
Exhibit I – Wildlife Evaluations Technical Memorandum

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To: Susan Moberg, PWS

Date: June 23, 2017

Memorandum

Project #: 42256.00

From: Jeffrey Peterson, PWS
Chelsea Glinka, ENV SP

Re: Wildlife Evaluations at Tobacco Valley Solar Site
Simsbury, Connecticut

DWW Solar II LLC (DWW) is proposing the Tobacco Valley Solar Project (the Project) on approximately 289 acres of land in Simsbury Connecticut. The Project is proposed on five parcels of land identified by the Town of Simsbury Tax Assessor as G03-403-032, G03-403-012, G03-403-026-32H, G03-403-014, and H05-103-024, collectively referred to herein as the Project Site. The Project will develop approximately 156 acres of the Site which is described herein as the Project Area.

Wildlife Resource Evaluation

Wildlife resources were characterized through a series of surveys, including bird surveys, vernal pool surveys, mammal and reptile observations, and searches for host-plant species for State-listed Lepidoptera. These field efforts were conducted between January and early June 2017. Surveys were directed based on species record information provided by the Natural Diversity Data Base (NDDB) maintained by the Connecticut Department of Energy and Environmental Protection (CTDEEP) in their three response letters dated January 9 and 10, 2016. These letters describe records of State-Listed Species that may occur within or close to the Project Site (see **Figure A-1** in **Attachment A**). The Connecticut Endangered Species Act (CT ESA), passed in 1989, was enacted to protect Connecticut's rare plant and animal species from threats that could lead to their extirpation. The goal of the CT ESA is to conserve, protect, restore and enhance endangered or threatened species and their essential habitats. Under the CT ESA, species are listed according to their level of risk for extirpation. Their status is reviewed every five years by CTDEEP. Species are listed in one of three designations:

"Endangered Species" means any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an "endangered species" pursuant to the federal Endangered Species Act (ESA).

"Threatened Species" means any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a "threatened species" pursuant to the ESA, except for such species determined to be endangered by the Commissioner of the CTDEEP in accordance with section 4 of the CT ESA.

"Species of Special Concern" means any native plant species or any native non-harvested wildlife species documented by scientific research and inventory to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of its population or has been extirpated from the state.

The CTDEEP NDDB species record information for the Project Site lists 23 State-listed species that have the potential to occur within the Project Site. The C TDEEP NDDB performs environmental reviews as part of the CT ESA to determine the impacts of proposed development projects on State-listed species to help conserve Connecticut's biodiversity. This Wildlife Memo includes general plant community descriptions and

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considers potential project effects on wildlife with emphasis on State-listed species. Proposed mitigative measures incorporated into the project design are described where appropriate.

Project Site Vegetation Cover Type Descriptions

The existing and proposed cover type areas within the Project Area are described in **Table 1**. Brief descriptions of each cover type are included below and a figure depicting the habitat cover types is included in **Figure A-2** in **Attachment A**. **Tables B-1 through B-3** in **Attachment B** list observed wildlife species and species with a potential to occur within the Project Site according to cover type.

Most of the Project Site, approximately 131 acres, consists of actively farmed fields (see Site Photos in **Attachment C**). During recent rotations, squash has been planted in hill and furrow design using plastic mulch and drip irrigation. Corn was planted in the field south of Hoskins Road during the prior year's growing season. Areas that have been planted in corn were fall seeded with annual rye grass.

This cover type corresponds to the Manmade designation portion of Key Habitat 10, Sub-habitat Agricultural Lands described in the 2015 Connecticut Wildlife Action Plan (CWAP; CTDEEP, 2015). The agricultural fields provide foraging grounds for species such as mourning dove (*Zenaidura macroura*), European starling (*Sturnus vulgaris*), common grackle (*Quiscalus quiscula*), Canada goose (*Branta canadensis*) and small mammals such as southern red-backed vole (*Myodes gapperi*), white-footed mouse (*Peromyscus leucopus*) and Virginia opossum (*Didelphis virginiana*). Disturbance associated with agricultural operations precludes utilization by most grassland birds because of the lack of suitable habitat and/or nest failure that may occur from the agricultural operation regime. Song sparrow (*Melospiza melodia*), chipping sparrow (*Spizella passerina*), and house sparrow (*Passer domesticus*) were observed foraging in fallow fields. Despite the ongoing agricultural operations, killdeer (*Charadrius vociferous*) appear to nest on the exposed soils between the hills of squash.

The remaining area of the Site not used to raise crops includes approximately 151 acres of forest and woodland (see Photos in **Attachment C**). The forests can be generally classified as upland broad-leaved deciduous, approximately 81 acres, upland coniferous evergreen which comprises approximately 36 acres of the Site, and forested wetland which comprises approximately 34 acres of the Site. Farm trails pass through these forests to access agricultural fields. The forests provide habitat for several year-round resident and neo-tropical migrant songbirds and corresponds to the Upland Forest Key Habitat and includes the Oak Forest and Coniferous Forest Sub-habitats listed in the CWAP.

A scrub-shrub cover type is maintained in the Eversource electric transmission right-of-way (ROW) by removing species that could grow to a height that would interfere with the overhead powerlines. This cover type also is part of the CWAP Key Habitat 10, Sub-habitat Public Utility Transmission Corridors. The early successional vegetation managed in the corridor provides habitat for species such as indigo bunting (*Passerina cyanea*), prairie warbler (*Setophaga discolor*), and eastern cottontail (*Sylvilagus floridanus*).

There are four farm ponds constructed to provide irrigation for agricultural operations. Each pond provides habitat for different assemblages of species. Some observations include herpetofauna such as painted turtle (*Chrysemys picta*), American toad (*Anaxyrus americanus*), and wading birds such as great blue heron (*Ardea herodias*). Each pond supports populations of fish. The two ponds constructed on streams include golden shiner (*Notemigonus crysoleucas*) and all ponds are inhabited by species of centrarchids (bass and sunfish).

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Other notable bird species observed at the ponds include belted kingfisher (*Megaceryle alcyon*), hooded merganser (*Lophodytes cucullatus*), and wood duck (*Aix sponsa*).

Proposed Cover Type Conversions

The proposed area of development within each cover type and the area remaining by cover type is provided in **Table 1** and the changes are depicted in **Figure A-3 in Attachment A**. Approximately 126 acres of the agricultural fields will be converted to solar array panels and associated improvements with a permanent grassland cover type. Grass cover with legumes will be established under the array and along the perimeters of the arrays. The grassland cover will be mown approximately one to two times per year to prevent vegetation from overtopping the solar array panels. Additionally, approximately 24 acres of deciduous forest and six acres of coniferous forest will be cleared to accommodate the solar arrays and allow for an adequate perimeter around the array that will permit sufficient sun penetration and ensure that the panels are not shaded by the trees. These cleared areas will also be planted in grasses and legumes.

A smaller area of scrub-shrub cover type within the ROW will be temporarily disturbed during construction to interconnect the Project to the North Simsbury Substation by underground conduit. Pre-construction wildlife usage patterns are anticipated to resume after construction has been completed.

None of the ponds, streams, or the forested wetland will be impacted by the proposed Project and best management practices will be employed during construction to prevent sedimentation and/or runoff from entering the ponds, streams, or wetlands.

Table 1 Cover Types with Project Parcels: Existing and Proposed Areas

Cover Type	Existing Area (Acres)	Area to be Altered (Acres)	Area not Altered (Acres)
Agricultural Fields	131	126	4.3 ¹
Deciduous Forest	86	24	57
Coniferous Forest	36	6	30
Forested Wetland	34	0	34
Scrub-Shrub ²	4.0	0	4.0
Ponds	3.0	0	3.0

1: The acreage supporting the solar array panels will all be managed as cool season grassland. Agricultural fields not occupied by solar arrays will also be converted to grassland or other landscape area.

2: Primarily Public Utility Transmission Corridor.

Breeding Bird Inventory & Surveys

An inventory of potential breeding birds provided in **Table B-1 in Attachment B** has been developed based on information from field observations, the Atlas of Breeding Birds of Connecticut (Bevier ed. 1994) and New England Wildlife (DeGraaf and Yamasaki 2001), and NDDDB data. Line transect surveys using call back surveys for State-listed species savannah sparrow (*Passerculus sandwichensis*), vesper sparrow (*Pooecetes gramineus*), grasshopper sparrow (*Ammodramus savannarum*) were conducted by VHB biologists on March 29, May 11, and June 8, 2017 and the observed species have been indicated in **Table B-1**.

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Nighttime surveys for eastern Whip-poor-will (*Caprimulgus vociferous*) were conducted on May 11 and June 12, 2017. As a result of the daytime and nighttime surveys, a total of 62 bird species were identified in the Project Site and 24 of these species appear in the Connecticut Wildlife Action Plan (CTDEEP, 2015) as species of Greatest Conservation Need (GCN). GCN species that were observed are annotated in **Table B-1**.

In May and June breeding bird surveys were conducted in the morning between 7:00 AM and 11:00 AM. Incidental species observations were also recorded throughout the day and during other field investigations not specifically concerning birds. VHB biologists conducted line transect surveys which followed pre-determined survey routes intended to maximize opportunities to observe listed species (see **Figure A-4** in **Attachment A**). Birds were identified based on visual observations and auditory identification of calls and songs. All birds within visual and auditory range were recorded. The surveys were conducted on clear days with low wind speeds that minimized interference with acoustic observations. Temperatures were seasonably appropriate during the survey windows with temperatures ranging between 43°F and 52°F¹ on March 29, between 53°F and 60°F on May 11, and between 50°F and 70°F on June 8.

Farming operations affected habitat utilization in some of the agricultural fields during both the May 11 and the June 8 surveys. On May 11th, the field on the north side of Hoskins Road was being reworked with tractors to level the hill and furrow pattern. On June 8th, a tractor was operating along the east side of this field and only the western side was surveyed. During the spring of 2017 the field south of Hoskins Road had dense stands of rye grass over four feet tall. This cover is not suitable for grasshopper or savannah sparrow. Up until the middle of June the western half of the large northernmost field was covered with a frost blanket. This covering reduced the habitat value for songbirds that might utilize agricultural fields.

VHB biologists recorded all bird species present, but were focused on surveying habitats that may be suitable for the State-listed bird species identified in the NDDDB records. State-listed bird species and their habitat preferences are provided in **Table 2**. Call back surveys using recordings from the Audubon Birds Application (National Audubon Society) of these target species were played throughout the course of the June 8, 2017 survey. After each recording was played the biologists stopped to listen for return calls for approximately two to five minute intervals. The biologists did not observe or detect the calls of any State-listed bird species during the call-back surveys or any other field investigations of the Project Area. Brief species descriptions and habitat requirements for the State-listed species are provided below. According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool, there are no federally-listed bird species within the Project Site (see **Attachment D** for IPaC Official Species Lists).

Eastern whip-poor-will Surveys

Two Eastern whip-poor-will surveys were conducted at night during clear conditions in near-full moon phases. The first survey was conducted during the night of May 11, 2017 with a temperature of

1 Weather station: Simsbury Airport KCTSMB7 <https://www.wunderground.com/personal-weather-station/dashboard?ID=KCTSMB7#history/s20170608/e20170608/mdaily>

approximately 40°F and a slight breeze between the hours of 9:46 PM and 10:31 PM at three different locations for at least six minutes at each location. No whip-poor-will were detected by this survey.

A second survey was conducted during the late hours of June 12 into the early morning hours of June 13. Temperatures were in the low 80°F with little wind. The VHB biologist visited 11 sites and monitored each site for Whip-poor-will calls for periods between 6 and 15 minutes. The VHB biologist used call-back survey recordings of the Whip-poor-will at eight of those sites (see **Figure A-4** in **Attachment A**). Call-back survey techniques were not used at three sites due to their proximity to residences. No whip-poor-will were detected during this second survey.

Table 2 State-listed bird species that have the potential to occur within or adjacent to the Project Site

Species Common Name	Scientific Name	State-Listed Status	Habitat Type(s) ¹
Eastern meadowlark	<i>Sturnella magna</i>	Threatened	Large, grassy fields such as hayfields and pastures
Horned lark	<i>Eremophila alpestris</i>	Endangered	Beaches and open areas along the coast as well as open grassland and fallow agricultural fields
Brown thrasher	<i>Toxostoma rufum</i>	Special concern	Suburban and rural areas, particularly in thickets, brushy hillsides and woodland edges; open areas with patches of bare ground
Savannah sparrow	<i>Passerculus sandwichensis</i>	Special concern	Grassy fields with damp soils and upland areas bordering on salt marshes
Vesper sparrow	<i>Pooecetes gramineus</i>	Endangered	Dry upland portions of pastureland, sandy fields, hayfields, brushy edges of farms fields, and extensive openings in pine woodland
Grasshopper sparrow	<i>Ammodramus savannarum</i>	Endangered	Moderately dry grasslands, typically with bunch grasses and areas of open ground
Whip-poor-will	<i>Caprimulgus vociferus</i>	Special concern	Scrubby immature woods or areas of regrowth following disturbance in mature forests. Prefers sites with relatively dry, sandy soils.

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1 Habitat types based on descriptions from Bevier, ed. 1994, The Atlas of Breeding Birds of Connecticut

State-Listed Species

The State-Listed bird species listed within the NDDB response letter that have the potential to occur within or adjacent to the Project Site boundaries are listed in **Table 2** and the approximate area that these species may occur within is depicted in the NDDB polygon in **Figure A-1** in **Attachment A**. This group of State-listed bird species, with the exception of the eastern whip-poor-will which prefers to nest on forest floors, all nest on or close to the ground in grassland or upland meadows. As recently as 2010 there were grassland areas present near the North Simsbury Substation along Hopmeadow Street and once fallow tobacco fields north and east of County Road may also have once provided suitable habitat for the grassland bird species provided in the NDDB report. However, these former grassland habitats are no longer suitable because the land near the substation has been developed as Eastpoint at Dorset Crossing and the former abandoned tobacco fields have been placed back into cultivation. Due to their nesting preferences and the disturbance from agricultural management during the nesting season, it is unlikely that breeding attempts by grassland species would be successful. The lack of suitable breeding habitat likely contributed to the non-detection of these species during the bird surveys.

The Atlas of Breeding Birds of Connecticut (Bevier ed., 1994) is the most comprehensive review to date of Connecticut's breeding birds. The Atlas indicates that several of the State-listed species from the NDDB records were scarce within Hartford County during the five-year span (1982-1986) that the breeding bird surveys for the atlas were completed. Savannah sparrow had two confirmed breeding pairs and four probable pairs, the grasshopper sparrow had two confirmed breeding pairs, the vesper sparrow had one probable breeding pair, the horned lark had two confirmed breeding pairs, and the whip-poor-will had one confirmed breeding pair and seven probable breeding pairs (Bevier ed., 1994). Brown thrasher and eastern meadowlark by comparison had more numerous breeding pairs in Hartford County with more than ten confirmed breeding pairs per species (Bevier ed., 1994).

Potential Impacts of Solar Arrays on Birds

A literature review by Harrison et al. (2016) evaluated peer-reviewed publications concerning the impact of solar photovoltaic (PV) developments on birds found relatively little scientific evidence of a direct impact. The review concluded that it is likely that different avian species may be affected differently by solar developments, dependent on the habitat around a solar PV development, the spatial requirements of a given species and the foraging behavior of that species (Harrison et al., 2016). One potential effect considered involved the polarized light effect from the solar panels that may cause birds to mistake the solar panels for water and thus result in collisions (Bryant et al., 1984). However, the limited number of mortality studies that have been conducted suggests that the incidence of bird mortality associated with bird collisions with PV developments is very low (DeVault et al., 2014; Walston et al., 2016). According to the literature review, there is likely to be a higher risk of bird collision with infrastructure associated with solar PV developments such as overhead powerlines (Harrison et al., 2016).

Two other forms of direct impact are possible. The Project will result in the loss or conversion of some of the cover types utilized as habitat for some species and temporary disturbance during construction will

displace some species. A summary of the areas of the existing cover types and proposed post-Project cover types is provided in **Table 1**.

The largest alteration will involve the conversion of tilled agricultural fields to permanent grass and legume cover in the solar array fields. Based on the biologists' observations, conversion of agricultural fields are likely to displace six to eight pairs of Killdeer. Although some species, such as mourning dove (*Zenaida macroura*) and American robin (*Turdus migratorius*) may prefer cultivated fields over grass fields, these species are common and are not limited by the availability of cultivated fields because they utilize other habitats readily. The management of the fields in permanent grass cover is unlikely to attract additional grassland bird species as the solar collectors breakup the continuity of the cover in a similar way that trees and shrubs would. Species that utilize edge habitat are likely to continue to be attracted to the edges of the solar array development. Several of the generalist species observed within the agricultural fields are also likely to continue to forage in the grassland associated with the solar array.

Approximately 30 acres of forested upland will be cleared for the Project which will result in some habitat loss for forest-dwelling species. The Center for Land Use Education and Research (CLEAR) produced a study of Forest Fragmentation in Connecticut. The GIS coverage for Simsbury prepared using 2006 aerial imagery indicates that the Project would alter a strip of Core Forest situated along Munnisunk Brook. Core Forest is only mapped for forest blocks that are greater than 250 acres in area with the Core Forest element at least 300 linear feet from any forest edge (University of Connecticut, 2009). Similar review of this same mapping indicates that existing Forest Core units along Bissell Brook and Saxton Brook will be mostly unaffected by the Project as less tree clearing is proposed in these areas.

There will be no reduction in habitat area of the forested wetlands, open water provided by ponds, aquatic and riparian habitats associated with the three perennial streams which cross the Project Site, or the scrub-shrub cover within the powerline ROW.

Mitigative Actions

To avoid the potential disturbance of birds during the breeding season, DWW proposes the following time-of-year schedule:

- If construction activities are to occur during the nesting period between early May through mid-August, vegetation removal work (forest tree removal and agricultural clearing) should be cleared before May 1st and after mid-August.
- If vegetation removal cannot be completed before May 1st areas to be cleared should first be surveyed to determine if breeding birds would be disturbed. If the survey concludes that breeding birds would be disturbed, then a modified vegetation removal schedule will be implemented.

Herpetofauna

Vernal Pool Surveys

VHB biologists conducted vernal pools surveys of the entire project area. The only potential vernal pools identified were four farm ponds created to provide irrigation for the agricultural operations. VHB investigated the ponds on April 3, April 19, and May 11, 2017 to attempt to detect obligate vernal pool

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species. Each of the ponds were found to contain fish populations and therefore do not meet the criteria for vernal pool designation. Further details concerning the vernal pool surveys are provided in a separate memo dated June 16, 2017.

Observations of reptiles and amphibians were recorded during vernal pool surveys and when incidentally encountered during other investigations. Species that were observed or have the potential to occur within the Project Area are included in **Table B-2** in **Attachment B**. Correspondence from the NDDDB reported the potential for three species of state-listed reptile and one amphibian to occur within the Project Area. VHB biologists did not observe any of these State-listed species during their field investigations.

State-Listed Herpetofauna and Potential Project Impacts

Eastern box turtle

Eastern box turtles (*Terrapene carolina*) require both old field and forested habitat, which can include power lines and logged woodlands, and are often found near small ponds and streams. They hibernate on land from October through April by digging down in the soil. Box turtles have extremely small home ranges and can usually be found in the same area year after year (Klemens, 1993).

Because of their small home ranges, slow reproductive rate, and inability to quickly flee when disturbance occurs, the effects of construction on local box turtle populations can be substantial. Tree removal and soil grading activities represent a threat to box turtles. Their dormant season is between late November and early April. Suitable habitat for this species is present within the Project Site and tilled agricultural lands may be suitable for nesting.

Wood turtle

Wood turtles (*Clemmys insculpta*), a State-listed Species of Special Concern, require riparian habitats bordered by floodplain, woodland, or meadow. They hibernate in the banks of the river in submerged tree roots and in summer move to adjacent old fields, woodlands and power line corridors (Klemens, 1993). Unlike box turtles, wood turtles have home ranges of several acres, throughout which they freely roam. Because of their extensive overland movements, roads traversing wood turtle habitat contribute significantly to mortality due to vehicle conflicts (Klemens, 1993). Suitable habitat for this species may be present along segments of the three perennial tributaries to the Farmington River that cross the Project Site. In addition, the four farm ponds in the Project Site may provide suitable habitat. There is no work proposed within the streams and buffer zones are proposed from the edge of the riparian wetlands.

Wood turtles have been negatively impacted by the loss of suitable habitat and can be displaced by soil disturbance during their hibernation period. Construction activities near riverbanks and wetlands containing hibernating wood turtle could potentially harm this species. Construction activities during the turtle's active period can result in mortality from interactions with farming equipment, clearing equipment, earth-moving equipment, and other vehicles.

Eastern hognose snake

Hognose snakes (*Heterodon platirhinos*), a State-listed Species of Special Concern, prefer sandy soil in fields and forest edges and suitable habitat for this species is present within the Project Area. VHB biologists

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walked the field edges during daylight hours during bird surveys and did not detect this species. At least two of the farm ponds in the Project Area provide breeding habitat for a preferred prey species, eastern American toad. Eastern Hognose snake lay their eggs in June or July. Eggs take six to eight weeks to hatch (Klemens, 1993).

Eastern hognose snakes favor sandy, gravelly, well-drained soils and have been observed in dry, ecotone areas bordering on young, second-growth deciduous forests (Klemens, 1993). They tend to burrow in the existing subterranean runways of small mammals (Klemens, 1993). Vegetation removal and grading activities could destroy burrows used by the snake during winter hibernation and the activity could drive the snake from the area. These same activities could destroy nests if conducted during the incubation period which last from June through August (Klemens, 1993).

Northern leopard frog

The northern leopard frog (*Rana pipiens*), a State-listed Species of Special Concern, is known to occur along the floodplain of the Farmington River where it prefers grassy habitats and meadows with forbs (Klemens, 1993). The Farmington River is nearly a mile east of the Project Site. No work is proposed close to the three perennial tributaries that run through the Project Site and potentially suitable meadow habitat is only present along Bissell Brook as it leaves the Project Site. It is unlikely that northern leopard frog occurs within the Project Area.

Mitigative Measures

DWW will employ the following mitigative actions to prevent the incidental take or harm to the State-listed herpetofauna species.

- Environmental monitoring by qualified personnel will be provided during construction in potential State-listed reptile habitats to try to avoid any impacts to these organisms.
- Entrenched silt fence will be used to isolate the work area from undisturbed areas that may provide habitat for a listed species.
- A contractor awareness program will be developed and implemented to ensure that contractors can identify these species and have been instructed on proper care and handling of herpetofauna individuals should one need to be removed from the work area.
- The work area will be examined by construction personnel in a walk-over or sweep prior to work each day.
- To the extent possible, construction vehicles and equipment will be parked along access routes and in active work areas and not in potential habitat.
- Any State-Listed species encounters will be reported to the CTDEEP NDDb.

Mammals

VHB biologists documented observations of mammals during the several field investigations performed within the Project Area between January 2017 and early June 2017. Direct and indirect observations, along with species that may utilize the Project Site, are documented in **Table B-3** in **Attachment B**. Notable field

observations include black bear (*Ursus americanus*) footprints along a farm field perimeter road, Virginia opossum, raccoon (*Procyon lotor*), and white-tailed deer (*Odocoileus virginianus*). Black bear is a GCN species listed in the CWAP.

Mammals within the Project Site rely on the forested areas to provide cover and breeding areas. Agricultural fields may be foraged at certain times of the year as when corn is ripening. The approximately 30 acres of forested area that will be cleared will not eliminate interior forest blocks. Although the proposed solar array will be fenced for safety and security reasons, adequate corridors will be maintained to facilitate wildlife passage. Wildlife corridors are depicted in **Figure A-5** in **Attachment A**.

Federal and State-Listed Mammals

The CTDEEP NDDDB reported the potential presence of three State-listed bat Species of Special Concern: red bat (*Lasiurus borealis*), silver-haired bat (*Lasionycteris noctivagans*) and hoary bat (*Lasiurus cinereus*), within or proximate to the Project Site. The Official Species List generated by the USFWS IPaC tool indicates that the federally-threatened northern long-eared bat (*Myotis septentrionalis*) has the potential to occur in the Project Site. The forested areas of the Project Site offer suitable, active-season roosting habitat for each of these species. All species are reported to be migratory (Kunz 1982; Shump 1982 and 1982a; USFWS, 2015) and therefore are not expected to overwinter within the Project Site (Cryan 2003; USFWS 2015). There are no critical habitats assigned to these mobile and migratory species. However, reproductive success relies on the use of maternity roost trees. Brief descriptions of each species are provided below.

Red bat

Red bats use solitary or communal maternal roosts which may be on branches of deciduous or coniferous trees or in woodpecker cavities in snags. The two to three young a mother bat raises roost among foliage in deciduous or coniferous trees or in tree cavities for three to five weeks in the summer before their first flight (DeGraaf and Yamasaki, 2001).

Silver-haired bat

Silver-haired bats are associated with coniferous and deciduous forests and forage near bodies of water. Roost are often under the loose bark of tree species such as willows, maples, or ash. Cavities in snags may also be used by maternity colonies. Young are typically weaned in five weeks (DeGraaf and Yamasaki, 2001).

Hoary bat

The hoary bat lives in forests of the eastern United States and diverse forest habitats with a mixture of forest and small open areas that provide edges are ideal for this species (DeGraaf and Yamasaki, 2001). Maternal roosts are thought to be solitary with young roosting in foliage along forest edges or in fencerows. Females typically give birth between mid-May and late June and the vast majority have twins, but can have litters of one to four pups. This species overwinters in coastal areas (DeGraaf and Yamasaki, 2001).

Northern long-eared bat

The northern long-eared bat was listed under the ESA as a federally threatened species on April 2, 2015. It is also listed as a State-endangered species but this species was not included within the NDDDB species report.

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This is one of the species of bats that has been most impacted by the disease white-nose syndrome (WNS), a fungal infection that interrupts hibernation in effected individuals and generally leads to death due to exhaustion and lack of food supplies. WNS has caused extensive bat mortality because hibernating bats roost together in large numbers which facilitates the rapid spread of WNS (USFWS, 2015).

During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). Males and non-reproductive females may also roost in cooler places, like caves and mines. Northern long-eared bats seem to be flexible in selecting roosts, choosing roost trees based on suitability to retain bark or provide cavities or crevices. They rarely roost in anthropogenic structures like barns and sheds (USFWS, 2015). Known northern long-eared bat hibernacula within Connecticut have been mapped by CTDEEP. There are no known hibernacula within Simsbury and at the time of the map's publication (February 2016) there were no known maternity roosting trees within Simsbury.

Potential Effects of Solar Farms on Bats

Based on a literature review that has evaluated peer-reviewed publications concerning the potential impact of solar PV developments on bats, there are currently no experimental observations or theoretical scientific literature on the effect that solar panels may have on bats (Harrison et al., 2016). Generalized risks that require further scientific investigation include proximate risk such as fatal collisions with solar panels and the associated infrastructure, indirect risks such as loss of habitat from the construction of solar array developments, and potential effects on feeding behavior as some bat prey (e.g. insects) may be attracted to the reflective properties of solar panels. An experimental study that evaluated the navigation capabilities of bats over smooth plates (the plates used in the experiment were wood, plastic, and metal) reported that bats were apparently able to use echolocation to differentiate between water bodies and smooth plates and no collision mortalities were recorded (Greif and Siemers, 2010). Although smooth plates are not the same as solar panels, the study suggests that at least some species of bats may be adept at avoiding collision with flat surfaces (Greif and Siemers, 2010).

Mitigative Measures

VHB did not conduct bat surveys to determine potential presence or absence of the listed bat species as part of the environmental review and the Applicant will operate under the assumption that the listed bat species may be present within the Project Area. To minimize the possibility of "incidental take" of roosting bat species, the Applicant will follow the guidance provided in the USFWS Final 4(d) Rule issued for the northern long-eared bat on January 14, 2016 (USFWS, 2017). The Applicant will not perform any tree removal activities during the bat pupping season between June 1 and July 31 (USFWS, 2017). If any bats are encountered during tree clearing activities outside of that window, then tree clearing will be immediately stopped and the Applicant will contact the Bat Program within the CTDEEP Wildlife Division to determine the proper next steps.

Invertebrates

According to the CTDEEP NDDDB correspondence there are four state-listed species of insect potentially occurring in the Project Site. This includes one State-Threatened odonate, two species of moth and one tiger beetle that are listed as Special Concern.

Rapids clubtail

The State-Threatened rapids clubtail (*Gomphus quadricolor*) is a dragonfly found in high and moderate gradient coldwater habitats associated with brooks and streams with strong currents over clean gravel, cobbles or bedrock. Eggs are laid outside plant tissues. Flight season is May to July (Massachusetts Natural Heritage and Endangered Species Program, 2015). Bissell Brook, Saxton Brook and Munnisunk Brook each provide suitable habitat for this species in at least portions of their segments which cross through the Project Site. No activities are proposed along these brooks which could directly impact the species and ample setbacks have been provided to protect the stream habitats from indirect effects.

Big sand tiger beetle

The big sand tiger beetle (*Cicindela formosa generosa*) is a state Species of Special Concern that inhabits exposed sandy substrates where its larvae are subterranean and trap insects in shallow pits they construct. Wagner (2015) notes this species has a strong affinity to areas mapped as Windsor sands. The parent material for these soils were originally deposited as paraglacial dunes. There are very limited areas of this soil type mapped in the Project Site that are not forested or otherwise covered with vegetation. Adults remain active until middle and late September before overwintering. Adults resume activity in late spring.

Open areas consisting of unconsolidated sand were observed around the perimeter of the large field south of Munnisunk Brook, especially at its eastern side near the abandoned tobacco barns. These deposits are blow-outs where the fine fraction of eroded soil deposits were lost by wind erosion leaving lag deposits of sand. A second suitable area may occur in the Eversource transmission line ROW above the North Simsbury Substation. These areas were surveyed in June 2017 and this large and rather conspicuous species was not observed.

Spinose flower moth

The spinose flower moth (*Schinia spinosae*) is a state Species of Special Concern that is associated with xeric, open sand plains where its host plant, coastal jointed knotweed (*Polygonum articulatum*), is found (Wagner et al., 2008). Flight season for adults occurs in September (New York Natural Heritage Program, 2015).

During previous investigations performed by VHB in 2009 for an unrelated project, VHB biologists observed the host plant in the open sands on the slopes north of the North Simsbury Substation. In June 2017 VHB biologists inspected the transmission line ROW and sandy edges of agricultural fields but they did not identify any stations of the host plant on the Project Site.

Scribbled sawfly moth

The scribbled sawfly moth (*Sympistis perscripta*) is a state Species of Special Concern. It is an uncommon moth associated with infertile, droughty, open habitats such as those found within Eversource powerline

ROW and open road sides where its larval host plant, Canada toadflax (*Nuttallanthus canadensis*), is found (New York Natural Heritage Program, 2017). Scribbled sallow moth completes one generation per year in Connecticut. Flight season for adults occurs from late May into early June. Wagner et al. (2008) reports that the infrequently observed caterpillars have been seen mostly in late June while feeding on the host plant.

A survey was conducted by VHB on June 8 when Canada toadflax flowers and is easy to locate. There are scattered toadflax plants around some field edges, however the only one sizable population was found on an open sand slope close to the North Simsbury Substation under transmission lines. This area was GPS surveyed and will be roped off prior to construction to avoid disturbance to the area. No other mitigation is proposed.

Freshwater Mussels

The CTDEEP NDDDB correspondence included records for three State-listed freshwater mussel species. During the potential vernal pool investigations performed in the spring at the farm ponds, VHB biologists observed unidentified freshwater mussel shells along the banks of two of the impounded farm ponds: the northwestern pond along Munnisunk Brook and the pond south of the ROW along Saxton Brook. The shells were likely left over from depredation by raccoon. VHB biologists identified the mussel shells as Eastern Floater (*Pygandon catarcata*) using the Connecticut Field Guide to Freshwater Mussels (CTDEEP, 2003) and the New Jersey Key to Freshwater Mussels (Bowers-Altman, undated). This species of mussel exists in a wide variety of habitats and substrate types and is common within manmade water bodies where it thrives in nutrient-rich water (CTDEEP, 2003).

VHB did not conduct further searches for freshwater mussels during the field investigations as no work is proposed that would impact the farm ponds or the streams where the mussels would be found.

Dwarf wedgemussel

The dwarf wedgemussel (*Alasmodonta heterodon*) is listed as endangered under the federal ESA and is also assigned a state Endangered classification under the CT ESA. According to the USFWS (2011), the dwarf wedgemussel inhabits creek and river areas with a slow to moderate current and a sand, gravel, or muddy bottom. The USFWS states that destruction and degradation of habitat and water pollution are major threats to the survival of this species.

Eastern pearlshell

The eastern pearlshell mussel (*Margaritifera margaritifera*) is a state Species of Special Concern. According to the CTDEEP, the eastern pearlshell does not have specific substrate requirements but is most often found in streams and small rivers that support trout or salmon populations (cold water fishery). This species is not found in lakes or ponds (CTDEEP, 2003).

Eastern pondmussel

The eastern pondmussel (*Alasmodonta heterodon*) is a state Species of Special Concern. According to the CTDEEP, the eastern pondmussel inhabits a variety of habitats such as coastal ponds, streams, and rivers. This species is reported to inhabit a wide variety of substrates and does not appear to have preferences for

specific depth or flow regimes. In the Connecticut River watershed, this species is most common in stream and rivers (Nedeau, 2008).

Mitigative Measures

There is no work proposed that will impact the freshwater ponds or streams within the Project Site. Mitigation will consist of good housekeeping practices and enhanced erosion and sediment controls installed along slopes that drain to one of the three streams which pass through the Project Site.

Vascular Plants

Plant Community Resources

Simsbury is situated in the Lower Connecticut River Valley subsection of the Laurentian Mixed Forest Province (Keys et al., 1995). The property has two principle cover types, open agricultural lands and forest lands. Forest types include stands dominated by mixed deciduous hardwoods, evergreen coniferous trees, and mixed stands containing coniferous and broad-leaved deciduous trees.

According to the classification system prepared by Metzler and Barrett (2006), the dominant upland forest type belongs to the northern red oak/black oak (*Quercus rubra/velutina*) and Blue Ridge blueberry (*Vaccinium pallidum*), and a variant of this community with white pine (*Pinus strobus*) present as a codominant. Witch hazel (*Hamamelis virginiana*), maple-leaved viburnum (*Viburnum acerifolium*), and American hazelnut (*Corylus americana*) are common shrubs in these forests. Common herbaceous species include hay-scented fern (*Dennstaedtia punctilobula*), wintergreen (*Gaultheria procumbens*), wild sarsaparilla (*Aralia nudicaulis*), and white wood aster (*Eurybia divaricate*).

A smaller area of the Sugar maple (*Acer saccharum*), White ash (*Fraxinus americana*) / New York fern (*Thelypteris noveboracensis*) community occurs on the south facing seepage slopes above Bissell Brook near the southern limits of the Project Site. Along with the named species in this community oaks, eastern hemlock, yellow poplar, and white pine occupy the tree canopy. Witch hazel and spicebush (*Lindera benzoin*) are common shrubs and nightcaps (*Anemone quinquefolia*) is a very common spring flower on the forest floor.

The forested wetlands on the property belong to two different classifications of red maple (*Acer rubrum*) dominated forest. The most common is the red maple/northern spicebush community which occurs streamside along Bissell Brook, Saxton Brook, Munnisunk Brook and on seepage slopes above these streams. The red maple/highbush blueberry (*Vaccinium corymbosum*) community is less common and occurs in wetland depressions such as the wetland southwest of Knollwood Drive (Wetland 2). Other common shrubs in these wetlands include winterberry (*Ilex verticillata*), northern arrowwood (*Viburnum dentatum*), and maleberry (*Lyonia ligustrina*). Herbaceous species commonly found in these wetlands include skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmundastrum cinnamomeum*), jewelweed (*Impatiens capensis*), and fowl mana grass (*Glyceria striata*).

Portions of the steeper ravine slopes and bottoms along Munnisunk Brook and to a lesser extent Bissell and Saxton Brooks host an Eastern hemlock (*Tsuga canadensis*) forest cover type. This hemlock dominated forest straddles upland and wetland soil types.

State-Listed Plant Species

Correspondence with the CTDEEP NDDDB indicated that there are records for four state-listed vascular plants in the vicinity of the Project Site that are protected under the CT ESA.

Tall swamp rosette-panic grass

Tall swamp rosette-panic grass (*Dichanthelium scabriusculum*) is a state Endangered species. Haines (2011) indicates this species is found along dry sandy roadsides, grasslands, and open ROWs also mesic to hydric, rocky or boggy soils next to streams. Fernald (1970) (*Panicum scabriusculum*) describes the requisite habitats as swamps, wet woods and damp sands.

Vernal panicles are present on the grass from May through July. VHB biologists have searched roadsides through the Project Site and have not observed the species. Most suitable habitats for this species will be avoided during Project construction as these habitats generally occur within jurisdictional wetlands.

Davis' sedge

Davis' sedge (*Carex davisii*), a state Threatened species, is known to grow in the floodplain of the Farmington River in Simsbury, almost a mile east of the Project Site. The New England Wild Flower Society (NEWFS) Conservation and Research Plan (2003) for this species reports populations in New England are associated with floodplains and appear to require some habitat disturbance from flooding or anthropogenic origin. This species prefers mesic floodplain soils that are inundated for short periods in the spring. This plant flowers in June and the perigynia needed for identification mature in early July. Suitable habitat for this species is not thought to exist in the Project Area.

Starry campion

Starry campion (*Silene stellate*) is a state Threatened species. Haines (2011) indicates this species is found in deciduous woodlands, rocky forests, riverbanks, and roadsides. The flowering period for this tall forb is reported by Fernald (1970) to be July through September. Suitable habitat for this species is present within the Project Area and at least one introduced congener is quite common around field edges. Surveys for this plant will be undertaken in August.

Dillenius' tick-trefoil

Dillenius' tick trefoil (*Desmodium glabellum*) is a state Species of Special Concern. Fernald (1970) indicates this species inhabits dry sandy woods, and Haines (2011) adds roadsides and open powerline ROWs. This species prefers sun or partial sun. Bloom time is from mid-summer to early fall. Potentially suitable habitat for this species is available around field edges, along woods roads, and in powerline ROWs. A late summer survey will be conducted for this Species of Special Concern.

Mitigative Measures

VHB biologists will perform plant surveys for the State-listed plants for which there is suitable habitat within the Project Site during the blooming period for each plant. Any observed occurrences of the state-listed plant species will be cordoned off with protective flagging to prevent disturbance to these areas during

construction. If avoidance is impracticable, additional coordination will be undertaken to comply with the CT ESA.

Pollinator Habitat Enhancement Demonstration Project

DWW has committed to implementing a demonstration scale project aimed at enhancing pollinator habitat within the Tobacco Valley Solar Project. Pollinators are essential for food production. Research has shown that where habitat needs are met, wild native bees contribute substantially to crop pollination (Pollinator Health Task Force, 2016). With the serious decline and difficulty of procuring hives of European honey bees for crop pollination, protecting and restoring habitat for native pollinators has become ever more important. Pollinator habitat includes native flowering plants that support bees, birds, butterflies, bats, and other animals that provide pollination services essential to the survival of flowering plants (Pollinator Health Task Force, 2016).

Today, pollinators face a variety of challenges, including habitat loss due to development, altered land use patterns, and climate change, as well as exposure to pests, pathogens, pesticides, and other stressors (Pollinator Health Task Force, 2016). One of the overarching goals of the Pollinator Partnership Action Plan is the restoration or enhancement of seven million acres of land for pollinators over the next five years (from 2016 through 2021).

To address the challenges facing pollinators, the State of Connecticut passed Bill No. 231: An Act Concerning Pollinator Health on May 6, 2016 (State of Connecticut, 2016). The Act is intended to protect pollinator populations through restrictions on the use of the class of pesticides known as neonicotinoids and the increase and preservation of pollinator habitats.

DWW will plant up to one acre within the project area with a Native Pollinator seed mix developed for the northeastern United States by the Xerces Society. The demonstration will be implemented generally following procedures outlined in Pollinator Habitat Conservation Reserve Program Job Sheet CP42 (Natural Resource Conservation Service, 2011), for well drained sites.

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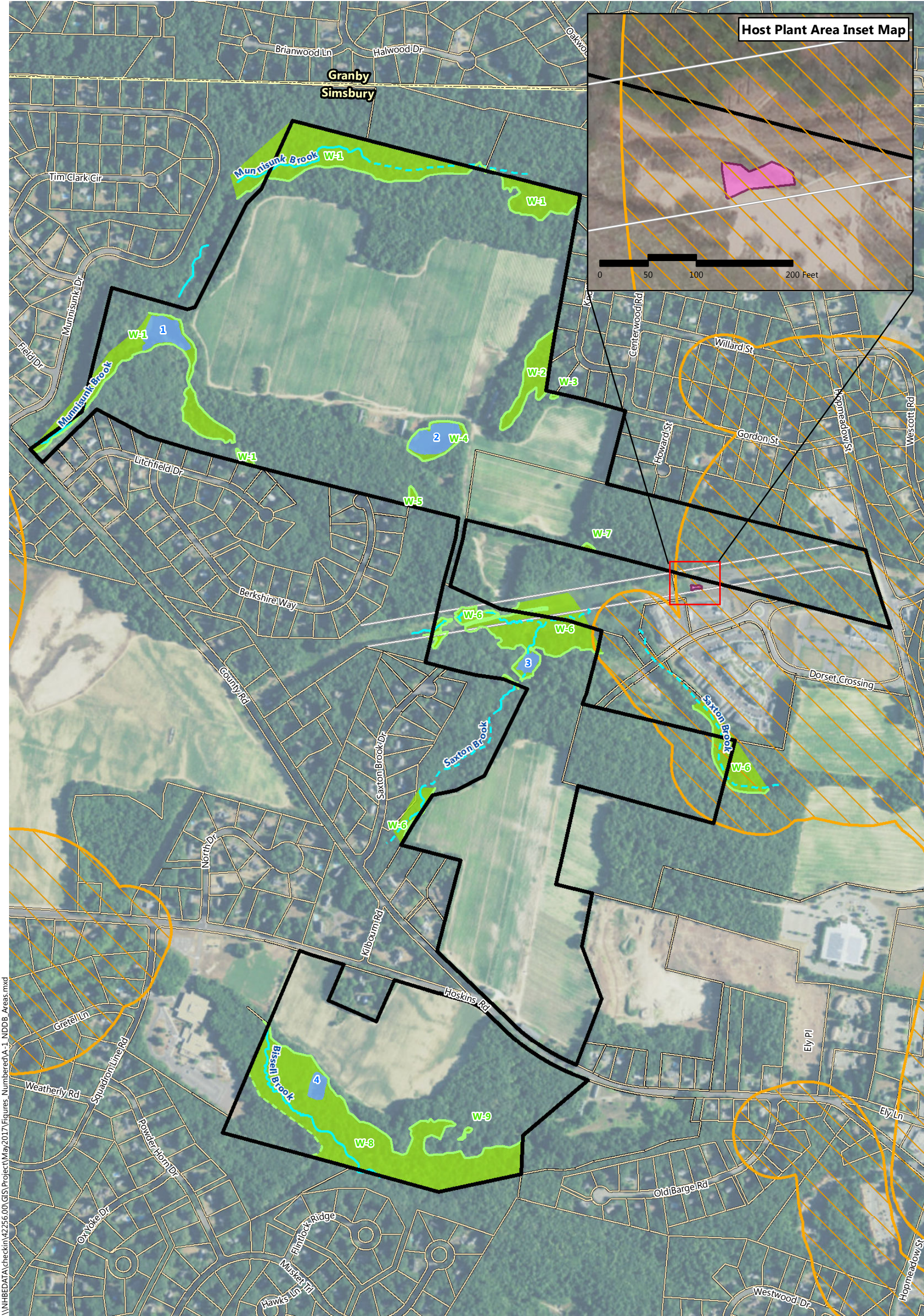
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Attachment A – Figures





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03256501300 Feet


 Property Boundary


 Adjacent Parcels


 Town Boundary


 Existing Eversource ROW


 Wetland Resource Area

 Farm Pond


 Delineated Wetland Edge


 Approximate Wetland Edge

 Stream

 Approximate Stream

VHB Identified host plants for the scribbled sallow moth (*Sympistis perscripta*)

 Canada toadflax (*Nuttallanthus canadensis*)

 Natural Diversity Data Base Areas containing State-Listed Species (CTDEEP, June 2017)

Tobacco Valley Solar

Simsbury, Connecticut

Figure A-1
Natural Diversity Data Base Areas
Containing State-Listed Species

Source: VHB, CTDEEP, NDDDB, ESRI



Tobacco Valley Solar

Simsbury, Connecticut

-

- Property Boundary

- ### Adjacent Parcels

- Town Boundary

- Existing Treeline


- Existing Eversource

- — — Approximate Wetland Edge

- Stream


- Approximate Stream

- Land Cover Type

- 
- Agricultural Field

-
- Coniferous Forest

-
- Deciduous Forest

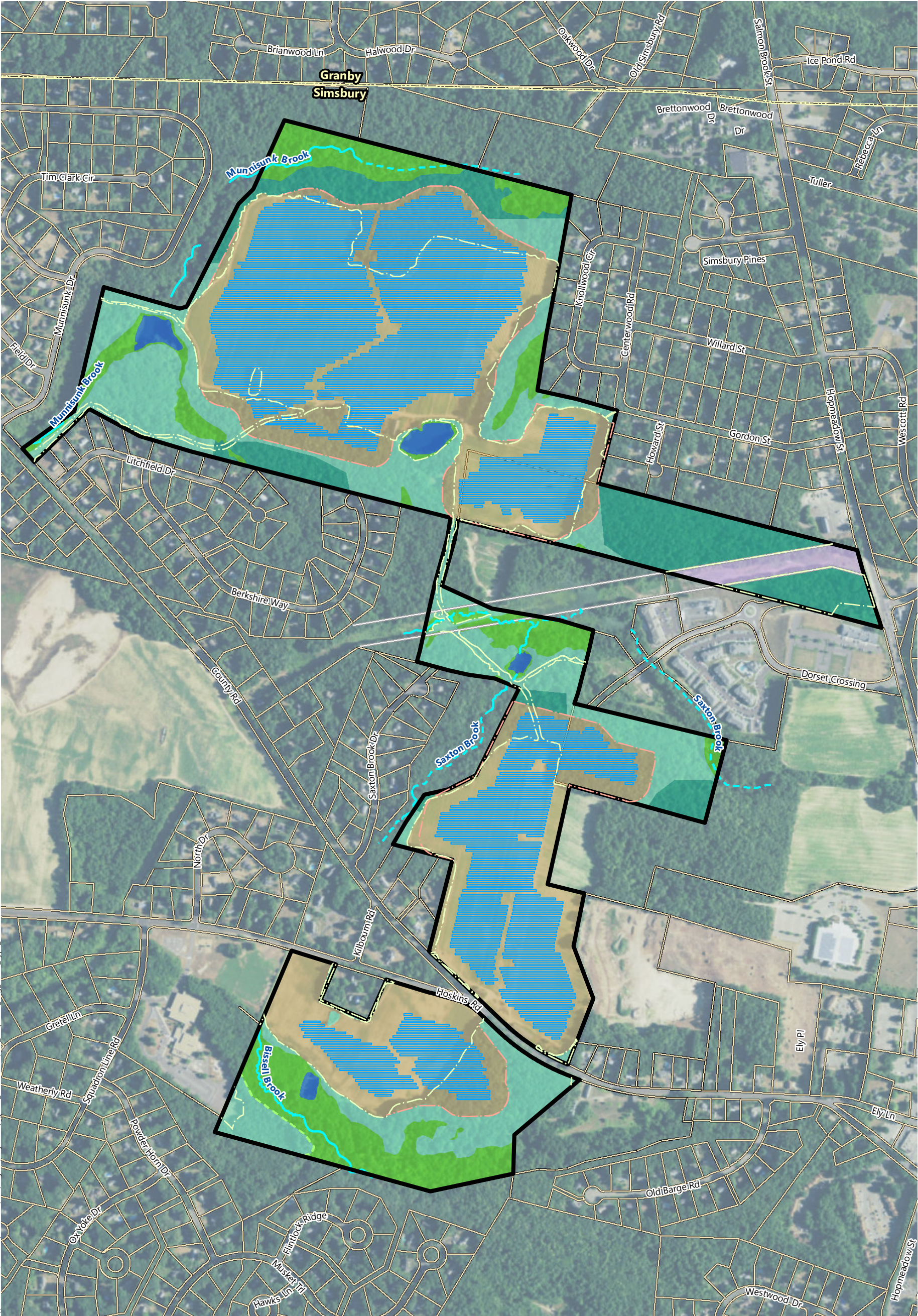
- 
- Forested Wetland

-
- Pond


- Scrub Shrub (ROW)

Figure A-2
Existing Vegetation Cover Types

Source: VHB, CTDEEP, ESRI



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0


325


650


1300 Feet


 Property Boundary


 Adjacent Parcels


 Town Boundary


 Existing Treeline


 Proposed Treeline

 Existing Eversource ROW


 Approximate Wetland Edge


 Stream


 Approximate Stream


 Solar Array Panel with Grassland Cover


Land Cover Type

 Grassland Field

 Coniferous Forest

 Deciduous Forest

 Forested Wetland

 Pond


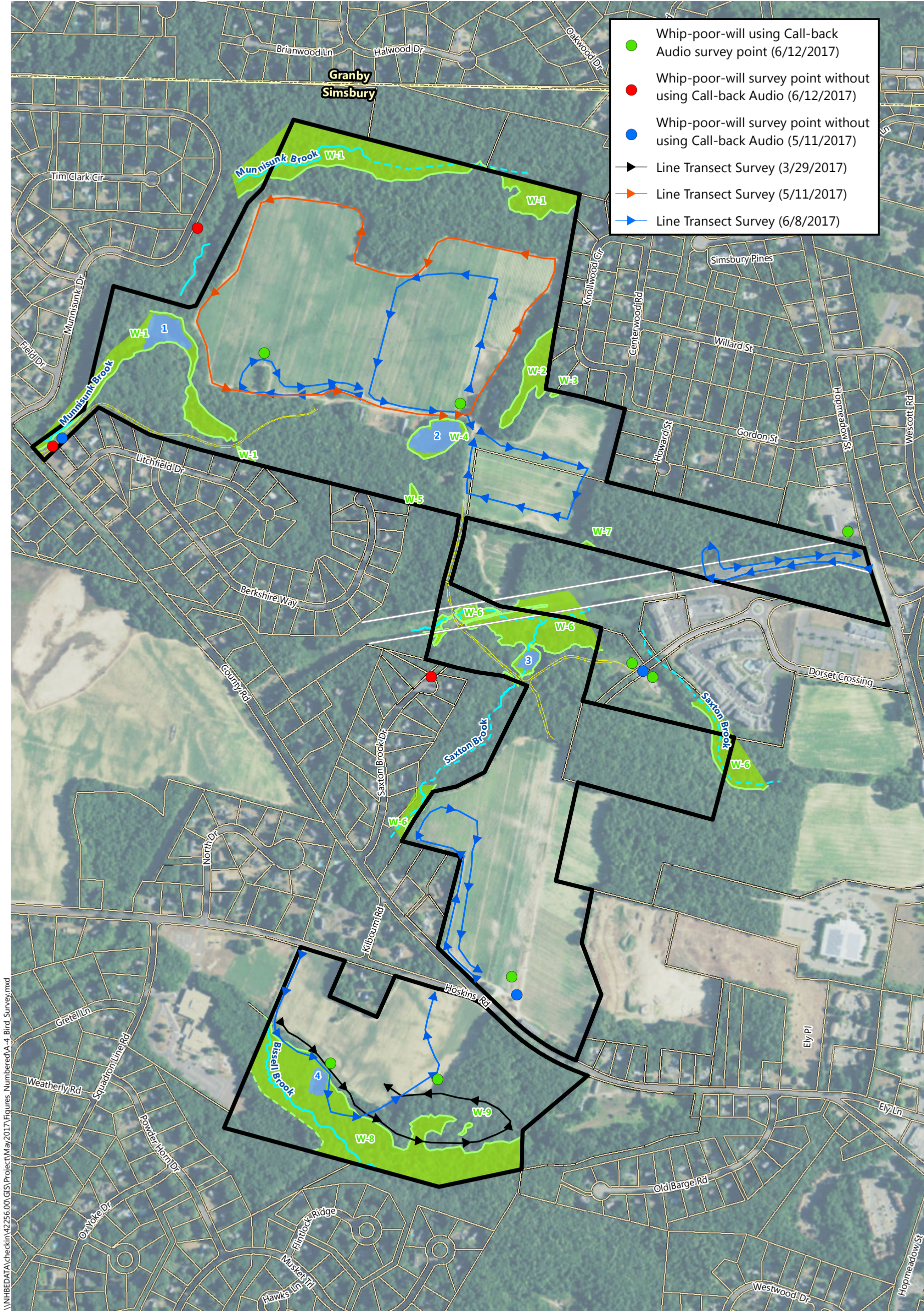
 Scrub Shrub (ROW)

Figure A-3

Proposed Vegetation Cover Type Conversions

Source: VHB, CTDEEP, ESRI

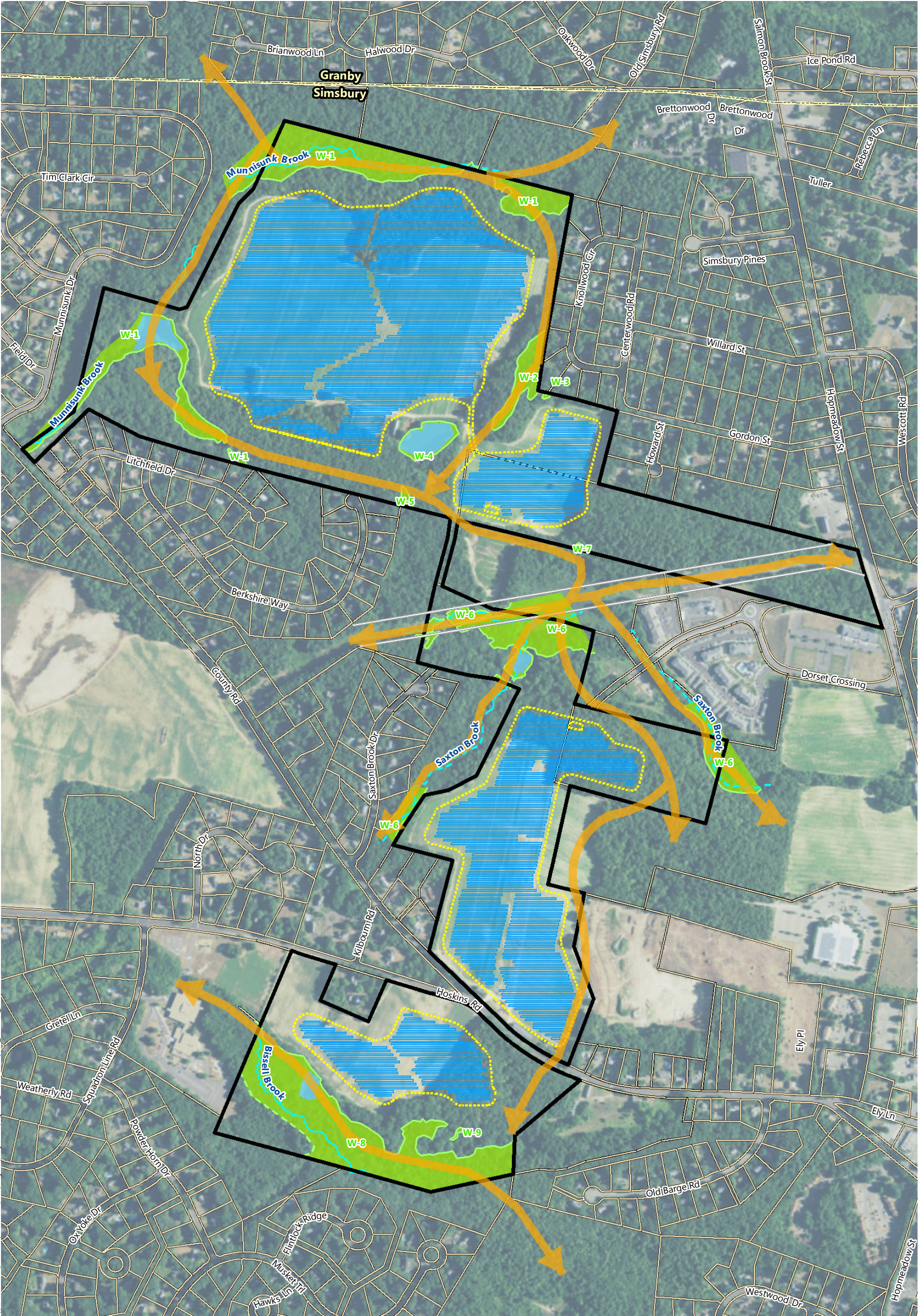



Tobacco Valley Solar

Simsbury, Connecticut


Figure A-4
Bird Survey Points
and Survey Routes


Source: VHB, CTDEEP, ESRI








03256501300 Feet


 Property Boundary


 Adjacent Parcels


 Town Boundary


 Existing Eversource ROW


 Wetland Resource Area


 Farm Pond


 Delineated Wetland Edge


 Approximate Wetland Edge

 Stream

 Approximate Stream

 Solar Array

 Proposed Fenceline

 Wildlife Passage Corridor

Tobacco Valley Solar

Simsbury, Connecticut

Figure A-5

Wildlife Passage Corridors

Source: VHB, CTDEEP, ESRI

Attachment B – Species Observation and Potential Occurrence Tables

Table B-1 Observed and Potential Bird Species

	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Least Bittern ^{B (S-T)}							P			
Great Blue Heron ^B		P					P	○	P	
Green Heron ^B		P					P	○	P	
Turkey Vulture ^B		P	P	P	P	P				
Canada Goose ^B				O	P	P		P	P	
Wood Duck ^B		P					P	O	P	
Hooded Merganser ^B	P							○	P	
Mallard ^B				P	P		P	P	P	
Sharp-shinned Hawk ^{M (S-E)}	P	P	P							
Cooper's Hawk ^B	P	P	P	P	P	P				
Northern Goshawk ^{B (S-T)}	P	P	P		P	P				
Red-shouldered Hawk ^B	P	○	○	○			○			
Broad-winged Hawk ^{B (S-SC)}	P	P			P	P				
Red-tailed Hawk ^B	P	O	O	P	P	O	P			
Rough-legged Hawk ^M			P	P	P	P	P			
American Kestrel ^{B (S-SC)}		P	P	○	P	P				
Ring-necked Pheasant ^B			P	P	P	P				

P = Potential to occur O = observed by VHB during Late Winter/Late Spring 2017 ○ = GCN Species in the 2015 CWAP. B = breeding in Connecticut M = migrant/visitor
S-E = State-endangered S-T = State-threatened S-SC = State-Special Concern

Source: DeGraaf, Richard M. and Mariko Yamasaki. 2001. New England Wildlife: Habitat, Natural History and Distribution, University Press of New England, Hanover, New Hampshire, 2001.

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Ruffed Grouse ^B		P	P							
Wild Turkey ^B	P	P	P	P	P	P				
Northern Bobwhite ^B		P	P	P	P	P				
Killdeer ^B				O						O
Spotted Sandpiper ^B				O	P	P		P	P	
Wilson's (Common) Snipe ^M			P				P			
American Woodcock ^B		O	P	O			O			
Rock Dove ^B				P						P
Mourning Dove ^B	P	P	O	O	P	O				O
Black-billed Cuckoo ^B		O	P				P			
Yellow-billed Cuckoo ^B		P	P							
Eastern Screech-Owl ^B	P	P	P		P	P				
Great Horned Owl ^B	P	P	P	P	P	P	P			
Barred Owl ^B	P	O	P		P	P				
Northern Saw-whet Owl ^{B (S-SC)}	P	P								
Common Nighthawk ^{B (S-E)}	P	P	P	P	P	P				P
Whip-poor-will ^{B (S-SC)}		P	P	P	P	P				
Chimney Swift ^B			P	O	P	P				P

P = Potential to occur O = observed by VHB during Late Winter/Late Spring 2017 **O** = GCN Species in the 2015 CWAP. B = breeding in Connecticut M = migrant/visitor
S-E = State-endangered S-T = State-threatened S-SC = State-Special Concern

Source: DeGraaf, Richard M. and Mariko Yamasaki. 2001. New England Wildlife: Habitat, Natural History and Distribution, University Press of New England, Hanover, New Hampshire, 2001.

Bevier, L. R. (Ed.). 1994. Atlas of Breeding Birds of Connecticut. Bulletin 113. State Geological and Natural History Survey of Connecticut. 461 p.

CTDEEP. 2015. Connecticut Wildlife Action Plan. http://www.ct.gov/deep/cwp/view.asp?a=2723&q=329520&deepNav_GID=1719#Revision

	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Ruby-throated Hummingbird ^B	P	P	P							
Belted Kingfisher ^B			O					O	P	
Red-bellied Woodpecker ^B		O								
Pileated Woodpecker ^B	P	O								
Yellow-bellied Sapsucker ^B	P	P								
Downy Woodpecker ^B	P	O	O							
Hairy Woodpecker ^B	P	O								
Northern Flicker ^B	P	P	P	P	P	●				P
Eastern Wood-Pewee ^B	P	O	O				O			
Acadian Flycatcher ^B		P								
Willow Flycatcher ^B		P	P							
Least Flycatcher ^B		P								
Eastern Phoebe ^B	P	O	O			O	O			P
Great Crested Flycatcher ^B	P	●	●							
Eastern Kingbird ^B		●	●	●	P	P	●			
Northern Shrike ^M	P	P	P		P	P				
White-eyed Vireo ^B		P	P				P			
Yellow-throated Vireo ^B		P								

P = Potential to occur O = observed by VHB during Late Winter/Late Spring 2017 ● = GCN Species in the 2015 CWAP. B = breeding in Connecticut M = migrant/visitor
S-E = State-endangered S-T = State-threatened S-SC = State-Special Concern
Source: DeGraaf, Richard M. and Mariko Yamasaki. 2001. New England Wildlife: Habitat, Natural History and Distribution, University Press of New England, Hanover, New Hampshire, 2001.

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Warbling Vireo ^B		O	O							
Red-eyed Vireo ^B	P	O	O							
Blue Jay ^B	P	O	O			O				
American Crow ^B	P	O	O	O	P	P				
Fish Crow ^B								P	P	
Horned Lark ^{B (S-E)}				P	P	P				
Purple Martin ^{B (S-SC)}	P		P	P	P	P		P	P	P
Tree Swallow ^B	P	P	O	O	P	O	P	P	P	
Northern Rough-winged Swallow ^B	P	P	P	P	P	P		P	P	
Bank Swallow ^B	P	P	P	P	P	P		P	P	
Barn Swallow ^B	P	P			P	P		P	P	P
Black-capped Chickadee ^B	P	O	O				O			
Tufted Titmouse ^B		O	O				O			
Red-breasted Nuthatch ^B	P	P								
White-breasted Nuthatch ^B		O	O							
Brown Creeper ^B	P	P								
Carolina Wren ^B		P	P				P			
House Wren ^B		O	O			P	P			P

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Winter Wren ^B	P	P					P			
Golden-crowned Kinglet ^B	P	P								
Ruby-crowned Kinglet ^M	P	P								
Blue-gray Gnatcatcher ^B		O	O				P			
Eastern Bluebird ^B		O	O	O	P	P	P			P
Veery ^B	P	P					O			
Hermit Thrush ^B	P	O	P				P			
Wood Thrush ^B	P	O								
American Robin ^B	P	O	O	O	P	P	O			
Gray Catbird ^B		O	O			O	O			
Northern Mockingbird ^B		O	O				O			
Brown Thrasher ^{B (S-SC)}		P	P							
European Starling ^B	P	P	O	O	P	O				P
Cedar Waxwing ^B		P	P			P	P			
Blue-winged Warbler ^B		P	P		P	P	P			
Golden-winged Warbler ^{B (S-E)}		P	P							
Nashville Warbler ^B	P	P					P			
Yellow Warbler ^B		P	O				O			

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Yellow-rumped warbler ^M	P	O								
Chestnut-sided Warbler ^B			P				P			
Black-throated Green Warbler ^B	P	P								
Pine Warbler ^B		O								
Prairie Warbler ^B			O							
Black-and-white Warbler ^B	P	O								
American Redstart ^B	P	P					P			
Worm-eating Warbler ^B		O								
Ovenbird ^B	P	O								
Northern Waterthrush ^B	P	P					P			
Louisiana Waterthrush ^B		P							P	
Common Yellowthroat ^B	P	O	O				O	P		
Hooded Warbler ^B		P	P				P			
Canada Warbler ^B	P	P					P			
Scarlet Tanager ^B	P	O	P							
Eastern Towhee ^B		P	P			P				
American Tree Sparrow ^M	P	P	P		P	P	P			
Chipping Sparrow ^B	P	O		O	P	P				

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Field Sparrow ^B			P	P	P	P				
Savannah Sparrow ^{B (S-SC)}				P	P	P				
Grasshopper Sparrow ^{B (S-E)}				P	P	P				
Vesper Sparrow ^{B (S-E)}			P	P	P					
Fox Sparrow ^M		P	P							
Song Sparrow ^B	P	O	O	O	P	O	O			
Swamp Sparrow ^B							P	P		
White-throated Sparrow ^M	P	P	O		P	P				
Dark-eyed Junco ^B	P	P			P	P				
Lapland Longspur ^M				P	P	P				
Snow Bunting ^M				P	P	P				
Northern Cardinal ^B		O	O				O			
Rose-breasted Grosbeak ^B	P	P					O			
Indigo Bunting ^B		O	O		P	O				
Bobolink ^{B (S-SC)}					P	P				
Red-winged Blackbird ^B			O	O	P	P	O	O		
Eastern Meadowlark ^{B (S-T)}				P	P	P		P		
Common Grackle ^B		P	O	O	P	P	P			
Brown-headed Cowbird ^B	P	O	P	O	P	P				

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S-E = State-endangered S-T = State-threatened S-SC = State-Special Concern

Source: DeGraaf, Richard M. and Mariko Yamasaki. 2001. New England Wildlife: Habitat, Natural History and Distribution, University Press of New England, Hanover, New Hampshire, 2001.

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Wetland	Pond	Stream	Structure
Orchard Oriole ^B		P								
Baltimore Oriole ^B		●	●				P			
Pine Grosbeak ^M	P	P		P						
Purple Finch ^B	P	P	P							
House Finch ^B		O		O						P
Common Redpoll ^M	P	P	P	P	P	P	P			
Pine Siskin ^M	P	P	P		P	P	P			
American Goldfinch ^B	P	O	O	P	P	O	O			
Evening Grosbeak ^B	P	P								
House Sparrow ^P				O	P	P				O

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S-E = State-endangered S-T = State-threatened S-SC = State-Special Concern
Source: DeGraaf, Richard M. and Mariko Yamasaki. 2001. New England Wildlife: Habitat, Natural History and Distribution, University Press of New England, Hanover, New Hampshire, 2001.
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Table B-2 Observed and Potential Amphibian and Reptile Species

	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
AMPHIBIANS AND REPTILES										
Marbled Salamander ^B	P	P					P			
Spotted Salamander ^B	P	P					O	P		
Red Spotted Newt ^B	P	P					P	P	P	
Northern Dusky Salamander ^B	P	P						P	P	
Northern Redback Salamander ^B	P	P								
Four-toed Salamander ^B	P	P					P		P	
Northern Two-Lined Salamander ^B	P	P							P	
American Toad ^B	P	P	P	P	P	P	P	O		
Fowler's Toad ^B		P	P	P	P	P	P	P		
Northern Spring Peeper ^B	P	P					O	P		
Gray Treefrog ^B		O					P	P		
American Bullfrog ^B							P	O	P	

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
Green Frog ^B							O	O	P	
Wood Frog ^B	P	P					P	●		
Pickereel Frog ^B		P			P	P		P	P	
Common Snapping Turtle ^B		P	P	P	P	P	P	P	P	
Painted Turtle ^B				P	P	P	P	O	P	
Spotted Turtle ^{B (S-SC)}	P	P	P	P		P	P	P	P	
Wood Turtle ^{B (S-SC)}	P	P	P	P		P	P	P	P	
Eastern Box Turtle ^{B (S-SC)}		P	P			P	P		P	
Common Musk Turtle ^B			P		P	P	P	P	P	
Northern Water Snake ^B							P	P	P	P
Northern Red-bellied Snake ^B	P	P	P				P			P
Common Garter Snake ^B	P	P	P			P	P	P	P	P
Eastern Ribbon Snake ^{B (S-SC)}		P					P	P	P	P
Eastern Hognose Snake ^{B (S-SC)}		P	P	P		P				
Northern Ringneck Snake ^B	P	P								
Eastern Worm Snake ^B	P	P	P	P						
Northern Black Racer ^B		P	P		P	P	P			P

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
Eastern Smooth Green Snake ^{B (S-SC)}		P	P		P	P	P			
Black Rat Snake ^B		P	P		P	P				P
Eastern Milk Snake ^B		P	P		P	P				P

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Table B-3 Observed and Potential Mammal Species

	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
Virginia Opossum ^B		O	P	P	P	P	P			
Masked Shrew ^B	P	P	P		P	P	P			
Water Shrew ^B	P	P				P	P	P	P	
Northern Short-tailed Shrew ^B	P	P	P		P	P	P			
Star-nosed Mole ^B						P	P	P	P	
Little Brown Bat ^{B (S-E)}	P	P	P	P	P	P	P	P	P	P
Silver-haired Bat ^{M (S-SC)}	P	P	P	P	P	P	P	P	P	
Eastern Pipistrelle ^B	P	P	P	P	P	P	P	P	P	P
Big Brown Bat ^B	P	P	P	P	P	P	P	P	P	P
Red Bat ^{B (S-SC)}	P	P	P	P	P	P	P	P	P	
Hoary Bat ^{M (S-SC)}	P	P	P	P	P	P	P	P	P	
Northern Long-eared Bat ^B (S-E and federally Threatened)	P	P	P	P	P	P	P	P	P	P
Eastern Cottontail ^B	P	P	O		P	P	P			
New England Cottontail ^B		P	P		P	P	P			
Snowshoe Hare ^B	P	P	P			P				

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
Eastern Chipmunk ^B	P	O	O		P					
Woodchuck ^B	P	P	P	P	P					
Gray Squirrel ^B	O	O				O				
Red Squirrel ^B	P	P								
Southern Flying Squirrel ^B		P								
Beaver ^B		P				P	P	P	P	
White-footed Mouse ^B	P	P	P		P		P			P
Southern Red-backed Vole ^B	P	P	P	P	P		P			
Meadow Vole ^B	P	P	P		P	P	P			
Woodland Vole ^B		P	P		P					
Muskrat ^B						P	P	P	P	
Southern Bog Lemming ^{B (S-SC)}		P	P		P	P				
Norway Rat ^B			P	P	P					P
House Mouse			P	P	P					P
Meadow Jumping Mouse ^B	P	P	P		P	P	P			
Coyote ^B	P	P	P		P	P	P			
Red Fox ^B	P	P	P	P	P	P	P			

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	Terrestrial Habitats						Aquatic Habitats			Other
	Eastern Hemlock Forest	Oak/Pine Forest	Scrub-Shrub (Powerline ROW)	Cultivated Field	Grass Field	Edge	Forested Swamp	Pond	Stream	Structure
Gray Fox ^B		P	P			P	P			
Raccoon ^B	P	P	P	P	P	P	P	O		
Ermine ^B	P	P	P	P	P	P	P			P
Fisher ^B	P	P	O							
Long-tailed Weasel ^B	P	P	P	P	P	P	P			P
Mink ^B	P	P				P	P	P	P	
Striped Skunk ^B	P	P	P	P	P	P	O			P
River Otter ^B	P	P				P	P	P	P	
White-tailed Deer ^B	P	O	O	P	P	P	P			
Black Bear ^B	P	P	P	O	P	P	P	P	P	
Bobcat ^B	P	P	P	P	P	P		P	P	

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Attachment C – Photos

100 Great Meadow Road
Suite 200
Wethersfield, CT 06109-2377
P 860.807.4300



Photo Point 1:

Southwesterly view along Hoskins Road near the intersection with County Road taken in June 2017. The field visible south of Hoskins Road was planted with annual rye grass last fall. This cover crop was treated with an herbicide in preparation for planting a cash crop.



Photo Point 2: This view south across Hoskins Road shows more of the field visible in Photo Point 1.



Photo Point 3: View standing mid-field north of Hoskins Road looking south (March 2017). In 2016 this field was planted in squash. Plastic mulch covered hills with a drip irrigation pipe beneath the plastic. The mulch and tubing have been removed from the field and it has been plowed level to plant corn.



Photo Point 4: Northerly view of the southern agricultural field in the foreground and the field north of Hoskins Road in the background. One of the former tobacco barns is visible along Hoskins Road. Spring 2017



Photo Point 5: View from the north side of the largest agricultural field north of Litchfield Drive looking west. Here in spring 2017 squash was drilled into the plastic mulch first used for the 2016 crop. This field had been entirely covered with light-weight fiber frost blanket until the second week of June, limiting any habitat value. .



Photo Point 6: High gradient segment of Bissell Brook south of Hoskins Road taken in May 2017.



Photo Point 7: Northerly view of the forest interior near the edge of one of the agricultural fields. The dominant upland forest type in this area belongs to the northern red oak/black oak and Blue Ridge blueberry, and a variant of this community with white pine as a codominant.



Photo Point 8: The forest south of the agricultural field south of Hoskins Road includes some large trees such as this 40-inch DBH red oak. The slopes south of the field are enriched by groundwater discharge and include sugar maple, white ash, yellow poplar, white pine and eastern hemlock in the tree canopy. The soil piles in the foreground were hand excavated, apparently for paintball contests.



Photo Point 9: View looking upstream (west) along Munnisunk Brook near the northern property limits. The stream is well shaded along much of this segment.



Photo Point 10: A basking painted turtle rests on a log in the farm pond south of Hoskins Road.



Photo Point 12: View of Saxton Brook looking upstream (south) from the culvert along the sewer easement.



Photo Point 13: A view looking south along the seepage slope within Wetland 8 located south of Hoskins Road. Vegetation within this wetland includes red maple, American elm, spicebush, skunk cabbage, and cinnamon fern.

Attachment D – USFWS Official Species Lists

100 Great Meadow Road
Suite 200
Wethersfield, CT 06109-2377
P 860.807.4300



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>



In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1831

Event Code: 05E1NE00-2017-E-04017

Project Name: Tobacco Valley Solar: Field A-0

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

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This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1831

Event Code: 05E1NE00-2017-E-04017

Project Name: Tobacco Valley Solar: Field A-0

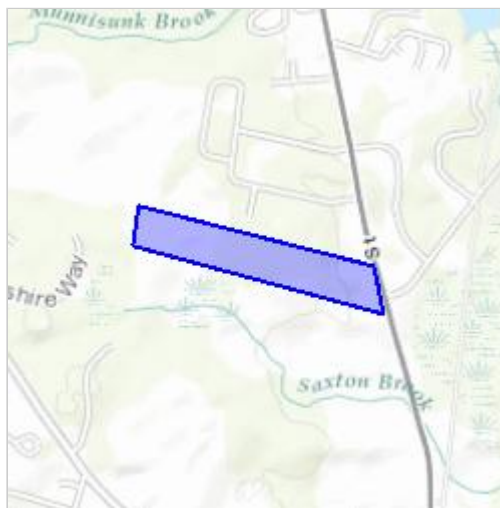
Project Type: ** OTHER **

Project Description: Proposed development site for solar farm project by Deep Water Wind, LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.90996662949975N72.7932431046779W>



Counties: Hartford, CT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.



United States Department of the Interior

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<http://www.fws.gov/newengland>



In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1832

Event Code: 05E1NE00-2017-E-04019

Project Name: Tobacco Valley Solar: Field A-1

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

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A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1832

Event Code: 05E1NE00-2017-E-04019

Project Name: Tobacco Valley Solar: Field A-1

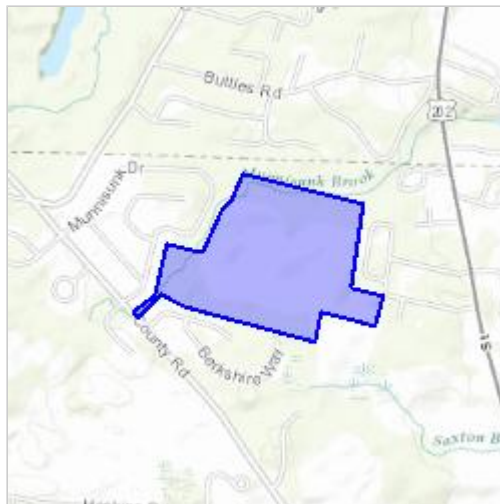
Project Type: ** OTHER **

Project Description: Proposed solar development project by Deep Water Wind, LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.91406226503216N72.80198997815751W>



Counties: Hartford, CT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.



United States Department of the Interior

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<http://www.fws.gov/newengland>



In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1828

Event Code: 05E1NE00-2017-E-04011

Project Name: Tobacco Valley Solar: Field B-0

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1828

Event Code: 05E1NE00-2017-E-04011

Project Name: Tobacco Valley Solar: Field B-0

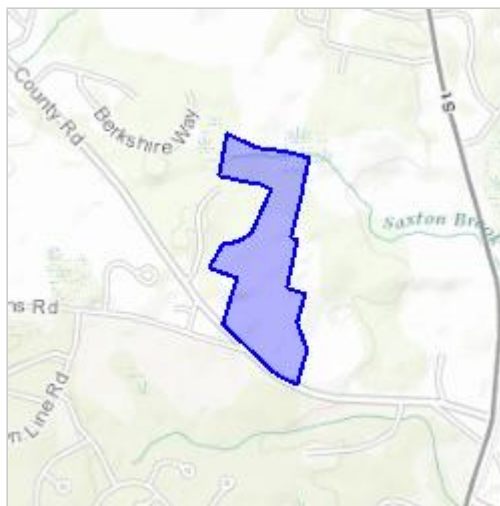
Project Type: ** OTHER **

Project Description: Proposed site for solar farm development by Deepwater Wind LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.9047310205936N72.79800358352435W>



Counties: Hartford, CT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.



United States Department of the Interior

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In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1829

Event Code: 05E1NE00-2017-E-04013

Project Name: Tobacco Valley Solar: Field B-1

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1829

Event Code: 05E1NE00-2017-E-04013

Project Name: Tobacco Valley Solar: Field B-1

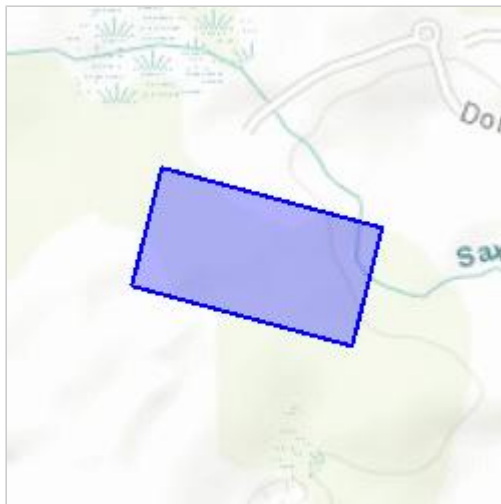
Project Type: ** OTHER **

Project Description: Proposed development site for solar farm by Deep Water Wind LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.90587809910273N72.79412827222606W>



Counties: Hartford, CT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.



United States Department of the Interior

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In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1829

Event Code: 05E1NE00-2017-E-04013

Project Name: Tobacco Valley Solar: Field B-1

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1829

Event Code: 05E1NE00-2017-E-04013

Project Name: Tobacco Valley Solar: Field B-1

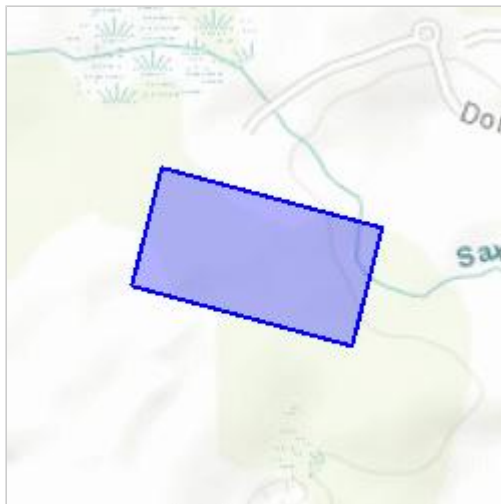
Project Type: ** OTHER **

Project Description: Proposed development site for solar farm by Deep Water Wind LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.90587809910273N72.79412827222606W>



Counties: Hartford, CT

Endangered Species Act Species

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Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.



United States Department of the Interior

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<http://www.fws.gov/newengland>



In Reply Refer To:

June 12, 2017

Consultation Code: 05E1NE00-2017-SLI-1830

Event Code: 05E1NE00-2017-E-04015

Project Name: Tobacco Valley Solar: Field C

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

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If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1830

Event Code: 05E1NE00-2017-E-04015

Project Name: Tobacco Valley Solar: Field C

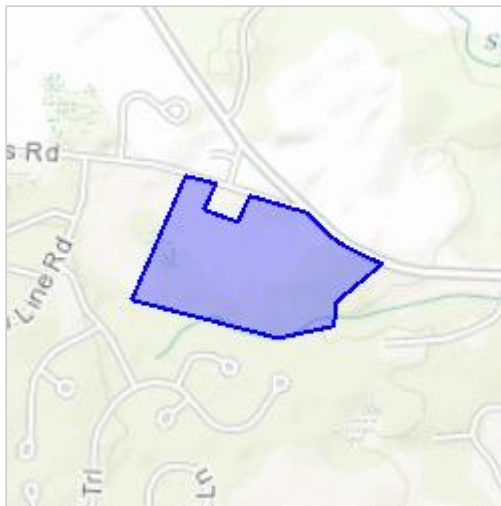
Project Type: ** OTHER **

Project Description: Proposed solar farm development site by Deep Water Wind, LLC

Project Location:

Approximate location of the project can be viewed in Google Maps:

<https://www.google.com/maps/place/41.90017711993967N72.80003193937638W>



Counties: Hartford, CT

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

NAME

STATUS

Northern Long-eared Bat (*Myotis septentrionalis*) Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Critical habitats

There are no critical habitats within your project area.