

EXHIBIT G

Environmental Assessment



Environmental Assessment

Proposed Solar Photovoltaic Array 958 Route 163 Montville, Connecticut

Prepared For
Tritec Americas, LLC
888 Prospect Street, Suite 200
La Jolla, California 92037

October 13, 2023



501 Main Street, Suite 2A
Monroe, CT 06468
Office: (203) 880-5455

11 Vanderbilt Avenue, Suite 240
Norwood, MA 02062
Office: (781) 352-8491

www.SolliEngineering.com

TABLE OF CONTENTS

1.0 INTRODUCTION 2

2.0 PROJECT DESCRIPTION..... 2

 2.1 EXISTING SITE CONDITIONS 2

 2.2 PROPOSED DEVELOPMENT..... 2

3.0 ENVIRONMENTAL CONDITIONS..... 5

 3.1 AIR QUALITY 5

 3.2 WATER RESOURCES 5

 3.3 WATER QUALITY..... 6

 3.4 HABITAT & WILDLIFE 8

 3.5 RARE SPECIES 9

 3.6 SOILS & GEOLOGY 11

 3.7 HISTORIC & ARCHAEOLOGICAL RESOURCES 11

 3.8 SCENIC AND RECREATIONAL AREAS 12

 3.9 LIGHTING 12

 3.10 FAA DETERMINATION..... 13

 3.11 VISIBILITY..... 13

 3.12 NOISE..... 13

4.0 CONCLUSION..... 13

LIST OF TABLES & CALCULATIONS

Table 1: Proposed Development Limits Table 3

Table 2: Wetlands Impacts Table..... 6

Table 3: Habitat Area Table..... 9

APPENDICES

- Appendix A: Figures
- Appendix B: Site Plans
- Appendix C: Ecological Resources
- Appendix D: Cultural Resources
- Appendix E: Product Information Sheets
- Appendix F: FAA Determinations

1.0 INTRODUCTION

Solli Engineering (Solli) has prepared this Environmental Assessment (EA) on behalf of Tritec Americas, LLC, (Petitioner) as an exhibit to the Connecticut Siting Council for a Petition for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need is not required for the construction, maintenance, and operation of a 0.99 megawatt (MW) alternating current (AC) ground-mounted solar photovoltaic array (Project/Facility) to be located at 958 Route 163 in Montville, Connecticut (Site).

2.0 PROJECT DESCRIPTION

2.1 EXISTING SITE CONDITIONS

The Project area is comprised of a 7.1± acre portion of the 30.66± acre Site. The Site is bound by residential land to the north, Route 163 to the east, undeveloped woodland to the south and mixed uses to the west consisting of agricultural land, woodlands, and residences. The project area is located within a Residential Zone (R120). The Site is currently undeveloped and was previously utilized as an agricultural field. The centrally located field is bound by wooded areas along its perimeter. Based on information gathered from the Town of Montville GIS, it is assumed that the neighboring residential properties are serviced by private water wells.

Elevations on-site range from approximately 376 feet at the southeast corner of the project area to approximately 524 feet at the northwest corner of the project area. Slopes range from 2%± in the northwest corner of the Project area to 10%± in the southeast corner of the Project area.

The Site contains inland wetlands soils in the southern and northwestern portions of the property. The Facility is proposed to be located outside of these existing wetland areas. Please refer to Section 3.2 for more details regarding existing water resources.

2.2 PROPOSED DEVELOPMENT

The proposed Solar Photovoltaic Array will consist of 2,590 TrinaSolar TSM-DEG19C20 540W modules, eight (8) Sungrow SG125HV 125kW inverters, AC panel boards and/or switchgear, one (1) 2,000 kVA transformer, and one (1) service interconnection line. The panels will be secured to a ground-mounted steel racking structure utilizing a single-axis tracking system, which allows the panels to rotate from east to west for more efficient capture of sunlight. The steel racking structure will be anchored to the ground using pile driven posts. The array of panels and the equipment will be surrounded by a 7-ft tall chain link security fence. Access to the Project will be from Route 163 via a 14-ft wide, 630± long gravel road. The road will extend to west to provide access to the proposed equipment, and will generate minimal traffic, for the primary use of operation and maintenance of the photovoltaic array. The proposed utility interconnection service poles by Eversource will be located in the southeast corner of the Site.

2.2.1 PUBLIC HEALTH AND SAFETY

The Project has been designed to meet all applicable local, state, national and industrial health and safety standards related to electric power generation. The Facility will not consume any raw materials, will not produce any by-products, and will be unstaffed under normal operating conditions. No chemicals will be used during the operation of the facility.

A 7-ft tall chain link fence surrounding the development is required per the Best Management Practices for Electric and Magnetic Fields and National Electric Code. This fence would mitigate potential electric hazards. The proposed project equipment has internal fail-safes to further mitigate the risk of electrical fires. A 26-ft wide gate is proposed at the entrance to the Project and will limit access to authorized personnel only. Town emergency response personnel will have access to the Project via a Knox padlock. The photovoltaic array will have the ability to be de-energized remotely in case of an emergency.

2.2.2 LAND USE PLAN

The solar photovoltaic array has been designed in accordance with state and federal policies and will support the State of Connecticut's energy goals by constructing a renewable energy resource with no substantial adverse environmental impact. The solar photovoltaic array will comply with the current Connecticut State Building Code and National Electric Code.

Although the Town of Montville currently does not have any land use requirements related to solar photovoltaic arrays, the Project was designed to meet the Town's land use regulations to the maximum extent practicable.

Per the *Connecticut Department of Energy & Environmental Protection (CT DEEP) Appendix I, Stormwater Management at Solar Array Construction Projects* (Appendix I), the solar array has been designed to maintain a 100-ft buffer between all solar panels and any wetland or watercourse as well as a 50-ft buffer from any property line located downgradient of the panels. Tree lines will be maintained to the best extent practicable, and additional evergreen trees will be planted to provide a visual buffer to adjoining properties.

The distance, direction, and address of the nearest property line and nearest off-site residence from the proposed 7' chain link fence, transformer pad, and access drive is shown in Table 1.

Table 1: Proposed Development Limits Table

	Distance (ft)	Direction	Address/Town
Perimeter Fence to Property Line	43'	North	968 Route 163
Perimeter Fence to Residence	254'	North	968 Route 163
Transformer Pad to Property Line	346'	East	Route 63
Transformer Pad to Residence	447'	South	924 Route 163
Access Drive to Property Line	50'	East	Route 163
Access Drive to Residence	233'	South	924 Route 163
Project Area to Nearest Town Line	10,000+'	North	Bozrah

Equipment

TrinaSolar TSM-DEG19C20 540W modules are solar panels consisting of a glass-cover, aluminum pane, and sealed back sheet, preventing rainwater from penetrating the panels and leaching out chemicals or substances. These solar panels have a width of 7.8 feet, a minimum height of 3 feet above grade, and a maximum height of 6 feet above grade when panels are at full tilt. The manufacturer of the solar panels, Trina Solar Co., Ltd., has conducted Toxicity Characteristic Leaching Procedure (TCLP) testing of the proposed solar panels. The solar panels are not classified as hazardous waste. For more information refer to the TCLP test results attached in Appendix E, Product Data Sheets.

Medium voltage switchgear and the 2,000 kVa transformer is proposed to be installed on the concrete pad that abuts the proposed access driveway. The proposed transformer will contain mineral oil which is not a danger to the environment. The transformer is standard and used industry-wide, including by electrical

distribution companies such as Eversource. Final dimensions of the switchgear and transformer will be available when equipment is ordered.

Three (3) utility poles are proposed to be located directly adjacent to the concrete pad to provide interconnection to an existing utility pole on Route 163. The standard height for utility poles is between 35 and 40 feet. The poles will be mounted with Eversource owned and operated equipment. All necessary offsite improvements to facilitate the interconnection will be completed by Eversource. Eversource Energy does not pad-mount their equipment; therefore, pole-mounted equipment is necessary to complete the project.

The Petitioner believes that this Project will benefit the local community by improving electrical service for existing and future development with the availability of a local, renewable energy source.

2.2.3 STORMWATER MANAGEMENT PLAN

The Project has been designed in accordance with the *2024 Connecticut Stormwater Quality Manual*; the *Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* (General Permit), effective December 31, 2020; and the *Connecticut Department of Energy & Environmental Protection (CT DEEP) Appendix I, Stormwater Management at Solar Array Construction Projects* (Appendix I). The design addresses three primary concerns: the management of peak stormwater flows, water quality volume treatment and soil and sedimentation controls (SESC) throughout the construction period.

To safeguard water resources from potential impacts during construction, the Petitioner is committed to implementing protective measures in the form of a Stormwater Pollution Control Plan (SWPCP), subject to review and approval by the CT DEEP Stormwater Management team. The SWPCP will include monitoring of established SESC measures that are to be installed and maintained in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Appendix I. Please refer to Section 3.3.3 for more information regarding stormwater management.

The phased soil and erosion control plans and details are provided in Appendix B. To meet the requirements of the General Permit, silt fencing with compost filter socks will be installed during construction activities. Perimeter SESC measures will encircle the Project area to trap sediment mobilized during construction activities. These measures will be cleaned of deposited sediment as needed during construction to maintain sufficient sediment storage capacity.

As indicated in the Stormwater Management Report, pre-development drainage patterns are proposed to be maintained, to the greatest extent possible, to maintain and/or reduce peak post-development flows to off-site areas. The proposed design results in the management/reduction of post-development peak runoff rates from existing conditions for the 2-, 25-, 50- and 100-year storm events. Water quality treatment will be handled within the proposed stormwater management basin, sediment forebay, and via the seed mix proposed across the Project area which will promote a meadow-type ground cover that encourages infiltration.

With the incorporation of the protective measures outlined above, the Project is not anticipated to result in an adverse impact to water quality associated with nearby surface water bodies or downstream properties.

2.2.4 LANDSCAPE PLAN

Vegetation buffers are proposed to shield the Facility from neighboring properties. Planting materials, consisting of a mix of evergreen species, will provide year-round screening on the northern and northeastern sides of the Project area. Existing wetlands and tree lines provide buffers on the eastern, western, and southern sides of the Project.

Seed mixes for the proposed solar photovoltaic array include ERNMX-147 for final stabilization within the solar array, ERNMX-610 for areas outside of the fence line and in non-array areas, and New England Erosion Control/Restoration No Mow Mix for the stormwater basin. For more information refer to the seed mix notes in Sheet 2.11 of Appendix B.

3.0 ENVIRONMENTAL CONDITIONS

This section provides a summary of the existing environmental conditions in and around the Site, as well as the potential impacts on the environment from the proposed photovoltaic array development. The results discussed in this section demonstrate that the development complies with CT DEEP air and water quality standards and will have no adverse effect on the existing environment and ecology.

3.1 AIR QUALITY

The nature of solar energy generating facilities results in a condition where no air emissions are generated during the operations of the facility. Therefore, this development will have no adverse effect on air quality and will not require a permit.

During construction, temporary mobile source emissions may occur due to the presence of construction vehicles and equipment. Any of these potential air emissions that occur during the construction of the solar photovoltaic array can be considered de minimis. These emissions will be mitigated using measures such as limited idling times of equipment, regular maintenance of all vehicles and equipment, and watering/spraying of vehicles and equipment to minimize dust and particulate releases. Additionally, all on-site and off-road equipment will meet the latest standards for diesel emissions as prescribed by the United States Environmental Protection Agency.

3.2 WATER RESOURCES

No inland wetlands and watercourses are located within 100 feet of the solar panel area. However, two wetland and watercourse areas are present approximately 345 feet west and 53 feet south of the development area. They were identified and delineated by James M. McManus from JMM Wetland Consulting Services, LLC. on January 26, 2023.

3.2.1 WETLANDS AND WATERCOURSES

Wetland South of Project Site

A wetland system is located southeast of the project site, approximately 53 feet south of the project area. The wetland is a broadleaf deciduous woodland wetland. The wetland drains to the wetland and watercourse, Amoeba Pond, on the eastern side of Oakdale Road. The principal source of hydrology for this wetland system is groundwater discharge. The project area, the Cropland/Field Crops habitat, is on a hilltop, with steeply sloping areas abutting to the south and west. As such groundwater seeps to the south to this wetland, and to the west to the other wetlands. Soils within the wetland consist of poorly to very poorly drained sandy loams formed from glacial till deposits. The hydrogeomorphic classification of this wetland and watercourse system is “Gently Sloping” and the USFWS National Wetlands Inventory (NWI) classification for this system is Palustrine, Forested, Broad-Leaved Deciduous (PFO1).

Wetland and Watercourse Northwest of Project Site

A wetland system is located in the northwest of the project site, approximately 345 feet west of the project area. The wetland is a broadleaf deciduous woodland wetland. The watercourse associated with the wetland extends and flows north to south and eventually drains into Schofield Pond approximately 1,600 feet southwest of the project area. The principal source of hydrology for this wetland system is groundwater discharge. Soils within this wetland consist of poorly to very poorly drained sandy loams formed in glacial

till deposits. The hydrogeomorphic classification of this wetland and watercourse system is “Gently Sloping” and the USFWS NWI classification for this system is Palustrine, Forested, Broad-Leaved Deciduous (PFO1).

3.2.2 WETLAND IMPACTS

Land development has the potential to cause direct and indirect impacts to inland wetlands and watercourses in the short- and long-term from activities such as vegetation clearing, soil filling, soil excavation and/or pollution of stormwater. The proposed project will not adversely impact any wetland or watercourse in the short and long-term. The solar panels are more than 100 feet from wetlands and watercourses and various best management practices (BMPs) such as soil erosion and sediment control measures and stormwater management measures will be used (further discussed in Section 3.4.3).

Table 2: Wetlands Impacts Table

Wetlands Impacts	
Direct Impacts to Wetland 1	0 Acres
Direct Impacts to Wetland 2	0 Acres
Direct Impacts to Upland Review Area of Wetland 1	0.10 Acres
Direct Impacts to Upland Review Area of Wetland 2	0 Acres

3.2.4 FLOODPLAIN AREAS

The most recent available mapping from the Federal Emergency Management Agency (FEMA) was reviewed regarding the presence of floodplain or flood prone areas onsite. According to the FEMA Flood Map Service Center (MSC), flood map number *09011C0331G*, effective on 7/18/2011, the project site falls within “Zone X” as defined by FEMA. Zone X is defined as “are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood”. This indicates that the project site is not within a flood zone and requires no special considerations relative to flooding for its implementation. For more information regarding the FEMA Floodplain Boundaries refer to Figure 3, FEMA Flood Map.

3.3 WATER QUALITY

The proposed solar array facility will have no potable water uses or sanitary discharges due to the unmanned nature of the facility. The proposed development will result in a de minimis increase in impervious cover at the project site. Regardless, the development includes a stormwater management plan to control stormwater.

3.3.1 GROUNDWATER

The CT DEEP *Water Quality Classifications Montville, CT* map, dated October 2018, was reviewed to assess the quality of ground and surface water at the project site. The map classifies that the project site falls within an area classified with ‘GA’ groundwater quality. ‘GA’ is defined as “existing private and potential public or private supplies of water suitable for drinking without treatment and baseflow for hydraulically connected surface water bodies.” For more information regarding the water classifications refer to Figure 4, Water Quality Classification Map.

According to the CT DEEP Public Water Supply Map, the project site does not fall within an aquifer protection area. The nearest aquifer protection area is approximately six miles to the southeast of the project area. However, the property in which the project area is situated is labeled as a private well parcel, yet, the nature of the project as a solar farm dictates that no potable water uses are required.

Based on the project design, type, and use and proposed stormwater management measures, it is concluded that the project will have no adverse environmental impact on groundwater quality. Information regarding stormwater management BMPs is provided in Section 3.3.3.

3.3.2 SURFACE WATER

The project area is situated within the Local Drainage Basin (3004-00) and the Oxoboxo Brook Subregional Drainage Basin (3004). These drainage basins are part of the larger Thames River Main Stem Regional Drainage Basin (30) and Thames River Major Drainage Basin (3). The unnamed watercourse, which is more than 150 feet from the project area, extends and flows north to south toward Schofield Pond, approximately 1,600 feet southwest of the project area. It is characterized by the CT DEEP as a first order stream with ‘Class 1 Stream Flow’, which means that it is a free-flowing stream. The water quality of the offsite watercourse is listed as ‘Class A’ surface water quality. Class A surface water quality is defined as “Class A designated uses are habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture”.

According to the CT DEEP Public Water Supply Map, the project area does not fall within a drinking water watershed. The nearest drinking water watershed is approximately 1,800 feet to the north of the project area. The offsite Amoeba Pond to the east likely serves as habitat for fish and other aquatic wildlife and flora and fauna. The offsite watercourses do not sustain a trout population according to the CT DEEP Connecticut Trout Stocking Map, however, approximately one mile to the west of the site, a segment of the Oxoboxo Brook from Oxoboxo Lake to Paris Pond, is apparently stocked with trout. This site is upstream from the project area, and therefore, no impacts to trout populations will occur. The offsite watercourse is also not a cold-water habitat according to the CT DEEP Cold Water Habitat Map; however, the nearby McAlpine Brook, approximately 2,500 feet to the west of the project area, which also feeds into Schofield Pond, is a cold-water stream, and its associated drainage basin is a cold-water basin. This stream is upstream from the project site, and its associated drainage basin is different from that of the drainage basin the project site is situated within, and as such, no impacts to cold water habitats from the project will occur. Based on the project design, type, and use and proposed stormwater management measures, it is concluded that the project will have no direct adverse environmental impact on surface water quality. Information regarding stormwater management BMPs is provided in Section 3.3.3. For more information, please refer to Figure 5, Public Supply Watershed Map.

3.3.3 STORMWATER MANAGEMENT

In the short-term, wetlands can be indirectly impacted from sediment laden stormwater from the proposed construction activities. All proposed development activities are located more than 150 feet from inland wetlands and watercourses. As such, no proposed site work is located within the 100-foot upland review area for wetlands. The project proposes the installation of soil erosion and sedimentation controls before construction and the maintenance of these controls throughout construction to prevent adverse indirect impacts to inland wetlands and watercourses from soil erosion and sedimentation. These controls are designed to comply with standards set by the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* published by the CT DEP (the predecessor to the CT DEEP) to manage the land disturbance from the development and protect surface water features. Such controls include but are not limited to temporary silt fencing and construction surrounding the perimeter of the development area, an anti-tracking pad at the construction entrance, and silt sacks within catch basins along Oakdale Road. Silt fencing is proposed around the perimeter of the development area to prevent sediment from migrating downslope to inland wetlands and watercourses. Following construction, a permanent chain-link fence is proposed to be erected to restrict access to the site. The anti-tracking pad is proposed to prevent sediment from being tracked into the street. The silt sacks are proposed to prevent sediment that does manage to leave the project site from impacting the adjacent storm sewer along Oakdale Road with sediment laden water. These control measures have been provided to maximize protection to wetlands and watercourses and the monitoring and maintenance of all control measures are required to ensure efficacy throughout all phases of construction.

In the long-term, and if not properly mitigated, wetlands and watercourses can be indirectly adversely impacted by stormwater runoff that flows from buildings, pavement, and vegetated surfaces. The proposed

project will not cause post-construction long-term adverse impacts from stormwater runoff due to the proposed stormwater management plan, which will mitigate for changes to stormwater runoff resulting from a proposed increase in impervious cover. A stormwater basin is proposed in the southern portion of the project site. The stormwater basin has been designed to provide adequate storage of the water quality volume generated from impervious surfaces. The basin will allow captured stormwater to settle and gradually infiltrate into the surrounding soils. The basin will also allow for pollutants to be removed when the stormwater flows through the basin vegetation, stems, leaves, and roots. Should the basin reach capacity, a proposed emergency spillway outlet will allow stormwater runoff flows to dissipate throughout the surrounding landscape in a manner that mirrors existing conditions. Based on soil testing performed on-site, a 3 inch/hour infiltration rate was used for the purposes of this analysis. The implementation and maintenance of this BMP will protect stormwater quality and will ensure that post-construction peak discharge rates of stormwater runoff from the project site will be less than predevelopment rates for the 2-year, 25-year, 50-year and 100-year storm events.

3.4 HABITAT & WILDLIFE

The surrounding lands are predominately maintained as forest and farm agricultural field. Low-density single-family residential properties are intermixed. The project area includes the area proposed to be developed for the solar farm as well as other land at 958 Oakdale Road that is within 150 feet of the proposed development. The project area is shown on the attached *Ecological Communities Map*. Existing improvements on the property include a single-family dwelling, detached garage, and asphalt driveway, all located in the eastern portion of the site along Oakdale Road; these existing features will not be located within the proposed project area. Three habitat types are present within the project area. They include Cropland/Field Crops and Broadleaf Deciduous Forest habitats. These habitat types are further discussed in Sections 3.4.1. Wildlife species that can use the project site are common species to the area. These species are further discussed in Section 3.4.3 and the acreage of proposed habitat alteration is provided in Table 2.

3.4.1 HABITAT TYPES

Residential Yard

A portion of the project site consists of a Residential Yard habitat in which existing improvements, specifically the single-family dwelling, detached garage, and asphalt driveway are all located within. Vegetation within this habitat includes eastern red cedar, eastern white pine, Japanese maple and several species of oak trees as well as manicured lawn. No disturbances or development activities are proposed within this habitat.

Cropland/Field Crops

The majority of the project area is an upland cropland. The cropland is being used to cultivate hay. At the time of investigation, only a portion of the hayfield had been mown. The hayfield includes grasses such as rye grass, timothy grass, tall fescue, reed canary grass, broomsedge bluegrass, and forbs such as red and white clover, buttercup, flowering bluet, milkweed, dogbane, fleabane, spurge, whorled coreopsis, hedge bedstraw and poison ivy. Along the eastern edge of this habitat, along Oakdale Road, native eastern red cedar and chokecherry saplings are present as well as invasive multiflora rose and autumn olive shrubs. Oriental bittersweet vines are thick within this area along Oakdale Road and is smothering other vegetation. Soils within this portion of the project area are primarily well drained to moderately well drained sandy loams formed in lodgement and ablation glacial till. To make way for the proposed solar array, this habitat will be replaced with a native meadow habitat following construction. The only portion of this habitat that will be eliminated and not replaced is the area of the proposed gravel access drive to the site.

Broadleaf Deciduous Forest

The Broadleaf Deciduous Forest habitat is present west and south of the Cropland/Field Crops habitat. According to historic aerial imagery of the project site, the forest is present as far back as 1934. As such,

many of the trees are mature. The trees within the forest include red oak, white oak, black oak, red maple, sugar maple, shagbark hickory, pignut hickory, white ash, American beech, American hornbeam, eastern red cedar and sassafras. Shrubs include native blueberry, raspberry, and spicebush and invasive multiflora rose, Japanese barberry, and burning bush. Invasive shrubs are at a greater density within areas of the forest where the tree canopy is thin. Native greenbrier vines are also dominant within some areas of the shrub strata. Groundcovers include Virginia creeper, wood fern, white wood aster, and Canada mayflower. Soils are primarily well drained to moderately well drained sandy loams formed in lodgment and ablation glacial till. No disturbances or development activities are proposed within this habitat.

Wetlands & Watercourses

No inland wetlands and watercourses are located within 100 feet of the proposed solar panels. However, two wetland and watercourse areas are present approximately 345 feet west and 53 feet south of the project area. They were identified and delineated by James M. McManus from JMM Wetland Consulting Services, LLC. on January 26, 2023. Further detail in regard to these wetlands and watercourses is provided in Section 3.2.1.

Table 3: Habitat Area Table

Habitat Type	Total Area In Study Boundary (±Acres)	Project Area (±Acres)
Cropland/Field Crops	9.3	6.9
Broadleaf Deciduous Forest	4.1	0.2
Residential Yard	0.4	0
Wetlands	0	0

3.4.2 CORE FOREST DETERMINATION

The Connecticut Department of Energy and the Environment (CT DEEP) defines ‘core forests’ as “forests surrounded by other forests, and in Connecticut, it has been defined as forest features that are relatively far (more than 300 feet) from the forest-nonforest boundary. Core forests provide habitat for many species of wildlife that cannot tolerate significant disturbance. The loss of core forest cover diminishes water purification and habitat values, and could result in heavier runoff, which might lead to poorer water quality and impaired habitat”.

Based on a review of available core forest mapping provided by the Housatonic Valley Association, no core forests are present in and around the project area and none will be impacted by this proposed development. The closest core forest to the project site is approximately 40 miles to the west of the project site in Hamden, Connecticut. For more information refer to Figure 11, Core Forest Map.

3.4.3 WILDLIFE

The proposed project will replace the Cropland/Field Crops habitat. The proposed solar array will be installed, and following construction, native meadow habitat will replace it. The adjacent Broadleaf Deciduous Forest habitats will not be impacted by the project. These habitats support various wildlife including mammalian, amphibian, reptilian and avian species.

The Cropland/Field Crops habitat serves herbivorous and omnivorous mammalian species that will utilize the hay crop. There are bee boxes located in the northwestern portion of the field so that the bees may utilize the nectar of the forbs growing within the hay field. The large open field is also beneficial for birds of prey as a hunting ground for small game perching in the canopy trees within the bordering forest. Other avian species such as sparrows will also utilize the field, predating on small insects such as grasshoppers.

The Broadleaf Deciduous Forest, which extends outside of the investigation area to the west and south, serves as habitat for various mammalian species, such as white-tailed deer, bobcats, coyotes, foxes, skunks,

raccoons, opossums, grey squirrels, eastern chipmunks, eastern cottontail, voles, moles and mice. The woodland provides foraging opportunities for these and other species in the forms of nuts, seeds and plants. Avian species such as turkeys are likely to forage in the groundlayer of the forest while songbirds likely perch in the canopy above. Reptiles such as eastern garter snakes also likely inhabit the forest. It is unlikely species common to Core Forests reside within the project site, or immediately adjacent to the site because the onsite and adjacent forest are not Core Forest.

The nearby wetlands and watercourses serve as habitat for all aforementioned species and provide them a source of drinking water. For the purpose of this investigation, a limited onsite review of wetlands and watercourses was conducted due to these areas being over 150 feet from any proposed site work. Additional information regarding Wetland and Watercourse conditions is provided in Section 3.2.1 and information regarding Surface Water conditions is provided in 3.3.2.

Due to the proposed development, the diversity of wildlife using the project area is expected to increase and decrease, with some species like avian and insect species increasing in diversity (due to the replacement of the Cropland/Field Crops habitat with native meadow), while other species like mammalian species decreasing (due to their exclusion from this area by chain-link fence). The abundance of species will also decrease slightly due to the proposed solar arrays and related improvements. The species that inhabit the project site are common in the Town of Montville and the State of Connecticut. Additionally, with the forest not being impacted, it is likely the greatest source of habitat onsite will remain. As such, the project will not have significant adverse impacts to wildlife.

3.5 RARE SPECIES

A review of publicly available state and federal information was utilized to determine whether listed species and/or critical habitats were present on or adjacent to the project site or could potentially be present onsite. No state records indicate that listed species and/or critical habitats are present within the project area or adjacent to the project area. Federal records indicate that the site may potentially serve as habitat for listed species and/or as a stop for protected migratory birds. A limited onsite review of the project area was completed on May 17, 2023. Based on this field review and on the review of state and federal files, it is concluded that the proposed project will not affect listed species or critical habitats.

3.5.1 NATURAL DIVERSITY DATA BASE

The CT DEEP Natural Diversity Data Base (NDDB) is a collection of maps that show the approximate locations of state endangered, threatened, and special concern species and important natural communities in Connecticut. The locations shown on the maps are based on information collected over the years by DEEP personnel and others. The maps are intended to serve as a pre-screening tool for preventing potential impacts to listed species. Maps are generated for each town. The map for the Town of Montville is dated December 2022. The map indicates areas where listed species have been identified in a hatched buffer area and areas of critical habitat in green polygons. The hatched buffer areas are intentionally left inaccurate to protect protected species, therefore, if the project site fell within or near a buffer, a request for determination would have to be filed with the CT DEEP NDDB for more accurate information and field work would need to occur to determine the presence or absence of these species onsite. According to the Town of Montville NDDB map, this project area does not fall within a hatched buffer area and is approximately 3,000 feet from the nearest area to the northwest of the site. As such, no request for determination was filed for the project area and the state has no records of listed species or habitats being present at the project area. For more information, please refer to Figure 7, Natural Diversity Database Map.

3.5.2 USFWS CONSULTATION

The US Fish and Wildlife Service (USFWS) provides an online planning tool (Information for Planning and Consultation (IPaC) system) allowing for project planners the ability to perform a regulatory review for protected species under the Endangered Species Act (ESA) that inhabit or potentially may inhabit their

project sites. This resource is designed to provide a list of potential ESA-protected and/or candidate species, migratory bird species protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, critical habitats, as well as the ability to consult whether a proposed project has the potential to result in “take” of listed species. “Take” refers to any means to “harass, harm, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct to threatened and endangered species”. In consulting this resource, projects are able to determine whether they are in compliance with the ESA and other federal acts. Solli Engineering filed, on May 18, 2023, an IPaC review of the project area and received a letter report from the USFWS titled “*List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project*”. This report is attached in Appendix C. The report specifies that one endangered species, one candidate species and seven migratory bird species have the potential to be impacted by the proposed project. The endangered species is the Northern Long Eared Bat, the candidate species is the Monarch Butterfly, and the migratory birds are listed in the report in the attached Appendix C.

The Northern Long Eared Bat is listed as endangered under the ESA. This species range encompasses the entirety of Connecticut. The CT DEEP has compiled a map of Connecticut towns known for hibernacula of Northern Long Eared and other bats. Based on this map, no known hibernacula are located within the Town of Montville. The nearest hibernacula according to the map is within the Town of North Branford, approximately 31 miles west of the site. For more information regarding the locations of NLEB areas of concern, refer to Figure 7, Natural Diversity Database Map. Regardless, to comply with the ESA, the IPaC Consultation Package Builder (CPB) was utilized to assess whether the project would result in the “take” of Northern Long Eared Bats. The results of the CPB are in the attached report “*Record of project representative’s no effect determination for ‘Oakdale CT Solar Project’*” (Appendix C). The results of this report indicate that the project is not likely to result in the unauthorized “take” of Northern Long Eared Bats and therefore does not require a permit from the USFWS.

The monarch butterfly is a candidate species for protection under the ESA. Candidate species are “species which the USFWS has sufficient information to propose as endangered or threatened under the ESA, but for which their development of a proposed listing regulation is precluded by other higher priority listing activities”. As such, until they are proposed for listing, these species are not officially entitled to legal protection under the ESA, and they are not considered when making a determination as to “take”.

3.6 SOILS & GEOLOGY

The project grading is expected to generate a net export of approximately 5,700 cubic yards of material. Before any fill material is removed or used, the topsoil will be stripped and stockpiled for later seeding of disturbed areas. Any soil exposed due to construction will be treated according to the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

The following soils currently exist on-site and in surrounding areas:

1. Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony.
2. Canton and Charlton fine sandy loams, 3 to 8 percent slopes.
3. Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony.
4. Paxton and Montauk fine sandy loams, 3 to 8 percent slopes.

For more information, refer to the map Figure 8, Prime Farmland Map.

3.6.1 PRIME FARMLAND SOILS

Solli Engineering has reviewed the listed soils in accordance with the Code of Federal Regulations (“CFR”) Title 7, part 657. Prime Farmland Soils are distinguishable based on soil type. These soils are to be identified under CFR Title 7, part 657 in order to know the extent and location of the best land for producing food,

feed, fiber forage and oilseed crops. Upon review, the entire project is made up of prime farmland. For more information refer to the map Figure 8, Prime Farmland Map.

The agricultural field used to grow corn covers the majority of the project area. Because the expected use of the Site will have a finite lifespan, the Petitioner proposes to use minimally intrusive methods during construction when possible. Grading will be limited by the use of solar panel tracker systems and construction of solar panels in existing areas where grades are similar to proposed conditions. There will be some excavation and regrading that takes place on prime farmland to install stormwater management basins and to properly develop the project area as a whole. In areas where Prime Farmland Soils are disturbed, the developer will remove the topsoil, segregate it from underlying horizons, and stockpile and spread it throughout the project area as necessary to re-establish vegetation growth.

When the solar panel facility reaches the end of its finite lifespan, the facility will be decommissioned. Upon this development, all areas disturbed by the facility will be top dressed with native soils and reseeded with the same (or approved equivalent) pollinator blend that exists within the area of the solar panel facility. These proposed design strategies will not materially affect the prime farmland. According to Public Act No. 17-218, “for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland... the Department of Agriculture represents, in writing, to the council that such project will not materially affect the status of such land as prime farmland or the Department of Energy and Environmental Protection represents, in writing, to the council that such project will not materially affect the status of such land as core forest.” The project is a 0.99 MW AC solar photovoltaic facility; therefore, a letter to the Council of the Department of Agriculture is not required.

3.7 HISTORIC & ARCHAEOLOGICAL RESOURCES

Archaeological Consulting Services LLC performed a Phase 1A cultural resources assessment survey on behalf of Solli Engineering and the Petitioner. Their report discloses that a property National Register of Historic Places does not exist within the Site. This conclusion was reached by means of a literature search for previously recorded cultural resources in the area, a review of historical maps and aerial imagery depicting the project area, and a pedestrian survey complete with photo documentation of the project area to determine archaeological sensitivity.

A portion of the project area has been identified as having a moderate-to-high sensitivity for historic cultural resources. However, given that the existing house is not listed with the State or National Register of Historic Places (NRHP), the avoidance of this house by the proposed array, and the setback of the project from the house, no further archaeological evaluation is warranted for the project.

For more information refer to the Phase 1A report in Appendix D, Cultural Resources.

3.8 SCENIC AND RECREATIONAL AREAS

State Route 163 is a state road on which the proposed solar array is located. Existing and proposed tree cover will shield the state route from the Site and the project will not visually impact the route. No hiking trails exist in the vicinity of the Site. The closest open space is approximately 85 feet southeast of the Site at Camp Oakdale. For more information regarding resources located within one mile of the site refer to Figure 9, Scenic & Recreation Map.

3.9 LIGHTING

Permanent exterior lighting is not planned for the project. During routine maintenance of the Facility there may be times when on-site equipment has small lights which will only be activated during maintenance.

3.10 FAA DETERMINATION

The closest federally-obligated airport is Groton-New London located approximately 12 miles southeast of the Site.

Solli Engineering has submitted the required project information to the Federal Aviation Administration (FAA) for review. The FAA reviewed multiple sample points to determine whether a potential hazard exists for air navigation. Upon review, the FAA issued a Determination of No Hazard to Air Navigation for all points, therefore a glare analysis is not required. For more information see Appendix F, FAA Determinations.

3.11 VISIBILITY

There will be solar trackers a maximum of 6 feet off finished grade within the solar panel facility. All disturbed areas will be contained within a 7-foot-high chain link fence. Trees constituting the existing tree line will be preserved and maintained to the best of the developer's ability. Most neighbors in the vicinity of the subject property will only be able to view the solar panel facility on a seasonal basis due to existing tree coverage. Figure 10, Proposed Conditions Viewshed Map.

The solar panel products are designed in such a way that they are not highly reflective. Because solar panels have tracking features, the panels will not reflect one direction for extended durations.

3.12 NOISE

The subject property is currently being used as an agricultural field. As such, the Site generates noise through the use of farming machinery.

Noise from the construction of the solar panel facility is exempted under Connecticut regulations for the control of noise. For more information refer to RCSA 22a-69-1.8(h). During construction, the increase in noise will likely lead to a subsequent elevation in ambient sound levels in the immediate vicinity of the project area. Standard construction equipment will be used for the project, and the highest level of noise generated from this equipment - such as backhoes, bulldozers, cranes and trucks – is expected to be approximately 88 dBA from the origin.

When construction ceases, noise from the solar panel facility will be minimal. The maximum amount of noise will be generated by inverters, during operation hours, which will emit 61 decibels measured at one meter from the inverter. The collective operational noise level of the inverters at the nearest property boundaries would be 30 decibels. This noise level meets applicable CT DEEP Noise Standards, and noise levels will effectively be reduced to zero during nighttime hours when the array is not generating electricity. For more information regarding the inverter product information refer to the specification sheets in Appendix E.

4.0 CONCLUSION

As demonstrated by the information outlined herein, the Project will have no air emissions, no significant adverse environmental impacts and will comply with the CT DEEP air and water quality standards. The Petitioner, therefore, respectfully requests that the Council issue a declaratory ruling that the proposed Project will comply with CT DEEP air and water quality standards, will not have a substantial adverse environmental impact, and does not require the issuance of a Certificate.