

## **DRAFT**

### **Petition No. 1442 SR Litchfield, LLC Litchfield - Torrington**

**Staff Report  
September 17, 2021**

#### **Introduction**

On February 5, 2021, the Connecticut Siting Council (Council) received a petition (Petition) from SR Litchfield LLC (Petitioner) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 19.8-megawatt alternating current (AC) solar photovoltaic electric generating facility located off of Wilson Road in Litchfield and Rossi Road in Torrington, and an associated electrical interconnection (Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about February 2, 2021, the Petitioner notified the Town of Litchfield (Town), City of Torrington (City), state officials and agencies, and the abutting property owners of the proposed project.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act (UAPA), an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. April 6, 2021 was the deadline for action on this petition under CGS §4-176(e). In response to the Coronavirus pandemic, Governor Lamont issued Executive Order No. 7, as subsequently extended, that provides for a 90-day extension of statutory and regulatory deadlines for administrative agencies thus extending the deadline for action to July 5, 2021.

The Council issued its first set of interrogatories to the Petitioner on March 12, 2021. The Petitioner submitted responses to the Council's first set of interrogatories on April 5, April 16 and May 14, 2021. Petitioner's response to Council Interrogatory No. 63 included photographic documentation of site-specific features intended to serve as a "virtual" field review of the Project.

On March 2, 2021, Ronald M. Viola, Trustee requested party status, and on March 25, 2021, the Council granted party status to Mr. Viola. On April 19, 2021, the Council developed a schedule for the exchange of interrogatories among the parties and intervenors. Mr. Viola did not issue interrogatories to the Petitioner.

The Council issued its second set of interrogatories to the Petitioner on June 10, 2021. The Petitioner submitted responses to the Council's interrogatories on July 1, 2021.

On June 17, 2021, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than November 2, 2021, which was the 180-day statutory deadline for a final decision under CGS §4-176(i) with the 90-day extension granted by Governor Lamont's Executive Orders, as extended. A revised schedule was developed evidencing the Council's June 17, 2021 vote to set the date by which to render a decision on the Petition in accordance with the 60-day agency action deadline under CGS §4-176(e), as extended by Governor Lamont's Executive Orders.

Also on June 17, 2021, the Council developed a revised schedule for the exchange of interrogatories among the parties and intervenors. Mr. Viola did not issue interrogatories to the Petitioner.

## **Municipal Consultation**

In 2019, the Petitioner met with Town and City officials to discuss the project. On August 22, 2019, former Litchfield First Selectman Leo Paul presented the proposed Project to the Litchfield Board of Selectmen, after which the Town issued a letter of support to the Petitioner.

On May 5, 2020, the Petitioner conducted a remote information session before the Litchfield Board of Selectmen and the public. On September 22, 2020, the Petitioner sent postcard mailers to property owners abutting the property that included Project details and provided contact information. In response to the outreach mailing, seven abutters contacted the Petitioner with questions about the Project. The Petitioner has been consulting with two abutters, Mr. Viola and a property owner at 347 Wimbledon Gate North in Torrington, to address their concerns regarding project aesthetics and setbacks.

On February 8, 2021, the Council sent correspondence to the Town and City stating that the Council has received the Petition and invited both municipalities to contact the Council with any questions or comments by March 7, 2021.

On March 7, 2021 the Town of Litchfield Planning & Zoning Commission's submitted comments to the Council concerning land use, drainage, grading, watersheds, noise, glare, setbacks and groundwater quality.

On March 8, 2021 the current Litchfield First Selectman, Denise Raap, submitted comments to the Council regarding abutting landowner concerns; protection of watercourses, wetlands and natural habitats; and adherence to local zoning and wetland regulations.

The City of Torrington did not respond to the Council's solicitation.

## **State Agency Comments**

On February 9, 2021, the Council sent correspondence requesting comments on the proposed project from the following state agencies by March 7, 2021: Department of Energy & Environmental Protection (DEEP); 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 Administrative Services (DAS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO).

In response to the Council's solicitation, CEQ<sup>1</sup>, DEEP<sup>2</sup>, and DOAg<sup>3</sup> submitted comments on February 24, March 8, and March 9, 2021, respectively. CEQ's comments relate to wetland and vernal pool impacts, wetland buffers, visibility, farmland soils, livestock grazing, establishment of pollinator areas, use of chemicals, and stormwater management. DEEP's comments relate to the state's goal to achieve a zero carbon electric sector by 2040, wetland buffers, the Natural Diversity Database (NDDDB), stormwater management, transformer oil containment, and consultation with the DEEP Dam Safety Program regarding the proposed stormwater basins at the site. DOAg's comments relate to loss of farmland soils for agricultural use, adverse impact to farmland soils from construction, and implementation of potential mitigation measures such as purchases conservation easements and establishing community gardens.

The DOT responded on March 31, 2021 stating that it had no comment.

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<sup>1</sup> [PE1442 STATEMEMO-CommentsRecd-CEQ.pdf\(ct.gov\)](#) (CEQ Comments)

<sup>2</sup> [TO: Parties & Intervenors\(ct.gov\)](#) (DEEP comments)

<sup>3</sup> [TO: Parties & Intervenors\(ct.gov\)](#) (DOAg comments)

While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies.<sup>4</sup>

### **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.” The proposed project was selected by DEEP in a solicitation prior to July 1, 2017; therefore, the proposed project is exempt from the provisions of Public Act 17-218.

### **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 2018 Comprehensive Energy Strategy (2018 CES) highlights eight key strategies to guide administrative and legislative action over the next several years. Specifically, Strategy No. 3 is “Grow and sustain renewable and zero-carbon generation in the state and region.” Furthermore, on September 3, 2019, Governor Lamont issued Executive Order No. 3, which calls for the complete decarbonization of the electric sector by 2040. The proposed facility will contribute to fulfilling the State’s Renewable Portfolio Standard and Global Warming Solutions Act 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. The proposed Project is one of the 25 projects selected. This Project was awarded to Renewable Ventures, LLC and was acquired by Silicon Ranch Corporation, the parent company of the Petitioner, in 2017.

The Petitioner would sell the generated power to two public utilities via power purchase agreements (PPAs). Specifically, per the PPAs, approximately 80.36 percent of the electricity and renewable energy certificates (RECs) would be sold to Eversource Energy (Eversource), and the remaining 19.64 percent would be sold to The United Illuminating Company (UI). The PPAs were approved by PURA in September 2017 (PURA Docket No. 17-01-11). The PPAs have a 20-year term. The PPAs can be extended subject to regulatory approval. If the PPAs are not extended and expire, then the Petitioner would sell the power at market rates.

The Petitioner does not plan to participate in the next ISO-NE Forward Capacity Auction. The Petitioner would evaluate its participation in future auctions on an annual basis.

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<sup>4</sup> *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

### **Proposed Site**

The proposed site consists of 6 contiguous parcels totaling 212 acres located generally south of Highland Avenue and east and west of Rossi Road in Torrington, and east and west of Wilson Road in Litchfield (collectively the Site). The parcels, owned by Silicon Ranch Corporation, are as follows;

#### Litchfield

- Parcel 162-02-015 – 50 – acres, Rural Residence District
- Parcel 162-019-009 – 59 acres, Rural Residence District

#### Torrington

- Parcel 217-004-074 – 38 acres, Residential R-40
- Parcel 217-001-024 – 18 acres, Residential R-60
- Parcel 217-004-016 – 47 acres, Residential R-40
- Parcel 217-014-075 – 0.33-acre, Residential R-60

The Site consists of a mix of former agricultural fields and forest. No structures are located on the Site. Existing Eversource electric transmission lines cross the northeastern section of the Site in Torrington.

Site topography consists of sloping hillsides separated by stream, wetland, and road corridors. Elevations range from 950 feet to over 1,200 feet above mean sea level. Soils are variable across the site, consisting of sandy loam, gravel and glacial till. Most slopes range from 3 to 15 percent although some areas reach 45 percent.

Land use in the surrounding area generally consists of agricultural land, forest, and residential.

The Petitioner selected the site due to its availability, size and topography, and the proximity to existing electric infrastructure. Pursuant to CGS §16-50p(g), the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility.<sup>5</sup>

### **Proposed Project**

After the Petition was submitted, revisions to the Project were made based on Council interrogatories, as well as input from DEEP and other State agencies, the Town, neighbors and Mr. Viola. Revisions included the use of higher watt modules to reduce the number of modules necessary to meet contractual obligations, relocation of the access road to avoid a stream on the Site (Gulf Stream), and the reduction of site disturbance by 25 percent, earthwork by 50 percent, wetland disturbance by 50 percent, clearing by 62 percent and site grading by 80 percent. In addition, 100-foot no disturbance buffers were applied to Gulf Stream and on-site vernal pools, and wetland buffers throughout the site were increased. Site plans detailing the revision were included in the May 14 and July 1, 2021 interrogatory responses.

### **Revised Project**

The Project consists of the installation of 51,300 bifacial Hanwha QCell Q.PEAK Duo XL-G10.3/BFG 475 Watt photovoltaic modules. The proposed facility would have an anticipated service life of 40 years. The capacity factor is approximately 19 percent which includes loss factors such as weather events, dust and pollen. The project is not designed to operate as a microgrid or to accommodate a battery storage system.

The Project fenced area would occupy 70.42 acres of the Site. Generally, the Project would consist of three main, non-contiguous areas - Area 1, Area 2, and Area 3. Access to the solar array areas would be from

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<sup>5</sup> *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007); CGS §16-50p(g) (2019).

new 16-foot wide gravel driveways except for one 12-foot wide access drive that passes through a wetland area. Approximately 8,170 linear feet of gravel access roads would be constructed for the Project.

Area 1 consists of three solar array areas located along the crest and sides of a hill. Two of the solar array areas are located east of the electric transmission line right-of-way (ROW) with the third array area located west of the ROW. Access would be from a single gravel drive extending south from Highland Avenue in Torrington through a forested wetland, following an existing access way. This section would be 12 feet wide to minimize wetland disturbance. Once out of the wetland, the access road would be constructed to a width of 16 feet.

Area 2 consists of three solar array areas located east of Rossi Road and Wilson Road. Most of the solar array area is located on the north and west slopes of a hill. Two of the three solar array sections would be accessed by a drive that extends east from Wilson Road, south of where the Gulf Stream riparian corridor crosses Wilson Road, thus avoiding a new access road crossing of the stream as was initially proposed. The access drive traverses steep slopes on the side of a hill and would have grades of up to 20 percent. The third array area is adjacent to Rossi Road and is separated from the other Area 2 sections by the Gulf Stream riparian corridor. It would be access from a gravel drive extending east from Rossi Road.

Area 3 consists of two solar array areas located on south sloping hillsides north and south of Town Farm Road in Litchfield. Access to the northern section would be from Town Farm Road. The southern section would be accessed from Wilson Road.

The solar panels would be arranged in linear rows, oriented to the south at a fixed 25° angle, extending to an approximate height of 10 feet above grade. Ground clearance on the lowest panel edge would be approximately two feet above grade. Inter-row spacing would be 8.8 feet. The modules would be supported on a fixed tilt racking system attached to posts. Posts would be driven into the ground to a depth of 10 feet or installed by using drilled piers ground screws depending on specific subsurface conditions.

Other equipment includes 90 string inverters installed on racks, and 8 transformer/switchgear pads. The majority of Project wiring would be installed on the racking system. Where wiring is not installed on the racking system, it would be installed in underground conduit.

The three solar array areas would be enclosed by a seven-foot high<sup>6</sup> chain link fence topped with barbed wire. The Petitioner is willing to install the fence without the barbed wire.

The nearest property line and residence to the solar array fence is approximately 10 feet and 78 feet west, respectively, of 377 Wimbledon Gate North in Torrington. The solar panels would be installed a minimum 23 feet from the property line.

The proposed Project would interconnect to the existing Eversource distribution system using a 27.6-kV distribution feeder that connects to Eversource's Campville Substation located at 420 Wildcat Hill Road in Harwinton. It would require an extension of approximately 5.35 miles of an existing three-phase distribution line. In July 2020, ISO-NE approved the Project's Distribution System Impact Study. Additionally, the Petitioner would enter into a Collector Line Easement Agreement with Eversource to cross over Wilson Road from a switchgear pad located south of Town Farm Road. Three new utility poles would be installed in this area to facilitate the overhead interconnection.

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<sup>6</sup> Section 691.4(2) of the National Electrical Code (NEC), 2020 Edition notes that, "Access to PV electric supply stations shall be restricted by fencing or other adequate means in accordance with 110.31..." Section 110.31 notes that for over 1,000 Volts, "...a wall, screen, or fence shall be used...A fence shall not be less than 7 feet in height or a combination of 6 feet or more of fence fabric and a 1 foot or more...utilizing barbed wire or equivalent."

The construction limit of disturbance (LOD) would consist of 74 acres. Approximately 23 acres of the site would require tree clearing/grubbing. Site clearing accounts for potential tree shading effects (assumed tree height of 82 feet).

The Petitioner intends to maintain existing slopes where possible to minimize land disturbance. Approximately 14 acres of the site would require re-grading to create solar field slopes that do not exceed 20 percent in order to be within racking post tolerances, and to establish the stormwater management system and access roads. The Project would require approximately 55,715 cubic yards of cut and 20,932 cubic yards of fill. Excess cut would be removed from the site.

Construction work hours would be 7 a.m. to 7 p.m. Monday through Saturday. Work may be performed on Sunday, if necessary. It is anticipated that 60 to 70 construction vehicles (average size light-duty) will make daily trips onto the Site. Once construction is complete and the Project operational, only maintenance vehicles would periodically access the site. Construction and site testing would take 16 months.

A 0.41-acre construction laydown area would be located at the north end of the Area 3, within the Project LOD. The laydown area would be located outside of the 100-foot vernal pool envelopes of two vernal pools located north of the laydown area.

A site construction phasing plan has been developed that includes three main construction phases. Phase 1 includes all work necessary to establish temporary sediment basins and other erosion control measures at the site. Once erosion and sediment control measures are stabilized, tree clearing and solar field site grading would commence. Phase 2 consists of completion and stabilization of final grades with the solar arrays and access drives, establishment of the laydown area, installation of culverts within the access drive locations, and construction of the solar array. Phase 3 consists of completion of final stabilization and conversion of temporary sediment traps to stormwater management basins.

Final stabilization would utilize various seed mixes for different areas of the site. The solar field areas would be seeded using a mix that includes a variety of grasses and forbs, including native species that support pollinator wildlife species. Areas outside of the solar array limits would be seeded with a conservation mix that contains a larger component of wildflowers than areas within the solar array areas. The stormwater basins and swales would be stabilized with an erosion control/restoration seed mix that include species tolerant of moist areas.

The anticipated total Project cost is \$30 - \$40 million.

### **Public Safety**

The proposed project would comply with the National Electrical Code, National Electrical Safety Code and National Fire Protection Association codes and standards, as applicable. In some areas the distance between the perimeter fence and solar array is only 4.5 feet, less than the 10-foot minimum width required by the CT State Fire Prevention Code, Section 11.12.3 - Ground Mounted Photovoltaic System Installations.

Prior to the commencement of site construction, the Petitioner would discuss the Project with the City and Town Fire Marshals. The Petitioner would offer an on-site review of the facility to discuss safety protocols and emergency response prior to the commencement of Project operation. In the event of a fire or emergency requiring site access, first responders would have access to bar and fence gates via a "knox box".

The nearest federally-obligated airport to the site is Waterbury-Oxford in Oxford, approximately 20 miles south of the proposed facility. Under Federal Aviation Administration (FAA) criteria, the Project would not be a Hazard to Air Navigation.

The Facility would be remotely monitored and would have the ability to remotely de-energize in the event of a fault or other power outage event and/or emergency. Manual shut down operations can also be performed. The use of string inverters also allows isolation of a section or sections of the Project while allowing other sections to operate.

The solar field would be enclosed by a 7-foot high chain link fence. Access to the different sections of the facility would be through bar gates along certain access roads and fence gates at all fenced solar array areas.

The proposed facility would be in compliance with DEEP Noise Control Standards. Project-related operational noise would be from 9 transformers and 90 inverters. Noise modeling at residential receptors abutting the site indicates noise from facility operation would not be in excess of 44 dBA at the nearest property line, below the 55 dBA threshold within the DEEP Noise Control regulations daytime threshold of 55 dBA. No significant noise would be generated at night as the facility would not be producing power. Construction noise is exempt from DEEP Noise Control Standards.

The Site is not located within a Federal Emergency Management Agency designated 100-year flood zone.

The Petitioner would consult with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins.

## **Environmental Effects and Mitigation Measures**

### *Historic and Recreational Resources*

The Petitioner performed historic and archeological studies of the Project area and submitted the findings to SHPO. By letters dated November 12 and December 19, 2020, SHPO concurred with the findings of the study that the Project would have no impact on historic or archeological resources and recommended no further action.

No public parks or other publicly accessible recreation resources are located adjacent to the site and thus, no impact to recreational resources would occur.

### *Visibility*

The proposed facility abuts a mix of residential properties, agricultural fields and forestland. Year-round visibility of the Project would occur from approximately 13 residences, as follows: 2 on Highland Avenue, 7 on Wimbledon Gate North; 1 on Town Farm Road and 3 on Rossi Road. Landscaping would be installed along the fence line in the Highland Avenue and Wimbledon Gate North areas to screen views of the facility where no intervening vegetation is present.

Most of the solar array areas are set back from roadways except for the small, isolated array east of Rossi Road and the array area northwest of the Rossi Road/Wilson Road intersection where no existing intervening vegetation is present.

### *Agriculture*

The subject property contains prime farmland soils according to mapping maintained by the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). Under PA 17-218, “prime farmland” means land that meets the criteria for prime farmland as described in 7 Code of Federal Regulations (C.F.R.) 657, as amended from time to time. 7 C.F.R. 657 defines prime farmland in relevant part as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses.”

Approximately 23 acres of prime farmland soil are within the Project’s (LOD). Topsoil that is removed would be temporarily stockpiled on-site for reuse in other disturbed/excavated areas. No prime farmland soils would be removed from the site.

To maintain agricultural use on the property, the Petitioner would contract with a sheep farmer to rotationally graze sheep within the fenced solar field areas. The entire 70.42-acre Project area will be utilized for livestock grazing. The sheep would maintain solar field grasses, lessening the use of mechanical vegetation management, and promoting a varied grass structure beneficial to pollinators. Based on sheep grazing at other Silicon Ranch projects, damage to wiring or solar components from animal contact is not anticipated. The density of sheep flock would be determined by site specific forage quantity and weather conditions. Outbuildings would not be installed as part of the co-use plan.

The site is not enrolled within the Public Act 490 Program. Development rights have not been purchased by DOAg as part of the State Program for the Preservation of Agricultural Land.

### *Wetlands and Watercourses*

The Site contains numerous wetlands and watercourses mostly within forested areas. Gulf Stream, a DEEP-designated cold-water habitat stream, flows from north to south within and adjacent to the Site, paralleling Rossi Road and Wilson Road. The stream contains buffering wetlands and is supported by two perennial and several intermittent watercourses that are located on portions of the Site. Two vernal pools were identified on the Site, one within the transmission line right-of-way and one at the north edge of Area 3. The vernal pools support vernal pool obligate species and appear to have been formed from past excavations in wetland areas to create farm ponds.

A 100-foot forested buffer along the Gulf Stream riparian corridor would be maintained during construction. The 100-foot buffer to the stream follows recommendations within the *2004 Stormwater Quality Manual* to maintain temperature and water quality of cold-water streams.

Wetland buffers to the LOD would range from 25 to 100 feet. In general, 25-foot buffers would be maintained where the wetlands are upgradient of the LOD so that runoff would drain away from these areas. Larger buffers, ranging from 50 to 100 feet would be maintained where the wetland is downgradient of the LOD. In general, 50-foot buffers would be designated in areas that are currently open fields. Exceptions include a 50-foot buffer to a seep area associated with a tributary to Gulf Stream and to two forested wetland areas located between the proposed access drive extending from Wilson Road to the southern portion of Area 2. The proposed access road was relocated to this area to avoid permanent impacts to the Gulf Stream riparian corridor associated with bridge crossing that was part of the initial site design.

According to the revised Stormwater Pollution Control Plan (SWPCP) for the Project, site development would impact less than 2,000 square feet of wetlands, most of which is associated with the development of Project access roads. Due to the amount of disturbance, the Project would require the filing of a Self-



Verification Notification to the U.S. Army Corps of Engineers New England District under Section 404 of the federal Clean Water Act.

In Area 1, a 12-foot wide access drive would extend from Highland Avenue through a forested wetland to the solar array. This access road would follow the route of existing farm road through the wetland. Approximately 866 square feet of forested wetland would be permanently impacted in this area. In the eastern portion of Area 1, an existing farm crossing of a wetland would be upgraded to a 16-foot wide access road/ culvert crossing that would require a permanent wetland impact of approximately 587 square feet. In the eastern portion of Area 3, an access road and an associated culvert would be installed at the head of an intermittent stream that drains to Gulf Stream.

In order to connect the Area 1 array to the switchgear location in Area 3, an overhead line would be installed to cross the Gulf Stream riparian corridor. The crossing location would utilize the route of existing farm road through the riparian corridor to minimize the clearing of vegetation. Two other overhead wetland utility crossings would be developed; one extending from Area 1 to Area 2 and one over a tributary to Gulf Stream adjacent to Rossi Road. To facilitate these crossings the Petitioner would use bucket trucks, skid steers, line trucks, reel trucks and hand tools. Construction would be conducted in accordance with US Army Corps of Engineers best practices.

Construction equipment washout areas would be established a minimum of 50 feet from wetlands or watercourses. The washout stations are self-contained and no surface discharge of washout wastewaters would occur.

### *Wildlife*

A wetlands and habitats report for the site was prepared that was based on field surveys of the site conducted from late 2016 to mid-2020. The site consists predominantly of second growth forest, scrub-shrub thickets and agricultural land. Water resources consist of wetlands, vernal pool and stream habitats.

A preliminary DEEP NDDDB review of the site was submitted to the Petitioner on May 29, 2017 that identified four State-listed Special Concern species that may occur in the project area; the wood turtle, red bat, hoary bat, and pale green orchid, and one Engendered species; the vesper sparrow. Field surveys for these species were conducted within the Project area in 2017, 2018 and 2019. During these surveys 3 additional State-listed Special Concern species were identified at the site; the American kestrel, the bobolink, and the savannah sparrow.

The wood turtle occupies riparian habitats, the pale green orchid favors moist habitats with sandy soils. The two bats species utilize forested areas. The bobolink, vesper sparrow and savannah sparrow favor grassland habitats. Kestrels are usually seen around agricultural areas and shrubby areas such as hay fields, orchards, and pastures airports, large parks, and along power line ROWs.

Site surveys did not identify the pale green orchid, wood turtle or vesper sparrow on the site. Additionally, the bobolink and savannah sparrow were most likely infrequent breeders due to disturbance from agricultural activities. The American kestrel was not a confirmed breeder at the site but could continue to use the site for foraging and breeding after construction of the solar arrays.

Surveys were not conducted for the two bat species but it is likely these species are utilizing the site. In addition to the two listed bats, the northern long-eared bat (NLEB), a state-listed Endangered Species and federally-listed Threatened Species, is known to occur in Connecticut. Although NLEB was not listed in

the DEEP NDDDB letter, it is possible NLEB uses the forests on the site. To protect all three bat species, the Petitioner proposes a tree clearing restriction from June through July to reduce the likelihood of bat mortality during breeding season.

A second request for a DEEP NDDDB review was submitted on December 29, 2020 because the first one expired after one year. The DEEP NDDDB responded indicating that the original species identified in its May 29, 2017 correspondence list is still valid.

DEEP's March 5, 2021 comment letter stated that a final NDDDB determination letter has not been issued and the proposed site clearing restriction of June through July to protect the identified bat species was insufficient to properly protect these species. The final NDDDB determination will likely require a tree clearing restriction of June 1 to October 1.

### *Core Forest*

Under PA 17-218, "core forest" means Under PA 17-218, "core forest" means unfragmented forest land that is three hundred feet or greater from the boundary between forest land and nonforest land, as determined by the Commissioner of DEEP. UCONN's Center for Land Use Education and Research defines "core forest" as forested areas that are essentially surrounded by more forested areas and fall into three classes – small core forest, medium core forest and large core forest. Small core forest is comprised of core forest patches that are less than 250 acres. Medium core forest is comprised of core forest patches that are between 250-500 acres. Large core forest is comprised of core forest patches that are greater than 500 acres. Forestland that does not meet the definition of core forest is considered "edge forest". Edge forest is a forested area extending up to 300 feet from a non-forest feature such as a road.

The site is not within a core forest block. The Site contains approximately 140 acres of woodland, and of that, approximately 23 acres would be cleared to develop the project. Most of the clearing is associated with development of the western portion of the Area 1 array and the southern portion of the Area 2 array and the associated access road. The remaining tree clearing areas consist of windrows and areas along the periphery of existing fields.

### *Air Quality*

The solar project would not produce air emissions of regulated air pollutants or greenhouse gases during operation.

The Petitioner estimates that there would be a 90 to 93 percent reduction in greenhouse gas emissions from Project operation over a 40-year period when compared to the operation of a natural gas fueled electric generating facility with equivalent megawatt-hour (MWh) production.

### *Water Quality*

The site parcel is not within a DEEP-designated Aquifer Protection Area or a mapped Public Drinking Supply Watershed. Underlying groundwater is classified as GA which is suitable for drinking without treatment.

Residences along the easterly and northern sides of the Project site, along Highland Avenue and Wimbledon Gate North, are supplied by public water serviced by the Torrington Water Company. No residential private wells are in the area of the proposed development. Private wells on properties not served by the Torrington

Water Company are located on Wilson Road in Litchfield and Rossi Road in Torrington. One well is also located on Town Farm Road in Torrington. Well depths range from 61 to 360 feet.

The module racking posts would be installed to a depth of approximately 10 feet depending on soil conditions. Due to the shallow post installation and the distance to private wells from the construction areas, no impacts to private wells or groundwater in the area are anticipated.

The solar facility would not use or discharge water during site operations.

### Stormwater

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater pollution. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. The DEEP Individual and General Permits for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Stormwater Permit) requires implementation of a Stormwater Pollution Control Plan to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a project after construction is complete. A DEEP-issued Stormwater Permit is required prior to commencement of construction. The Stormwater Permit requires the Project to be designed a licensed Connecticut Professional engineer and in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sedimentation Control*, the 2004 *Stormwater Quality Manual* and DEEP's Appendix I, Stormwater Management at Solar Array Construction Projects document.

The Petitioner filed for a Stormwater Permit on October 20, 2020 and, at that time, the Petitioner anticipated the project would require an Individual Permit. The Petitioner subsequently re-designed the project layout and revised the SWPCP and supporting drainage calculations. The SWPCP contains construction sequencing as well as details for temporary sediment traps and permanent stormwater basins, swales and trenches. The Petitioner indicated the design of the project conforms to Appendix I except for the drainage area adjacent to an intermittent stream west of Rossi Road (Area 3).

Post-construction stormwater basins would feature discharge pipes and rip-rap outlet structures that would drain to on-site wetland areas. A minimum 50-foot buffer would be maintained between the outlet structures and adjacent wetlands. No outlet pipes would discharge directly to on-site wetlands.

### **Operation and Maintenance**

A post-construction Operations and Maintenance Program has been established that includes provisions for periodic inspections of physical site features and structural and electrical components. An evaluation of facility components and preventative maintenance activities would be conducted in accordance with manufacturer recommendations.

Damaged modules would be replaced as necessary. The Petitioner would store approximately 150 modules on the site to use as replacement for damaged modules. The modules would be stored in the fenced array area, remote from roads or abutting residences.

Cleaning of the modules would be conducted on an as needed basis with deionized or tap water. No chemical additives would be used. Snow would be allowed to naturally melt or slide off of the panels.

Sediment that accumulates within the post-construction sediment basins would be removed by skid steer and spread around the site or removed from the site.

The Petitioner would rotate livestock at the site for vegetation control. In areas with excessive weed growth that hinder site operation, herbicides would be used in spot applications specific to the target species and would be applied by a contractor with a current herbicide applicators license.

Areas outside of the solar array fence would be mowed/cut at least once per year to prevent growth that would lead to project shading. Mowing would occur in July to prevent impacts to ground nesting birds that may use these shrubby areas for nesting.

Forested areas on the site outside of the project limits would be left undisturbed to protect State-listed and other species that may use this habitat.

### **Decommissioning**

Project decommissioning would involve the removal and disposal or recycling of all above-surface project components. All recyclable materials would be transported to appropriate recycling facilities. Any non-recyclable materials will be properly disposed of at a nearby landfill. It is anticipated that at least 95 percent of the project's components will be recyclable. A transportation plan would be developed in consultation with local officials for truck traffic, if necessary.

The transformer and interconnection equipment pads would be removed. The underground cable/collection lines installed at a depth of 4 feet or less would be excavated and removed from the site. Disturbed areas would be backfilled with native soil and stabilized. Overhead portions of the utility interconnection would be removed. Access roads may be left in place or removed depending on the future use of the property. On-site decommissioning activities would take approximately one year to complete. The stormwater management system would remain in place.

The manufacturer of the selected solar panels has conducted Toxicity Characteristic Leaching Procedure (TCLP) testing on the panels. The TCLP test indicates the panels would not be characterized as hazardous waste at the time of disposal, under current testing criteria.

### **Conclusion**

The project is a grid-side distributed resource with a capacity of not more than sixty-five megawatts that was selected in DEEP's Small Scale RFP, meets air and water quality standards of 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.

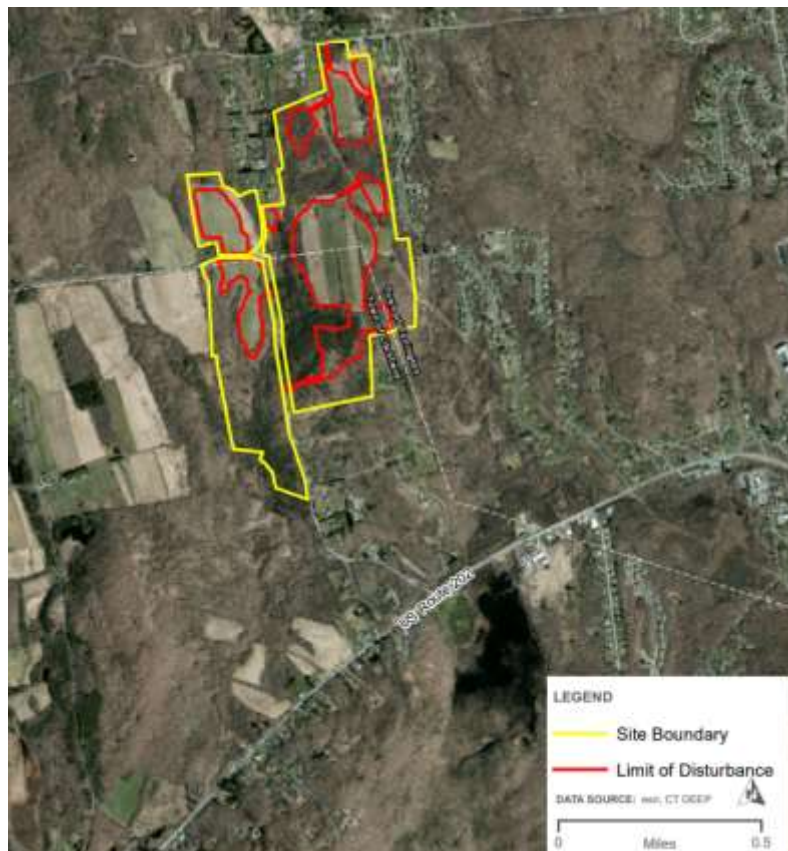
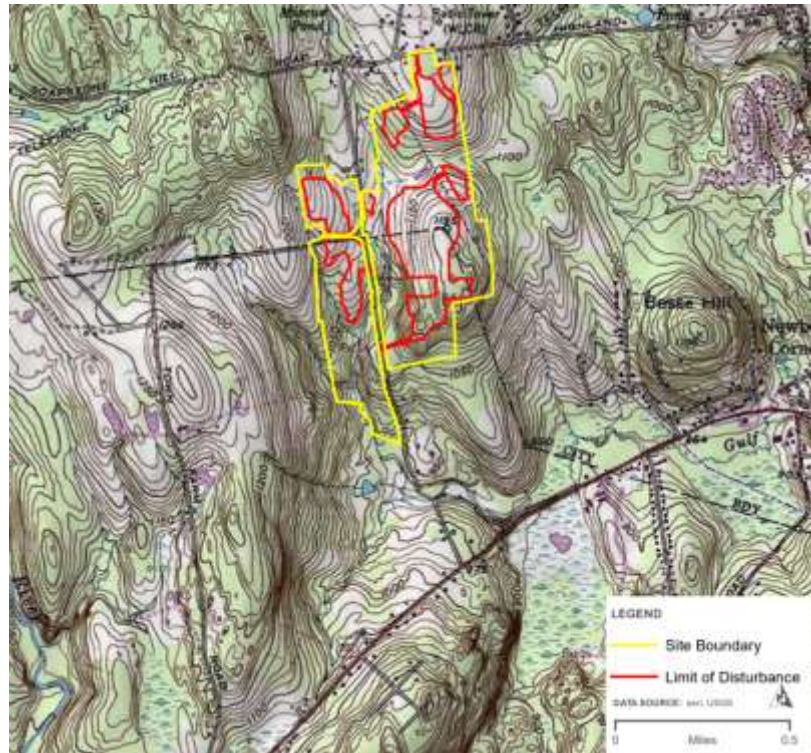
### **Recommendations**

If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. Submit a final Landscaping Plan;
3. Submit a Spill Prevention and Response Plan;
4. Submit the final structural design for the racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;
5. Submit a copy of the DEEP Natural Diversity Database Final Determination letter prior to commencement of construction;

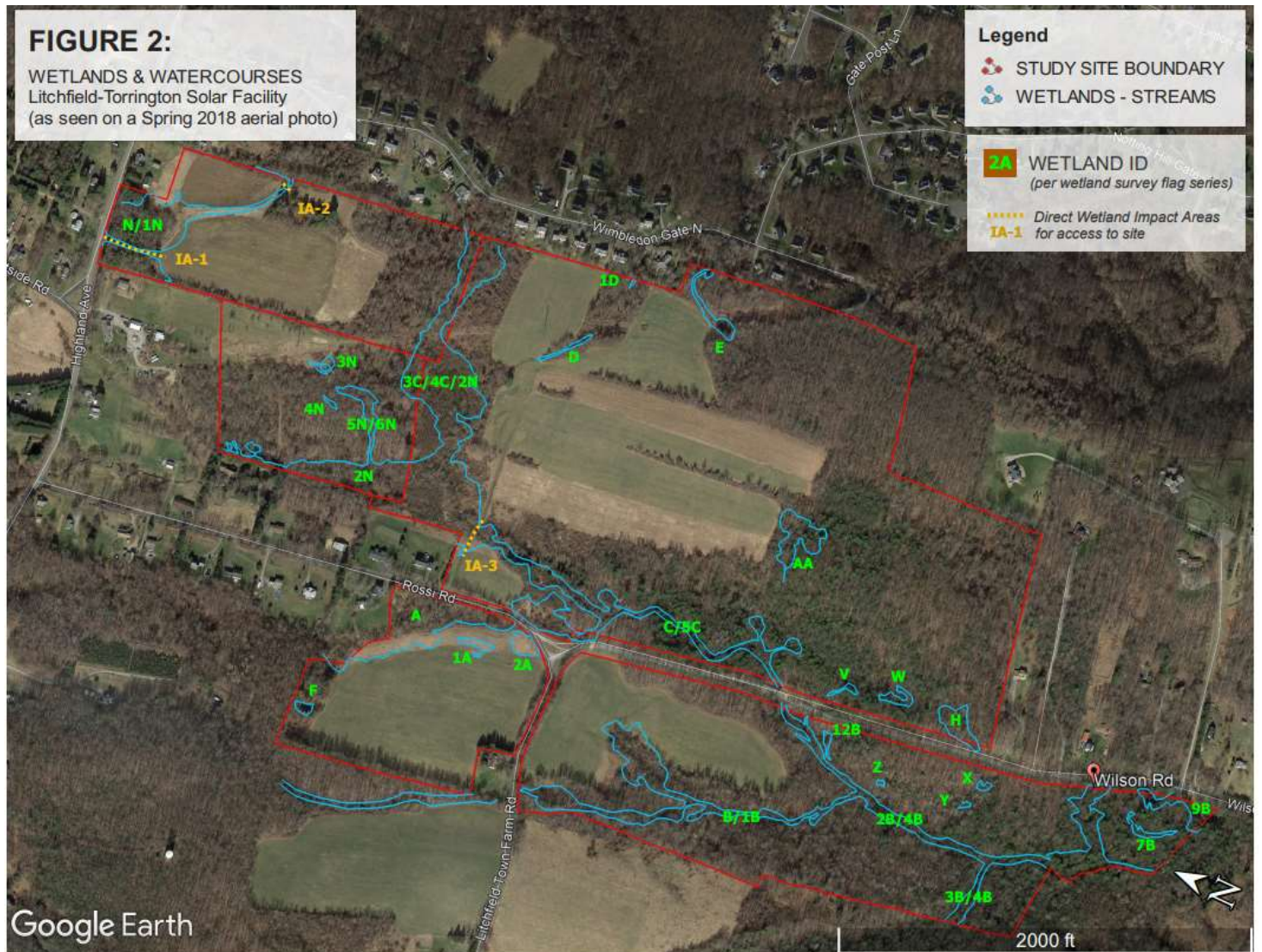
6. Consult with the DEEP Dam Safety program regarding permitting requirements, if any, for the proposed stormwater basins prior to construction;
7. Consult with the state and local fire marshals regarding compliance with CT State Fire Prevention Code, Section 11.12.3 - Ground Mounted Photovoltaic System Installations prior to commencement of construction; and
8. Submit a copy of the DEEP Stormwater Permit prior to the commencement of construction.

### Site Location



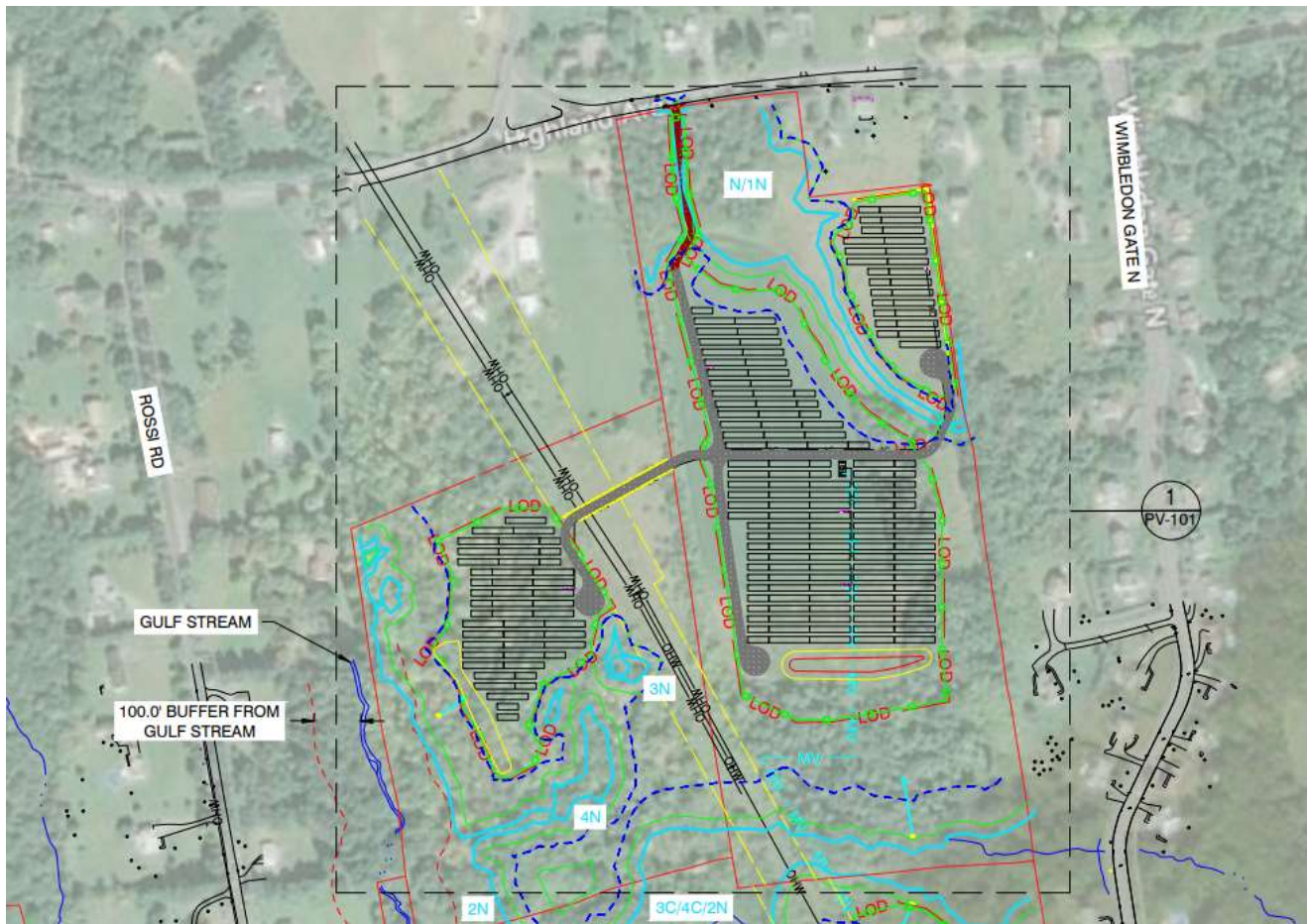


### Wetland and Watercourse Locations



\*The access drive crossing of Gulf Stream (IA-3) is no longer proposed.

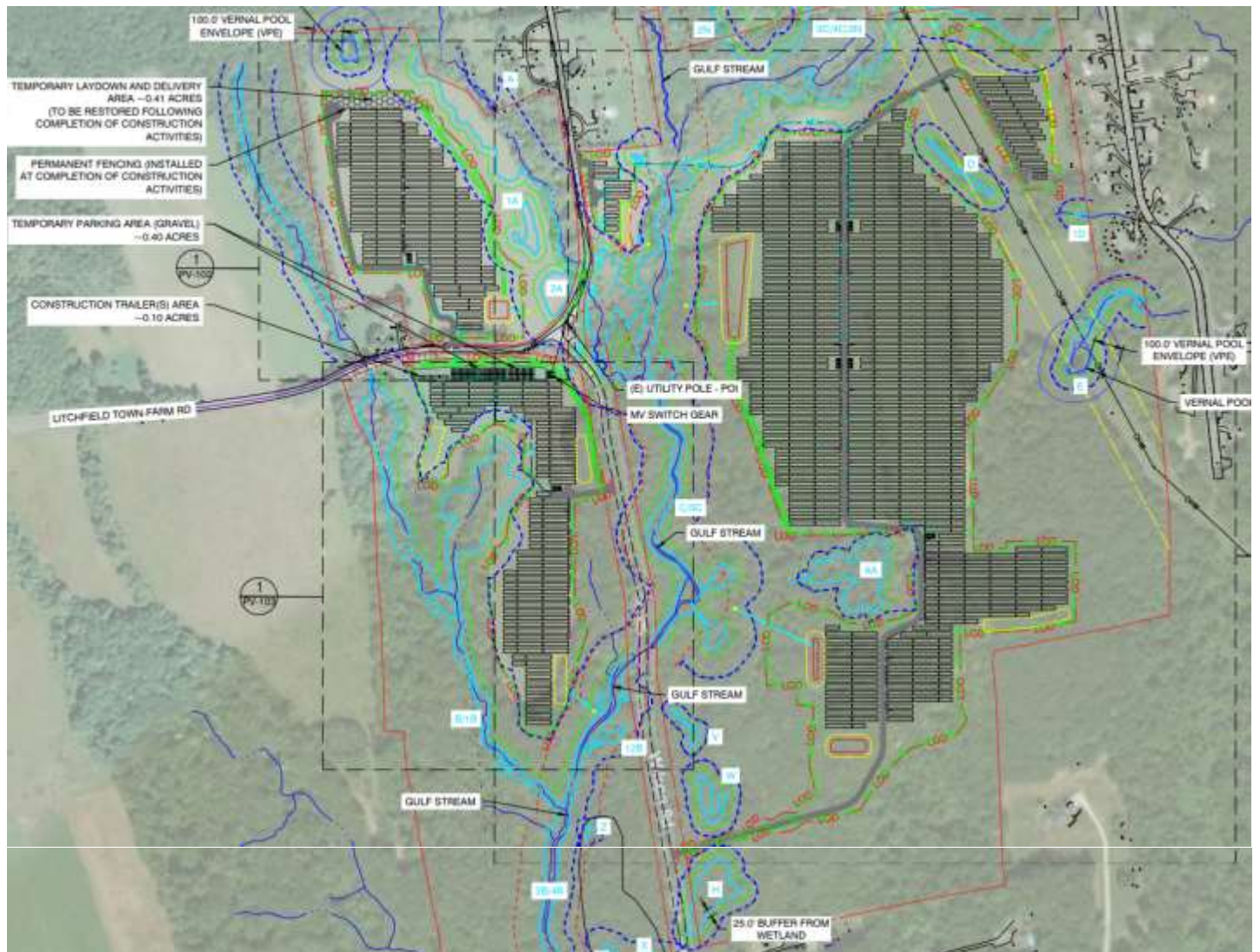
### Site Layout showing Project Area 1



	LIMIT OF DISTURBANCE
	STORMWATER BASIN
	16FT ACCESS ROADS
	12FT ACCESS ROADS
	TEMPORARY LAYDOWN AREA (TO BE RESTORED FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES)
	25' WETLAND BUFFER
	WETLAND SETBACK
	100' GULF STREAM BUFFER
	WETLAND ID
	LANDSCAPING



**Site Layout showing Project Area 2 (right) & Area 3 (left)**



	LIMIT OF DISTURBANCE
	STORMWATER BASIN
	16FT ACCESS ROADS
	12FT ACCESS ROADS
	TEMPORARY LAYDOWN AREA (TO BE RESTORED FOLLOWING COMPLETION OF CONSTRUCTION ACTIVITIES)
	25 WETLAND BUFFER
	WETLAND SETBACK
	100' GULF STREAM BUFFER
	WETLAND ID
	LANDSCAPING

### Wetland Buffer Table

Wetland ID	Dominant Habitat Type	Watercourse Association	Minimum Buffer to Project Limit of Disturbance (FT)	Buffer Rationale
C/SC/28/48	PFO	Gulf Stream	100	100 foot buffer provided to Gulf Stream riparian corridor to maintain existing forested buffer; complies with DEEP Fisheries 100 foot riparian buffer guidance for perennial streams
AA	PFO	intermittent stream	25	wetland located upgradient of Project LOD; complies with DEEP Construction Stormwater GP Appendix I; existing buffer characterized by maintained agricultural field
B/1B	PFO	unnamed tributary to Gulf Stream	50	100 foot buffer provided to unnamed tributary to Gulf Stream; maintains existing forested buffer; complies with DEEP Fisheries 100 foot riparian buffer guidance for perennial streams; 50 foot provided to associated seep area with no disturbance to mature vegetation
A	PFO/PSS/PEM	Gulf Stream Tributary	50	wetland located in existing maintained agricultural field; existing buffer characterized by maintained agricultural field; Project would not remove mature vegetation in buffer
1A	PEM	isolated	50	wetland located in existing maintained agricultural field; existing buffer characterized by maintained agricultural field; Project would not remove mature vegetation in buffer
2A	PEM	isolated	50	wetland located in existing maintained agricultural field; existing buffer characterized by maintained agricultural field; Project would not remove mature vegetation in buffer
N/1N	PFO/PEM	intermittent stream	25	wetland located in existing maintained agricultural field; existing buffer characterized by maintained agricultural field; Project would not remove mature vegetation in buffer
2N	PFO	Gulf Stream	100	100 foot buffer provided to Gulf Stream riparian corridor to maintain existing forested buffer; complies with DEEP Fisheries 100-foot riparian buffer guidance for perennial streams
3N	PFO	isolated	25	wetland located upgradient of Project LOD; complies with DEEP Construction Stormwater GP Appendix I; small isolated wetland pocket supports minimal functions/values
4N	PFO	isolated	25	wetland located upgradient of Project LOD; complies with DEEP Construction Stormwater GP Appendix I; small isolated wetland pocket supports minimal functions/values
H/W	PFO	isolated	50	alternative access road provided to eliminate Gulf Stream crossing passes between Wetlands H & W; LOD associated with solar arrays located approximately 290 feet to the east at closest point to these wetlands
F	PFO	Vernal Pool 1	100	no disturbance to 100 foot Vernal Pool Envelope
E	PFO/PSS/PEM	Vernal Pool 2	190	no disturbance to 100 foot Vernal Pool Envelope
D	PFO/PSS		50	narrow isolated wetland located within Eversource Transmission ROW; project would only be located within maintained agricultural field and would not remove any mature vegetation within buffer
NOTES: Cowardin/USEPA Wetland Classification Habitat Codes PFO - Palustrine Forested PSS - Palustrine Scrub-Shrub PEM - Palustrine Emergent				