven. GRE received one written communication from an abutter (located at 242 Rimmon Road, North Haven) indicating that he did not want the proposed project located near his home. GRE has been in contact with such abutter to discuss visual screening options. GRE also had verbal discussions with other neighbors regarding visual screening. These discussions have resulted in GRE and certain neighbors coming to agreement on the visual screening mechanisms that would be used. The details regarding visual screening are discussed in the section of this staff report titled, "Visibility."

State Agency Comments

On April 16, 2018, the Council sent correspondence requesting comments on the proposed project from the following state agencies: DEEP; Department of Agriculture (DOAg); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Emergency Services and Public Protection (DESPP); Department of Consumer Protection (DCP); Department of Labor (DOL); Department of Construction Services (DCS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO). The deadline for submission of state agency comments was May 16, 2018. By letter dated May 16, 2018, DEEP filed its written comments, which are attached hereto. No comments from any other state agencies have been received to date.

Public Act 17-218

Effective July 1, 2017, Public Act 17-218 requires, "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such project will not materially affect the status of land as core forest." Because the proposed project was selected by DEEP in a solicitation prior to July 1, 2017, the proposed project is exempt from the provisions of Public Act 17-218. Notwithstanding the exemption, neither prime farmland[2] nor core forest would be impacted by project development.

Public Benefit

The project would be a distributed energy resource facility as defined in CGS § 16-1(a)(49). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The 2013 Connecticut Comprehensive Energy Strategy (2013 CES) emphasizes low- or no-emission sources of

[1] The Town of East Haven is greater than 2,500 feet from the project boundary.
[2] The proposed site is not considered prime farmland due to drainage issues.

electric generation and development of more distributed generation. The 2018 CES identifies Strategy No. 3 as, "Grow and sustain renewable and zero-carbon generation in the state and region." The proposed facility is distributed generation. Specifically, the proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard as a zero emission Class I renewable energy source.

On March 9, 2016, pursuant to Section 1(b) and 1(c) of PA 15-107, DEEP issued notice for a Request for Proposals (RFP) for Class I renewable energy sources and Class III sources with a nameplate capacity rating of more than 2 MW and less than 20 MW (Small Scale RFP). Project selection occurred on November 28, 2016. On June 27, 2017, DEEP issued its final determination in the RFP and selected 25 out of 107 proposed projects to enter into long-term power purchase agreements with the electric distribution companies (EDCs) for a combination of energy and environmental attributes. Of the 25 projects selected, one is the proposed project – a 4.98 MW Solar Project in North Haven by GRE.

Per GRE's Power Purchase Agreement (PPA), approximately 80 percent of the electricity and renewable energy certificates (RECs) would be sold to Eversource Energy (Eversource), and the remaining 20 percent would be sold to The United Illuminating Company (UI). The PPA was approved by the Connecticut PURA on September 7, 2017. The PPA has a 20-year term, and there is no option for any length of renewal. The Petitioner currently has no plans to participate in the ISO-NE Forward Capacity Auction (although the potential exists).

Proposed Site

The proposed solar project would be located within approximately 22 acres of a total of approximately 42 acres, consisting of two continguous parcels. One parcel (approximately 26.2 acres) is located at 232 Rimmon Road, and the other parcel (approximately 15.5 acres) is located at 700 Middletown Avenue. Both parcels are owned by CCA and located in the Town of North Haven's Residential District (R-40).

The subject property is currently unimproved, vacant land that is not currently in use. It is mostly flat and free of trees. However, a single, 2-acre stand of deciduous trees marks the north-central portion of the site and contains an isolated pocket of wetlands. An existing stand of deciduous trees is also located around much of the perimeter of the property. An existing dirt path is located on the western parcel (Dirt Path No. 1). The path originates at Old Velvet Street and runs in roughly a southeast to northwest direction. Another dirt path (Dirt Path No. 2) is located on the western parcel. It originates near Rimmon Road and runs parallel to the northern property line.

To the west of the subject property, there is a cemetery that is owned by the same land owner as the subject property. Directly to the north and east of the project site are residential parcels. To the south is Old Velvet Street, Middletown Avenue (Route 17) and residential parcels to the south of Route 17. To the northwest of the proposed project is unused land that is a mixture of open and forested areas.

GRE conducted an extensive search of both public and private land resulting in the selection of the subject property. Specifically, GRE evaluated 25 potential sites for renewable energy projects throughout Connecticut. GRE attempted to utilize former municipal landfills in Torrington, Ellington, Sprague, Waterbury, and Ledyard, as well as several farms and vacant land in Bristol, Torrington, Watertown and Salem. However, the available build acreage was too small for a nearly 5 MW AC project at these sites. Alternative sites that were of suitable size were investigated in the towns of Brooklyn, Columbia, Coventry, East Windsor, Ellington, Enfield, Lebanon, Lisbon,

Somers, Southington, and Stonington. However, in each case, environmental concerns and cost considerations rendered the sites less suitable than the proposed site.

GRE identified specific site and community characteristics for a preferred site such as: minimal environmental and natural resource impacts; minimal adverse effects on quality agricultural land; not diminish the quality of life of those who live in the vicinity; and availability to interconnect to a feeder and substation of the utility company to better serve customers and ensure compatibility with the grid. The proposed site was selected because it was deemed by GRE to meet such characteristics.

Proposed Project

The solar field would include a total of approximately 17,568 solar photovoltaic panels at 340 Watts direct current (DC) each on fixed rack systems oriented to the south, for a total of about 5.97 MW DC. These panels would be tilted on an angle of 30 degrees with the horizontal. This angle would maximize energy production and result in snow shedding.

The solar panels would be installed on a post-racking system with approximately a 15-foot spacing between the rows. The solar panels would reach a maximum height approximately 9-feet 5-inches above grade, depending on local grade and topography. The ground clearance under the panels would be approximately three feet.

The racking system would be constructed to a 115 miles per hour design wind speed standard in accordance with the Connecticut State Building Code. The rack posts would be driven approximately six feet into the ground by a track-mounted pneumatic driving rig. Ledge is not anticipated to be encountered. However, if ledge is encountered, the driven posts would be substituted with a ballast design with a concrete base.

Much of Dirt Path No. 1 would be covered by the solar panels. However, there are no known existing easements associated with the use of this dirt path.

The efficiency of the solar panels would be approximately 19.4 percent, subject to final panel design procured. The power output of the solar panels would decline by approximately 0.5 percent per year as the panels age.

The power produced would be fed into the local distribution system via a connection from a proposed metering cabinet near the southern limits of the project (adjacent to Old Velvet Street) to an existing pole on the same side of Middletown Avenue as the subject property.

An Interconnection Application has been submitted to UI, which is currently in the process of preparing a line study to confirm the proposed interconnection location, as well as to provide recommendations for the proposed electrical equipment. As of May 25, 2018, UI has completed its design review and is in the process of commencing the impact study. If approved, Council staff suggestions that the final plans for interconnection be included in the Development and Management Plan (D&M Plan).

The proposed project would not serve any microgrids. Also, no battery or other energy storage is proposed at this time.

All solar arrays and most electrical equipment[3] would be surrounded by a seven-foot tall chain link fence. An anti-climb design is not proposed at this time. A six-inch gap under the fence for wildlife to pass through would be included if recommended by pending wildlife studies discussed in the section of this staff report titled "Environmental." If approved, Council staff suggests that the final determination on the wildlife gap for the fence be included in the D&M Plan.

The construction access and permanent access to the site would be from Old Velvet Street, beginning where Dirt Path No. 1 originates, but it would not follow the dirt path; it would run directly north. The existing drive (Dirt Path No. 2) off of Rimmon Road currently exists, and is maintained for secondary owner access. The Petitioner would not use Rimmon Road for construction access. Paved driveway aprons are proposed at both entrances.

In total, approximately 3,100 linear feet of 12-foot wide internal gravel access roads would be constructed within the proposed project area to provide access to the solar array and electrical equipment. To minimize site disturbance, the access roads would be constructed on prepared sub-grades with a 12-inch layer of processed stone and matching existing grades. This approach would result in minimal grading and would facilitate sheet flow stormwater runoff to mimic existing conditions.

Temporary laydown areas would be located within the proposed project site boundaries and used for each phase of construction. A total of five construction phase areas would ensure that not more than five acres would be disturbed at a time.

Project construction would be anticipated to proceed in late 2018 or early 2019, subject to regulatory approvals. Formal construction notice to proceed is anticipated in late 2018, with the delivery of equipment likely commencing in late 2018 or early 2019. Final installation of array equipment is anticipated to occur in late 2018. Final site stabilization, testing and commissioning would be expected to be completed in the spring of 2019. Construction would occur Monday through Saturday from 7:00 a.m. to 9:00 p.m.

Public Safety

The proposed project would comply with the National Electrical Code, the National Electrical Safety Code and the National Fire Protection Association code. The system would be remotely monitored through a data acquisition system, allowing for remote shutdown of the facility in the event of a fault or other power outage event. Before commencement of operation, GRE would meet with local first responders to supply information on responding to emergencies at solar facilities.

Disconnect switches would be used by first responders to shut down the facility. GRE would provide the first responders with their preferred means of access to the site and emergency shutdown of the facility. This could potentially include a key box, if first responders prefer.

The nearest airport to the proposed facility is Tweed New Haven Airport, which is approximately 7.5 miles south-southwest of the proposed project. GRE filed with the Federal Aviation Administration (FAA) on March 29, 2018 and is seeking a Determination of No Hazard to Air Navigation (No Hazard Determination). The FAA requested that GRE file additional requests related to the opposite side of the array as well as utility poles. GRE provided this information to the FAA on April 16, 2018 and is awaiting a determination. A glare analysis has not be performed. However,

[3] The switchgear, SCADA cabinet and metering cabinet would be located on concrete pads near the entrance off of Old Velvet Street and would be protected by bollards.

GRE would utilize panels that are as non-reflective as possible. It is not anticipated that FAA will require a glare analysis.

Environmental

While the total project area would be approximately 22 acres[4] (out of approximately 42 acres of subject property), only one tree would be removed for the proposed project. Net carbon dioxide emissions reductions would occur due to the solar power displacing more traditional generation (which includes fossil-fueled generation). Thus, the loss of carbon sequestration would be negligible, and a "carbon debt payback" analysis based on loss of sequestration would not be applicable. Overall, the proposed project would result in a net reduction in carbon dioxide emissions for the environment.

GRE would follow existing grades as much as possible, with the only proposed changes in grades to accommodate some slight modification to handle drainage paths where collected runoff crosses the gravel access drives via proposed culverts.

The cut volume for access drive construction would be approximately 1,600 cubic yards, which would be replaced with sub-base material and processed stone. General site grading would include approximately 300 cubic yards of material for grade raise fill at the proposed stormwater crossings.

The proposed project is expected to meet the DEEP noise standards at the property boundaries.

The solar project would not produce air emissions of regulated air pollutants or greenhouse gasses during operation. There are no wells located on the subject property. In addition, the project is not located within a DEEP-designated Aquifer Protection Area. Installation of the solar rack posts into the ground would not be expected to impact groundwater quality.

The proposed site is located in the Federal Emergency Management Agency (FEMA) Zone X (unshaded). Thus, the solar panels and equipment would remain outside of the 100-year and 500-year flood zones.

There are four identified wetland areas on the subject property. Wetland 1 is located in the northern portion of the subject property. Wetland 2 is located in the northwestern portion of the subject property. Wetlands 3 and 4 are located in the southwestern portion of the subject property. None of the proposed solar arrays, equipment or access drives would be located within wetland areas. Thus, no direct impacts to wetlands would be expected.

The Town of North Haven Inland Wetland Commission regulatory wetland setback area is 50 feet. The existing farming use includes disturbance within 10 to 15 feet of the wetlands in some instances. The final proposed development would include a 25-foot wide vegetative filter strip beyond the 50-foot buffer between the perimeter fence and the wetland buffer, thus creating a de facto 75-foot wide buffer. The proposed buffer between the perimeter fence and Wetland 3 (adjacent to Old Velvet Street) would be in excess of 100 feet.

Erosion and sedimentation controls would comply with the the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* (2002 E&S Guidelines). The proposed silt fence would be Mirafi Envirofence or Propex Geotex, or equivalent. The silt fence would not be intended to trap all particles, but rather to filter sediment from stromwater runoff. Additonal protection measures, including silt socks, could be directed by the engineer during construction if needed.

[4] The total disturbance area would be approximately 24.3 acres.

Field surveys of vernal pools were conducted at all on-site wetlands during April and May of 2018. No vernal pools are present at the site. A final wetlands and biological report is in the process of being prepared. If approved, Council staff suggests that a copy of the final wetland and biological report with associated mitigation measures be submitted as part of the D&M Plan.

By letter dated March 22, 2018, DEEP indicated that its review of the Natural Diversity Database (NDDB) identified two State-listed Species of Special Concern that may occur within or close to boundaries of the subject property. These species are the eastern box turtle and the ground beetle. DEEP requests that field surveys by a qualified biologist be performed for these two species and that the survey results and a conservation/protection plan be submitted in order to receive a final determination letter. GRE notes that such studies are underway in the field, and the results are expected by the end of June 2018. If approved, Council staff suggests that the final wildlife survey results and a conservation/protection plan in accordance with the DEEP NDDB Comments dated March 22, 2018 be provided in the D&M Plan.

Low growth grass and/or flower mix would be planted throughout the fenced area including beneath the solar panels and between the rows of the panels. GRE is open to the possibility of hydroseeding, but a final determination on how to broadcast the seed at the site has not yet been made. The solar panel height above ground and the choice of seed mix would be intended to minimize frequency of mowing required. GRE is anticipating mowing approximately two or three times per growing season.

Stormwater

The Petitioner would register for a General Permit from DEEP. The Petitioner met with DEEP stormwater permitting staff on April 23, 2018 to discuss the proposed project and anticipates filing the application for the General Permit prior to construction activites. The project would be phased to ensure each disturbance would be kept to a maximum of five acres of soil disturbance or less at any given time during construction. The Stormwater Pollution Control Plan (SWPCP) was prepared in accordance with the DEEP's "Stormwater Management at Solar Farm Construction Projects" dated September 8, 2018, the *2004 Connecticut Stormwater Quality Manual* and the 2002 E&S Guidelines). According to the SWPCP, due to the change in land use from fallow farmland to seeded low-maintenance lawn, the post-construction runoff produced within the subject property would be reduced post-construction.

Cultural Resources

A Phase 1A Cultural Resources Assessment Survey (Phase 1A Survey) was performed for the proposed site. According to the Phase 1A Survey, the areas of the proposed project in the vicinity of Dirt Path No. 1 and close to Old Velvet Street have no/low archaeological sensitivity. Much of the proposed solar facility footprint is located in areas of moderate archaeological sensitivity, and the eastern limits of the project would be located in areas of high archaeological sensitivity. A Phase 1B Survey would be performed for areas of moderate and high sensitivity due to the possibility of archaeological deposits.

The Rising Sun Tavern (RST), a National Register of Historic Places resource, is located approximately 250 feet south of the subject property across Middletown Avenue on the south side of Old Tavern Road. Due to the existing trees and vegetation along the southern property line, as well as existing trees and vegetation between Middletown Avenue and the RST, the proposed project would not be expected to be visible from the RST.

Visibility

Hansen Park is located approximately 0.4 miles north of the proposed Project site. The Project would not be expected to be generally visible from the park; however, there may be some minimal visibility from the trail on the south side of the park during leaf-off conditions. No glare impacts on the park would be expected due to the low-glare design of the panels and the south-facing orientation of the panels.

Existing vegetation would substantially reduce views from Middletown Avenue and Stone Hedge Drive. The only area with significant views of the facility would be the cemetery to the west (owned by the same property owner).

The Petitioner provided site line cross sections to evaluate the visibility of the project from the four closest abutting residential properties: Zimmerman Property (to the north); Camara Property (to the east); Lupoli Property (to the east); and the Genarc 1 LLC Property (to the southeast). Existing trees and shrubs would be expected to screen the visibility of the project from the Lupoli Property and the Genarc 1 LLC Property.

The nearest off-site residence is the Camara Property, located along Rimmon Road, approximately 36 feet east of the proposed Project fenceline. While the project footprint could be altered to increase this distance, it would result in solar panels being placed elsewhere on sloped terrain which would affect power output. Under existing conditions, views of the proposed project from the Camara Property would be expected due to lack of intervening vegetation along the western-central property line of the Camara Property. Thus, the Petitioner plans to plant eastern red cedar, eastern white pine and rosebay rhododendrons (on the subject property) adjacent to the Camara Property to fill this "gap" and provide screening.

Some views of the proposed project from the Zimmerman Property are possible through the existing trees and shrubs. Thus, the Petitioner plans to plant eastern red cedar and eastern white pine (on the subject property) adjacent to the Zimmerman Property to provide additional screening.

Existing vegetation west of the Lupoli Property is expected to screen views of the proposed facility. While the Genarc 1 LLC Property also has existing vegetation to provide screening, some distant views of the facility through the trees might be possible from an upper floor of the house. Accordingly, the Petitioner is proposing to plant eastern red cedar and eastern white pine southwest of the Genarc 1 LLC to provide additional screening. With regard to other abutting residential properties, GRE believes that the existing landscaping would be sufficient to screen views of the proposed facility. If approved, Council staff suggests including the final landscaping plan in the D&M Plan.

Agriculture

The proposed site is enrolled in the Public Act 490 Program. However, the subject property is not currently in agricultural use. The solar field development area is not considered prime agricultural soil because it is not properly drained. The subject property is also not part of the farmland preservation program. DOAg did not comment on the project.

Decommissioning Plan

A Decommissioning Plan was included in the Petition and has provisions for project removal after an operational life of at least 30 years. Following the removal of the project-related equipment and access road base materials, imported soils would be used to fill in the access road areas, removed

equipment pad areas, fence post holes, etc. Once landform features and soils are restored, a seed mix would be applied to match the existing groundcover.

Conclusion

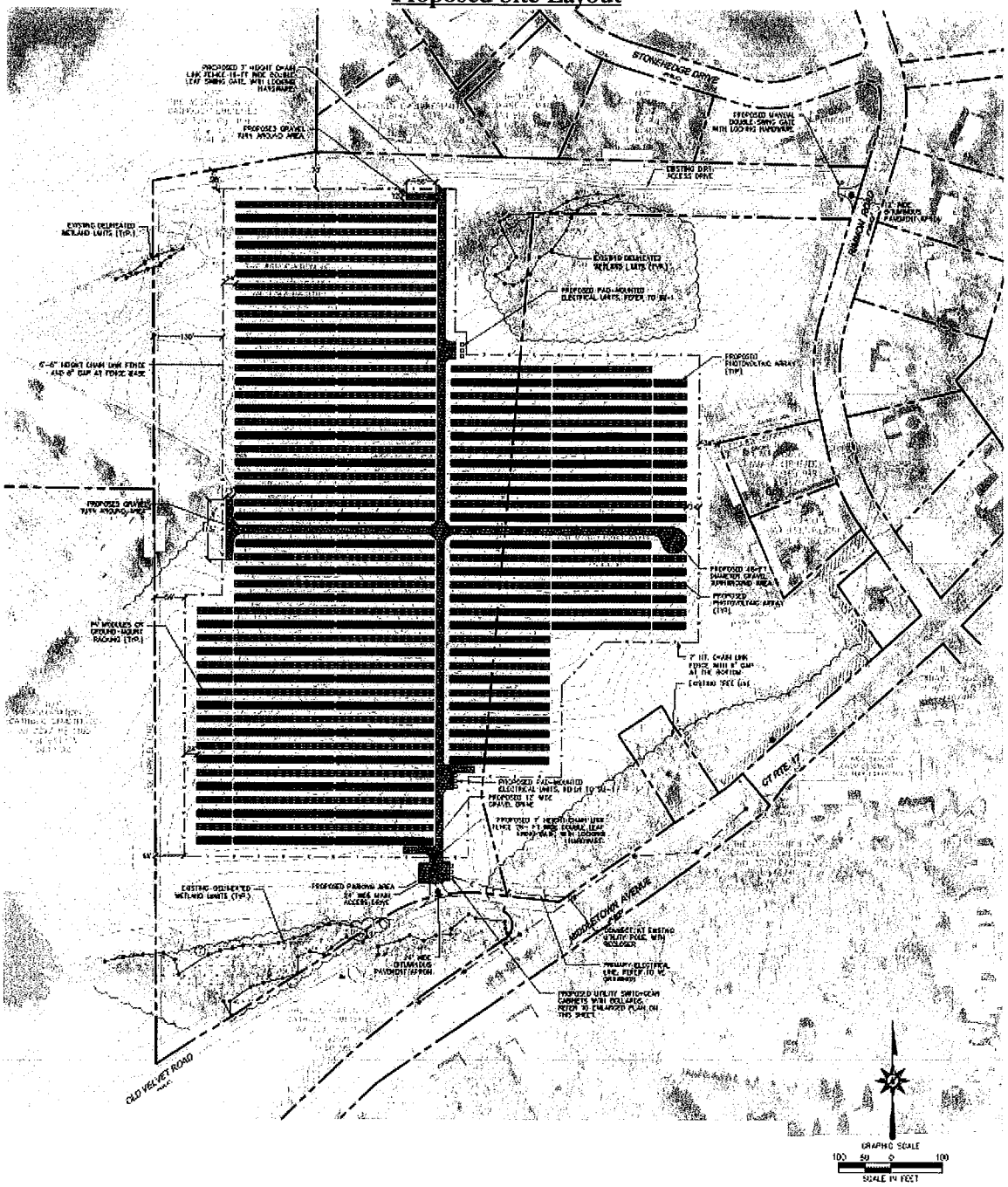
The project is a distributed energy resource with a capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize environmental impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources.

Recommendations

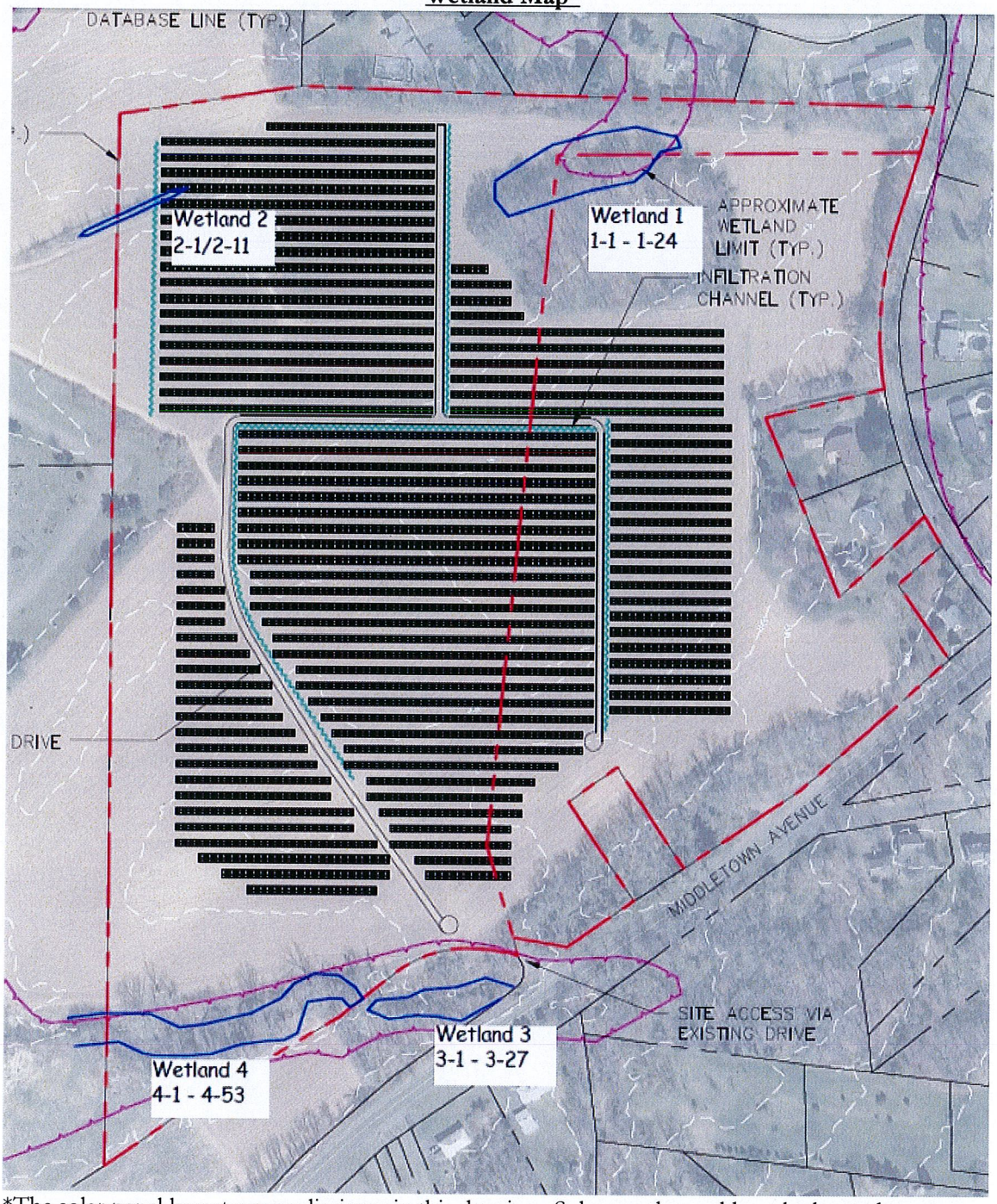
Staff recommends inclusion of the following conditions:

1. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of North Haven and North Branford for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) A final site plan including, but not limited to, final solar panel design, electrical interconnection, fencing and equipment pads;
    b) Final wetland and biological/vernal pool report with associated mitigation/protection measures;
    c) The final wildlife survey results and a conservation/protection plan in accordance with the DEEP NDDB Comments dated March 22, 2018;
    d) Final landscaping plan for screening abutting properties; and
    e) Final erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control.*

Proposed Site Layout



Wetland Map*



*The solar panel layout was preliminary in this drawing. Solar panels would not be located over Wetland 2. Please refer to Proposed Site Layout for the correct (and most up to date) panel layout.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

May 16, 2018

Robert Stein, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: 4.98 MW Solar Photovoltaic Electric Generation Facility
GRE GACRUX LLC
232 Rimmon Road and 700 Middletown Avenue, North Haven, CT
Petition No. 1342

Dear Chairman Stein:

The Department of Energy & Environmental Protection (DEEP) has reviewed the above referenced *Petition for Declaratory Ruling* that the installation and operation of a 4.98 megawatt AC ground-mounted solar photovoltaic electric generating facility will not have substantial adverse environmental effects and will not require a *Certificate of Environmental Compatibility and Public Need.* The following comments are offered for your consideration.

The Project was selected by the DEEP under the March 2016 Connecticut Request for Proposal (RFP) for Clean Energy. Connecticut solicited and selected renewable energy projects issued pursuant to Section 1(c) of Connecticut Public Act 15-107, *An Act Concerning Affordable and Reliable Energy* ("P.A. 15-107") and Sections 6 and 7 of Connecticut Public Act 13-303, *An Act Concerning Connecticut's Clean Energy Goals* ("P.A. 13-303"). The RFP process represents an important step forward in the implementation of Governor Malloy's vision for a cheaper, cleaner, and more reliable energy future for the ratepayers of Connecticut. Bringing more grid-scale renewable energy projects on line is instrumental in furthering this vision as these resources help diversify the regional fuel mix, assist the state in meeting its commitment to procure 20% of its electricity from Class I renewable sources by 2020, and also, contribute to the state's goal of reducing carbon emissions by 80% below 2001 levels by 2050.

Site Visit

A field review of the site was conducted on May 3, 2018 with representatives from DEEP, CT Siting Council, Greenskies, BL Company, Catholic Cemetery Association (landowner), and Pullman & Comley LLC. The site entrance is located on Old Velvet Road, off of Middletown Avenue. The property consists of two parcels totaling 42 acres and was formally agricultural land acquired by the Catholic Cemeteries Association in 1983. Approximately 24 acres will be utilized for the project. The topography consists of gently rolling slopes ranging from an elevation of 59 to 102 feet. Three wetland areas were identified: an isolated wetland pocket is located in a stand of trees in the north central section, a low lying wetland area at the southern end of the property

collects stormwater runoff, and another low lying isolated wetland is located in the northwest corner. Site observations indicated loose soil and several ruts and rills on the property, with spotty vegetation. In order to avoid further erosion and degradation of the site, all bare areas must be stabilized with grass cover upon the completion of the project. The grass cover will help to permeate stormwater runoff and reduce pollutants therefore decreasing volume and improving water quality of the runoff. Grading the access roads shall not change/affect the existing drainage patterns. DEEP will consider these recommended techniques as part of the construction stormwater permit review.

The proposed project appears to have negligible impacts to the environment and proximal area because minimal tree cutting is proposed, the site is located away from major roads and residential developments, and the primary wetland function is stormwater collection.

Construction Stormwater Management

Construction-related land disturbances of 0.5 acres or larger are regulated in Connecticut pursuant to the Connecticut Soil Erosion and Sediment Control Act under Sections 22a-325 to 22a-329, inclusive, of the Connecticut General Statutes (CGS). Construction-related land disturbances of one (1) acre or larger are also regulated under CGS Section 22a-430 and under Section 402(p) of the federal Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) program. Prior to the start of such regulated activities, authorization is required from local authorities and, for larger projects, DEEP. Construction projects involving five (5) or more acres of land disturbance require an individual NPDES discharge permit from the DEEP , or may be eligible to register for coverage under DEEP's NPDES General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit).
Based upon the problems that have been encountered in regards to large areas of land disturbance at solar farm construction projects, DEEP has provided a guidance document dated September 2017 (attached).

Natural Diversity Database

A preliminary Natural Diversity Database review dated March 22, 2018 revealed that there are known extant populations of the Eastern box turtle and ground beetle close to the boundaries of this property. Surveys are in the process of being conducted from April to June. Survey results and a final determination are pending.

Thank you for the opportunity to review this project. If there are any questions regarding these comments, please contact me at 860-424-3739 or Linda.Brunza@ct.gov if there are any questions.

Respectfully yours,

Linda Brunza
Environmental Analyst

Cc: Robert Klee, Commissioner

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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Stormwater Management at Solar Farm Construction Projects September 8, 2017

Solar farms are on-the-ground installations of arrays of photovoltaic cell panels, supporting structures and related equipment for the production of electricity. As with other types of construction projects, the construction of solar farms can involve land clearing, grading, excavation, trenching, dewatering and similar activities that create land disturbances which potentially result in soil erosion and sediment discharges polluting wetlands, streams and other surface waters. Construction-related land disturbances of 0.5 acres or larger are regulated in Connecticut pursuant to the Connecticut Soil Erosion and Sediment Control Act under Sections 22a-325 to 22a-329, inclusive, of the Connecticut General Statutes ("CGS"). Construction-related land disturbances of one (1) acre or larger are also regulated under CGS Section 22a-430 and under Section 402(p) of the federal Clean Water Act and the National Pollutant Discharge Elimination System ("NPDES") program. Prior to the start of such regulated activities, authorization is required from local authorities and, for larger projects, the Connecticut Department of Energy and Environmental Protection ("Department"). Construction projects involving five (5) or more acres of land disturbance require an individual NPDES discharge permit from the Department, or may be eligible to register for coverage under the Department's NPDES General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (general permit).

The Department has encountered repeated problems associated with solar farm construction projects covered under the general permit, from the registration process through construction activities. Although in no way an exhaustive list, the following are common problems associated with solar farm general permit registration applications and ways to address such problems:

- Applicants have been submitting registration applications that lack the requisite information or the requirements necessary for authorization under the general permit. The Department requires a complete and sufficient application when a registration application is filed, and may reject any registration application it deems to be incomplete or insufficient.
- Applicants are not adhering to the sixty (60) day/ninety (90) day time frame for Department review as required by Section 3(c) of the general permit. While the Department has on occasion shortened the review timeframe, Applicants are expected to allocate no less than the requisite time frame for the registration application review process and must plan accordingly.
- Registration applications for solar farm projects often fail to identify the project's contractor and sub-contractors. Section 5(b)(1)(viii) of the general permit mandates that this information be included in the registration application.

- Applicants have been repackaging the Siting Council submittal, which is not acceptable. Section 3(c)(2)(D) of the general permit mandates that the application submittal include only materials required to support the Stormwater Pollution Control Plan ("SWPCP"). This information must be up-to-date and accurate. Any superfluous information delays the registration application review process.
- SWPCPs for solar farm projects are often lacking sufficient detail and information. An approvable SWPCP shall include, but not be limited to, the location of all erosion, sediment and stormwater control measures including detailed design cut sheets with supporting calculations, construction means and methods, project phasing (i.e., site planning, pre-construction, construction, and post-construction stabilization, etc.), construction sequencing and a construction schedule.
- The Applicant's design professional must be well-versed in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control ("E&S Guidelines"), specifically the techniques found in Chapter 4, Large Construction Sites, the 2004 Connecticut Stormwater Quality Manual, as well as *current* best management practices (BMPs) recognized by the International Erosion Control Association (IECA), provided such BMPs are equal to or better than the E&S Guidelines.
- From the Department's perspective, an approvable SWPCP will include methods for avoiding compaction of soils, disconnection and reduction of runoff associated with solar panel arrays, avoidance of concentration of stormwater, and other measures necessary to maintain or improve pre-construction hydrologic conditions.
- Applicants need to follow the SWPCP review checklist when preparing the SWPCP, giving specific attention to post-construction stormwater controls and the development of a detailed long-term maintenance plan to ensure that the SWPCP meets the terms and conditions of the general permit.

Subsequent to authorization for coverage under the general permit, the Registrant is responsible for ensuring compliance with all terms and conditions of the general permit and the approved SWPCP once construction has been initiated. However, for solar farm projects, Registrants often fail to comply with the terms and conditions of the general permit, including the approved SWPCP. In particular, Department staff have observed the following issues that a routine inspection protocol and proper oversight, as required under the general permit, would have prevented, including but not limited to:

- pre-construction site planning and management deficiencies (e.g., existing vegetation, scheduling, training, phasing/sequencing, tree protection, etc.)
- ineffective placement, maintenance, and/or repair of administrative/procedural, vegetative, and structural BMPs (e.g., erosion, sediment and stormwater runoff controls, good housekeeping, materials management, and training)
- lack of thorough inspections
- ineffective or untimely corrective action
- ineffective stabilization practices
- ineffective permanent post-construction controls (i.e., store, treat and direct stormwater quality and quantity to pre-construction levels)

Such issues at solar farm construction projects raise concerns, since such projects often create areas of land disruption larger than the generally accepted BMPs of five (5) acres anticipated under the general permit. As a result, any applicant seeking coverage under the general permit

for a solar farm construction project should take care to address the issues noted above. While by no means exclusive, some recommendations that should be incorporated into a SWPCP to address these issues include:

- Ensuring that only a Professional Engineer and/or Landscape Architect, as defined in Section 2 of the general permit, who meets the qualifications described in Section 5(b)(4)(A)(ii) and who has been approved in writing by the Commissioner, serve as the Commissioner's agent to inspect the site and also serve as the qualified inspector for the purposes of Section 5(b)(4) of the general permit ("authorized professional"). Such authorized professional must remain in good standing with the Connecticut Department of Consumer Protection and be technically and ethically qualified to inspect the site and be retained for the duration of the construction project until the Notice of Termination acceptable to the Commissioner has been filed as described below.
- Ensuring that the authorized professional prepare a proposed inspection checklist to assure the construction project is being conducted in compliance with the terms and conditions of the general permit, and the approved SWPCP is implemented in accordance with the general permit. The inspection checklist shall comply with Section 5(b)(4)(B)(iii) of the general permit, and include a space for the authorized professional's signature and professional stamp.
- Ensuring that the credentials for the authorized professional proposed by the Applicant and the proposed inspection checklist prepared by such authorized professional be submitted for the review and approval of the Commissioner and be included with the registration application for the general permit. No other professional may serve as the authorized professional without the prior submittal of relevant credentials and inspection checklist for the Commissioner's review and written approval.
- Ensuring that the authorized professional personally perform all pre-construction, construction, and post-construction site inspections; perform inspections at the end of any storm event whether or not such storm generates a discharge; and prepare and submit all inspection reports including the supporting inspection checklists in compliance with Sections 5(b)(4)(A) and 5(b)(4)(B) of the general permit.
- Ensuring that the authorized professional report any violations of the terms and conditions of the general permit or the SWPCP to the Commissioner's designee within two (2) hours of becoming aware of such violation, or at the start of the next business day of becoming aware of such violation outside normal business hours and shall, within five (5) days, prepare and submit a signed and stamped written report, which documents the cause of the violation, duration including dates and times, and corrective action taken or planned to prevent future occurrences.
- Ensuring that if circumstances necessitate a revision to the SWPCP, the authorized professional works with the Permittee's design professional to ensure compliance with the terms and conditions of the general permit, and any such change to the SWPCP shall be submitted for the review and written approval of the Commissioner.
- Ensure that the authorized professional reviews all stormwater monitoring reports to evaluate the effectiveness of the SWPCP and to document any adverse impacts that any stormwater controls on the construction site or discharges from the construction site may have on wetlands, streams, any other receiving waterbodies. Such evaluation shall be documented in the inspection reports and inspection checklists performed pursuant to Section 5(b)(4) of the general permit.

- Ensuring that, in the event the authorized professional identifies a violation of the terms and conditions of the general permit, the SWPCP, or otherwise identifies adverse impacts on wetlands, streams or any other receiving waterbodies, that construction activity shall immediately cease and the site stabilized until such violation or adverse impacts have been corrected.
- Ensuring that reporting and record-keeping of all inspection checklists and inspection reports comply with the requirements of Section 5(d) of the general permit, except that a copy shall also be submitted electronically to the Department within ten (10) days from the date such inspection was performed.
- Ensuring that all inspection checklists and inspection reports comply with the requirements for Certification of Documents in Section 5(i) of the general permit, including the requirement that such checklists and reports shall also be prepared, stamped and signed by the authorized professional.
- After completion of a construction project, ensuring that a Notice of Termination is filed in compliance with Section 6 of the general permit, including the requirement that such Notice of Termination be stamped and signed by the authorized professional certifying that such authorized professional has personally inspected and verified that the site has been stabilized following the first full growing season (i.e., April through October) in the year following completion of the construction project.
- Ensuring that any transfer of the registration comply with the requirements of Section 5(m) of the general permit.

These recommendations are by no means intended to be exclusive. To help address the issues noted above, the Commissioner will also be considering the posting of a performance bond or other security, in accordance with Section 22a-6(a)(7) of the Connecticut General Statutes, to assure the solar farm construction project maintains compliance with the terms and conditions of the general permit and the SWPCP.