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CT DEEP Provides Additional Guidance on Stormwater Requirements for the Construction of Solar Projects

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Those who develop solar projects in Connecticut know that the siting and developing of these projects can be every bit as involved as the permitting of a fossil-fueled generation station. In addition to the ordinary permitting issues, solar projects in Connecticut have faced concerns over the development of farmland,[1] the incursion into core forests, and, most recently, stormwater runoff. The Connecticut Department of Energy and Environmental Protection (“DEEP”) governs stormwater associated with the construction of solar facilities (and other large construction projects) through its General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (“general permit”). While the general permit and the instructions for completing a general permit application are available online, DEEP is reevaluating how it considers permitting for solar facilities, and is looking to states such as Maryland and Minnesota for guidance. This reconsideration, however, is not yet publicly available.

The general permit is necessary for the construction of the majority of solar projects in Connecticut, given the amount of land disturbance involved in the construction of such projects. On paper, the process for obtaining the general permit appears relatively easy: satisfy the conditions as set forth therein and you have your permit. In practice, however, the process is more complicated. Permit applicants must not only adhere to the terms and conditions set forth in the general permit, but must also satisfy additional conditions from DEEP, which have been developed as a result of DEEP’s evaluation of solar projects over the last several years.

The general permit itself remains unchanged, and it is likely to remain that way, at least in the short term. The most likely course of events is for the general permit to be reauthorized in its current form for another year when it expires in

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September, 2019. After that, DEEP is expected to notice an appendix of changes which will relate to stormwater management for the construction of solar arrays, and take comments related to that appendix. In the meantime, DEEP will provide a copy of that appendix to would-be permit seekers, so that those applicants can know how their solar projects will be evaluated. Our attorneys have reviewed the appendix, and we have outlined its contents in the details below.

The DEEP's appendix to the general permit primarily relates to: (i) the design and construction requirements for solar arrays and, (ii) the design requirements for post-construction stormwater management measures for solar arrays. As such, those seeking to construct a solar project in Connecticut should familiarize themselves with these requirements before applying for the general permit.

Design and construction requirements for solar arrays

(1) For the purposes of calculating Water Quality Volume, the entire solar array will be considered effective impervious cover unless the following design conditions have been met:

(a) The vegetated area receiving runoff between rows of solar panels is equal to or greater than the average width of the row of solar panels draining to the vegetated area.

(b) Site conditions must be maintained such that the runoff remains as sheet flow across the entire site.

(c) For slopes greater than or equal to eight (8) percent, erosion control blankets or stump grindings or erosion control mix mulch or hydroseed with tackifier must be applied within 72 hours of final grading, or when a rainfall of 0.5 inches or greater is predicted within 24 hours, whichever time period is less.

(d) The solar panels are constructed in such a manner as to allow the growth of vegetation beneath and between the panels.

(e) A fifty (50) foot buffer, comprised of undisturbed existing vegetation or native shrub plantings, must be maintained between all parts of the solar array and any adjacent wetlands.

(2) The lowest vertical clearance of the solar panels above the ground should not be greater than ten (10) feet. That said, however, they must be at a height to promote vegetative growth beneath the panels. If the lowest vertical clearance of the solar panels above the ground is greater than ten (10) feet, control measures will be necessary to prevent/control erosion and scour along the drip line or otherwise provide energy dissipation.

(3) Prior to commencing any construction activity on the site, the registrant must include staff from the appropriate District in the pre-construction meeting pursuant to Section 3(b)(15) of the general permit.

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The date of such meeting and a report summarizing the meeting must be included in the registrant's Stormwater Pollution Control Plan ("SWPCP").

(4) The registrant must ensure that a qualified professional engineer will serve as the qualified inspector for the purposes of the "routine inspections" in Section 5(b)(4) of the general permit. Such qualified professional must be retained for the duration of the construction project. In addition, the registrant must include the credentials for the qualified professional and his or her proposed inspection checklist in the registration for the general permit.

(5) The applicant must not only ensure that the reporting and record-keeping of all inspection checklists and inspection reports complies with the requirements of Section 5(d) of the general permit, but must also submit an electronic copy of same to DEEP within three (3) days from the date such inspection was performed.

(6) The District must inspect the project site at the completion of each phase of construction to assess compliance with the general permit and the SWPCP, including the phasing and sequencing of the project. The permittee must notify the appropriate District when each phase of construction is complete. In addition, the District must inspect the site at least every six (6) weeks to ensure general permit and SWPCP compliance during construction. The District must also conduct the Post-Construction Inspection and Final Stabilization Inspection pursuant to Section 6(a) of the general permit.

(7) The registrant must ensure, after completion of a construction project, 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 a District representative certifying that such District representative has personally conducted a Post-Construction Inspection and Final Stabilization Inspection in accordance with Section 6(a) of the general permit.

(8) The registrant must secure a letter of credit to ensure that the solar farm construction project remains compliant with the terms and conditions of the general permit and the SWPCP. Such letter of credit must be for an amount sufficient to ensure that, upon the potential failure of the site to meet the construction and post-construction requirements of the general permit, DEEP would be able to remediate the site accordingly.

Design Requirements for Post-Construction Stormwater Management Measures for Solar Arrays

DEEP's appendix includes the following design requirements for post-construction stormwater management measures for solar arrays:

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(1) The orientation of panels must be considered with respect to drainage pattern (i.e. row parallel to flow direction results in higher runoff);

(2) Hydrologic analysis must evaluate 2, 25, 50 and 100-year storm pre-and post-construction stormwater flows;

(3) Site specific soil mapping must be conducted to confirm soil types for hydrologic analyses;

(4) Hydrologic analysis must be performed based on slope gradient, surveyed soil type, infiltration rate, length of slope, occurrence of bedrock, change in drainage patterns;

(5) The hydrologic analyses necessary to confirm the infiltrative capacity of any stormwater management measures must reflect a reduction of the Hydrologic Soil Group present on-site by one (1) step to account for the compaction of soils that results from extensive machinery traffic over the course of the construction of the array; and,

(6) Hydrologic analysis for the engineered stormwater management system must demonstrate no net increase in peak flows or cause adverse impacts to downstream properties.

For more information on this topic, please contact Lee Hoffman at 860-424-4315 (lhoffman@pullcom.com), Amanda Gurren at 860-424-4338 (agurren@pullcom.com), or your Pullman & Comley attorney contact.

[1] See “Tensions Grow as Solar Projects Supplant Farmland,” March 8, 2017, *The Wall Street Journal*, <https://www.wsj.com/articles/solar-energys-growth-sows-concerns-over-farmland-1488991708>.

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