



STATE OF CONNECTICUT

COUNCIL ON ENVIRONMENTAL QUALITY

March 25, 2021

Melanie Bachman, Executive Director Connecticut
Siting Council
Ten Franklin Square New
Britain, CT 06051

PETITION NO. 1443 - SR North Stonington, 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 9.9-megawatt AC solar photovoltaic electric generating facility on five parcels located north and south of Providence New London Turnpike (State Route 184), west of Boombridge Road and north of Interstate 95 in North Stonington, Connecticut, and associated electrical interconnection.

Dear Ms. Bachman:

The Council on Environmental Quality (“the Council”) supports the development of clean, renewable energy technologies on appropriate sites in Connecticut. The Council offers the following comments with regard to Petition 1443.

1. Wetlands and Vernal Pools

The Petitioner indicates that the proposed construction of the project will result in the direct impact to approximately 3,750 square feet of identified wetland soils and 20 linear feet of watercourse. To minimize impacts on wetlands, including a substantial wetlands crossing, the Council questions whether the northwest solar area (identified on Sheet PV 101) could be accessed off of State Route 184, west of the identified wetlands, as there appears to be an existing driveway that abuts the proposed site(s).

The Petitioner attempts to minimize the potential impacts the proposed project would have on the identified wetlands by proposing a 25-foot buffer, which in most instances is insufficient to the task. As detailed in a recent report, “larger buffers will be more effective over the long run because buffers can become saturated with sediments and nutrients, gradually reducing their effectiveness, and because it is much harder to maintain the long term integrity of small buffers.” In addition, “wetland buffers maintain or serve directly as habitat for aquatic and wetland-dependent species that rely on complementary upland habitat for critical stages of their life-history.”¹ Furthermore, the Town of North Stonington’s Inland Wetland and Watercourses Regulations, while not governing in this case, identifies both the “regulated area” and the “upland review area” as the land within 100 feet of any wetland or watercourse. Consequently, the Council recommends that the Petitioner utilize a minimum 100-foot buffer around all identified wetlands and assess the total area of direct and indirect impacts that would result from encroaching on the standard 100-foot buffer on the proposed site(s).

Keith Ainsworth
Acting Chair

Alicea Charamut

David Kalafa

Lee E. Dunbar

Alison Hilding

Kip Kolesinskas

Matthew Reiser

Charles Vidich

Peter Hearn
Executive Director

¹ Environmental Protection Agency, Planner’s Guide to Wetland Buffers for Local Governments, Environmental Law Institute, March 2008; https://www.epa.gov/sites/production/files/2014-03/documents/final_40.pdf

Vernal Pools

The Petitioner has identified eleven vernal pools within the proposed site(s); six are considered Tier I type vernal pools. For two of those Tier I vernal pools, the Petitioner indicates that 9-11% of the vernal pool envelope (VPE), which is the area within 100 feet of the delineated boundary of the vernal pool, would be impacted by the proposed project. This appears in contradiction to the Petitioner's statement that the "VPE is considered critical for vernal pool conservation as it is considered to be most protective against direct "physical" impacts of vernal pools, and are also the preferred habitat area for emerging metamorphs." Though the Petitioner asserts that construction of the proposed stormwater management basins (i.e., detention basins) would be "appropriately vegetated with native vegetation, including shrubs, so as to function as effective VPEs post-construction", the removal of vegetation adjacent to the vernal pools could have the unintended consequence of increasing the temperature of the water and eliminating a source of leaves, which constitute the base of the pool food web. Consequently, the Council recommends the following best development practices be employed:

- maintain an undeveloped forested habitat around the pool, including both canopy and understory;
- avoid barriers to amphibian dispersal (emigration, immigration);
- protect and maintain pool hydrology and water quality by maintaining a 100-foot "no- disturbance" buffer; and
- maintain a pesticide-free environment.²

The Petitioner also calculated the area of the critical terrestrial habitat (CTH), which is the area within 750 feet of the delineated boundary of the vernal pool, that would be impacted by the proposed project. The CTH, as the name implies, is critical for the survival of vernal pool obligate species because most adult vernal pool amphibians spend a very short time in breeding pools and the rest of their annual cycle is spent in adjacent uplands and wetlands. The Petitioner estimates that the CTH for all but one of the vernal pools would be impacted, with three of the Tier I vernal pools (VP1, VPE, and VPI) being significantly impacted. All of the identified pools currently have a CTH with 25 percent or less developed area; however, the amount of development within the CTH for VP1, VPE, and VPI, is proposed to increase to 43.3 percent, 35.6 percent, and 25.7 percent, respectively. Experts indicate that development pressures (buildings, impermeable surfaces, roads, lawns) on the CTH "higher than 25-30% cause declines in breeding populations" for vernal pool obligate species. Consequently, the Council recommends that there be no direct impact on the VPE for any of the vernal pools and that any development within the CTH for the identified Tier I type vernal pools be limited to no more than 25 percent of the CTH area.³

2. Wildlife

The Petitioner states that it is likely that the red bat utilizes the site during the roosting season, and the possibility exists that extends to the northern long eared bat (NLEB) and that "the Project will be restricted according with 4(d) rule requirements of the Endangered Species Act ("ESA")". The Council supports the Petitioner's intention to restrict tree clearing on the proposed site(s) during bat pup season (June 1 to July 31). The Petitioner also noted the presence of three State-listed species, including the ribbon snake (*Thamnophis s. sauritus*), the eastern box turtle (*Terrapene c. Carolina*), and the spotted turtle (*Clemmys guttata*). The Council recommends that the Petitioner develop a preservation and habitat expansion plan to protect these State-listed species during and after construction of the proposed facility, which should be approved by the Department of Energy and Environmental Protection (DEEP) Natural Diversity Database (NBBDD).

² Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.

³ Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States.

3. Vegetation

The Petitioner states in Exhibit M - Integrated Vegetation Management Plan (IVMP) that the proposed site(s) will use a combination of “biological control methods (Adaptive Multi-Paddock sheep grazing), mechanical, and chemical control measures as needed”. The Council recommends that the Petitioner provide a detailed grazing plan for the management of vegetation on the proposed site(s). The Council is also concerned about the use of certain chemicals for vegetative management since the proposed site(s) are underlain by a municipal “Aquifer Protection Zone”. According to the United States Geological Survey, which monitors water quality throughout the United States, “fertilizers and pesticides don't remain stationary on the landscape where they are applied; runoff and infiltration transport these contaminants into local streams, rivers, and groundwater.”⁴ Consequently, the Council recommends the use of organic herbicides, in accordance with integrated pest management (IPM) standards, to control vegetation while reducing runoff that might contaminate both surface water and groundwater and potentially impact non-targeted species.

4. Visibility

The Petitioner states that they performed a quantitative analysis of the proposed solar project; however, neither the Petition narrative nor Exhibit Y- Quantitative and Qualitative Visual Impacts indicates how many acres (quantity) within a predefined distance would be visually impacted by the proposed facility. In addition, Exhibit Y only includes two locations, which are proximate to one another, where a projected view (photo simulation) of the proposed facility was done. The Council recommends that the Petitioner enhance the qualitative analysis by providing the number of acres within one mile of the proposed facility that would have visibility of the proposed project, if the existing vegetation is removed as proposed. Further, the Council recommends that the Petitioner expand the number of locations of the qualitative analysis to possibly include more than two locations, such as nearby residences and any state or local highways in the area, provide a map depicting the locations of the qualitative analysis with photographic simulations of what the proposed facility would look like, and indicate whether the proposed project would be visible during leaf-on and leaf-off conditions. The Council also recommends that evergreen, deer-resistant vegetation be installed along the proposed fence line, as screening, in areas where the proposed facility is proximate to, and would be visible from, existing residences.

5. Core Forest

The Petitioner states that a contiguous forest block, which has an area of 13.5 acres, is not considered a core forest because it is less than 250 acres. While the Petitioner is correct that core forest is generally defined as “a contiguous block of forested land at least three-hundred feet (300’) from any forest edge”, the requirement that it be 250 acres or greater is incorrect. The 250-acre threshold is actually the upper limit of the definition of small core forest block, but a small core forest block area can be much smaller than 250 acres.⁵ Therefore, the proposed project would result in the destruction of over 13 acres of core forest. The Council does not support the destruction of core forest and recommends that the Petitioner revise the proposed project or evaluate other options for the development of a renewable energy facility on land that would have limited impacts on this important environmental resource.

6. Stormwater

The Petitioner states in the Stormwater Control Plan that during construction, areas exceeding eight vertical feet would be “stabilized with synthetic or vegetated mats in addition to seeding”. However, the Petitioner fails to identify the distance for the vertical drop and therefore the slope is unknown. There are also references to “dewatering wastewater” and “washdown areas” that could impact surface water

⁴ United States Geological Survey, Water Resources – Agricultural Contaminants; https://www.usgs.gov/mission-areas/water-resources/science/agricultural-contaminants?qt-science_center_objects=0#qt-science_center_objects

⁵ Forest Fragmentation Categories Defined, Center for Land Use Education and Research (CLEAR), University of Connecticut; <https://clear.uconn.edu/%5C/projects/landscape/v2/forestfrag/measuring/categories.htm#core>

quality. The Council recommends that the Petitioner not discharge any dewatering wastewater or create “washdown” wastewater within 100 feet of any wetland or watercourse and that the Petitioner provide more detail regarding the proposed site(s) characteristics and procedures for the proper placement of all erosion control features. The Petitioner states that a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) and Stormwater Pollution Control Plan was filed with DEEP on October 20, 2020, and is working to secure its General Permit by Spring 2021. The Council notes that the revised General Permit, which became effective on December 31, 2020, mandates the “best practices” for construction of solar energy facilities (Appendix I). Consequently, the Council recommends that the Petitioner adhere to all the provisions of the new General Permit, even if they were not included in its October filing.

Thank you for your consideration of these comments. Please do not hesitate to contact the Council if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Peter Hearn". The signature is written in a cursive style with a long horizontal line extending to the right.

Peter Hearn,
Executive Director