Warner River Local Advisory Committee
5 East Main Street, P.O. Box 265
Warner, New Hampshire 03278
danieljmorrissey@gmail.com

Via email: Michael.J.Schlosser@des.nh.gov

December 9, 2024

8(a)

Mr. Michael Schlosser
Alteration of Terrain Bureau
DEPARTMENT OF ENVIRONMENTAL SERVICES
29 Hazen Drive, P.O. Box 0095
Concord, New Hampshire 03302-0095

RE: Review Comments
Alteration of Terrain Permit Application #241030-201
Poverty Plains Solar Array
Warner, New Hampshire

Dear Mr. Schlosser:

Warner River Local Advisory Committee has reviewed the Alteration of Terrain Permit (AOT) Application (DES# 241030-201) submitted by VHB (of Bedford, New Hampshire) for the proposed Poverty Plains Solar Array (Poverty Plains Road, Warner, New Hampshire), on behalf of applicant Encore Renewable Energy (Burlington, Vermont). The review involved examination of materials provided by VHB in support of the AOT permit; FEMA flood mapping; U.S. Geological Survey aquifer mapping; and a field trip to view the site of the proposed project.

Since the southern part of the proposed solar array project falls within the Warner River Designated River Corridor and, because the project requires an AOT Permit from the NHDES, the applicant and the DES, notified WRLAC. The WRLAC respectfully provides the following comments:

1) The proposed array is located atop a "Significant Sand and Gravel Aquifer" as mapped by the U.S. Geological Survey. More specifically, the array is very close to the most productive part of the aquifer along the Warner River where thickness and permeability, and therefore aquifer yield, are greatest. (Geohydrology and Water Quality of Stratified-Drift Aquifers in the Contoocook River Basin, South-Central New Hampshire: U.S. Geological Survey Water Resources Investigation Report 92-4154)

2) The proposed project area falls entirely within the Town of Warner Ground Water Protection Overlay District, which is based on the above-mentioned U.S. Geological Survey mapping. (https://warnernh.gov/tow/downloads/gpc/Facts.pdf) Therefore the applicant should ensure that the proposed activity is permitted under the Aquifer Protection Ordinance.

3) The site is also within, or close to, flood zone areas mapped by the Flood Emergency Management Agency (FEMA). A large part of the proposed project area is within a Zone A flood zone area and the southern part of the site is close to a Zone AE area. Zone A areas have a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for Zone A areas; no depths or base flood elevations are shown within these zones. Zone AE areas are determined with detailed methods and provide base flood elevations.
https://jobs.utah.gov/housing/environmentalreview/docs/femafloodzone.pdf

4) It appears that the Zone A area, which is mapped in the central area of the proposed array, is associated with the Bog Brook drainage north of the site. Because "approximate methods" were used to delineate the Zone A area, and because so much of the proposed project falls within the Zone A area, more analysis should be performed by the applicant to ensure that flooding will not pose problems. Flooding at this location could also be exacerbated by high groundwater levels.

5) The array is to be set atop an abandoned, partially restored gravel pit. The soils are coarse grained, and therefore permeable. Because of this, surface runoff from the site should be minimal and most of the rainfall and snow melt from the site will likely infiltrate the soil and travel directly to underlying ground water.

6) Since 1965 the USGS has operated a monitoring well (Station NH-WCW 1) near the site, between the southern edge of the gravel pit and I-89. Examination of historical groundwater levels at this location shows that the seasonal variation can be as much as 6 feet or more. https://waterdata.usgs.gov/monitoring-location/431540071452801/#dataTypeId=continuous-72019-0&period=P365D&showMedian=true

7) Several borings completed at the site in September 2024 during the seasonal low show that groundwater levels were approximately 10 feet below land surface. Because no permanent monitoring walls were installed in these borings the exact depth to groundwater at these locations is unknown. Given the information from the USGS long term monitoring well, and the approximate levels obtained during the site investigation performed by VHB, groundwater levels at the site could be close to land surface during seasonal high water, especially in the low-lying area near the proposed infiltration basin.

8) The applicant should construct permanent groundwater observation wells on and around the site to monitor groundwater. The purposes of the monitoring network would be to understand the depth to groundwater (especially during seasonal highs), directions of groundwater flow, groundwater quality, and the potential for groundwater levels to be very close, or at land surface, during seasonal highs. The proposed solar panel support structure calls for "embedded screw supports" which could, depending upon their final depth, reach the underlying water table.

9) Hazardous waste testing on solar panels in the marketplace has indicated that different varieties of solar panels have different metals present in the semiconductor and solder. Some of these metals, like lead and cadmium, are harmful to human health and the environment at high levels. If these metals are present in high enough quantities in the solar panels, solar panel waste could be a hazardous waste. Some solar panels are considered hazardous waste, and some are not, even within the same model and manufacturer. https://www.epa.gov/hw/end-life-solar-panels-regulations-andmanagement Any chemicals released to the environment from the project area during construction, operation, or decommissioning would most likely travel to the underlying aquifer that is connected to the Warner River.

10) The applicant is encouraged to use BMP's during construction activities (silt fencing, runoff controls, etc). Drainage from access roads along the perimeter of the array should be prevented from entering adjacent wetland areas.

11) The applicant is also encouraged to consult with DES biologists regarding any site critical habitat issues for flora or fauna, especially related to the nearby wetlands

By this letter, we are expressing our concerns about the potential that the proposed development could have on groundwater quality adjacent to the Warner River.

WRLAC recommends that DES accept this application subject to the recommendations described above in this letter.

Thank you for your attention to this matter. Please contact me if you have questions or require additional information.

Very truly yours,
WARNER RIVER LOCAL ADVISORY COMMITTEE

Daniel J. Morrissey
Chair

cc. Warner Conservation Commission
Warner Planning Board

Chapter 4. Housing

4.1 Introduction

This chapter recognizes that a mix of different housing types that are available to families and individuals of all income levels is vital for making Warner a diverse, vibrant, and healthy community. Availability and affordability are integral to maintaining housing and community stability, and h~~aving housing available~~ supports local businesses by allowing their employees to live close to where they work.

~~Housing is an important aspect of infrastructure in any town, just like streets, a sewer system, a library, or a town hall. Not only are the type, size, and location of housing important, but also the availability and cost of that housing.~~

Since the town's previous 2011 Master Plan, housing vacancy rates throughout New Hampshire have decreased while prices have increased. In early 2024, the median purchase price for homes in Warner rose to $420,000. Vacancy rates for all rental units was .7%, and the Merrimack County median monthly gross rent for a two-bedroom unit was $1,500. The lack of housing stock and rising prices make it difficult to find an affordable place to live, or even to afford and maintain ones existing housing.

~~Individuals of different ages with different family sizes and income levels have different needs when it comes to housing. Availability and affordability are integral to maintaining housing and community stability, and having housing available supports local businesses by allowing their employees to live close to where they work. Further, housing development, and the distribution of housing, affects where people decide to center their lives in relation to their workplaces and community. As such, this chapter recognizes that a mix of different housing types that are available to families and individuals of all income levels is vital for making Warner a diverse, vibrant, and healthy community.~~

~~Likewise, a majority of~~ Warner residents continue to emphasize the value of "rural character" as a large part of "what makes Warner, Warner," or what makes Warner a desirable community different from a city or suburban area. Often, rural character involves what buildings look like, where they're located, and the scale of development. This rural character is essential to Warner's existing infrastructure, community, and the wishes of its residents. However, rather than seeing rural character as competing or mutually exclusive to a community with a healthy mix of housing ~~that residents~~

~~can afford, this chapter also recognizes that~~ the Town can encourage the development of housing in a way that maintains the character of the existing community.

This chapter will shed light on what type of housing already exists in Warner, what housing-related challenges residents are facing, what it means to be a "rural" community, a review of the town's current zoning framework with regard to housing, and recommendations for how the Town can create a healthy mix of housing stock moving forward.