



VOLUME THREE to:

Petition of BNE Energy Inc.

**for a Declaratory Ruling for the Location, Construction and Operation
of a 3.2 MW Wind Renewable Generating Project in Prospect, Connecticut**

November 17, 2010

EXHIBITS

Terrestrial Habitat and Wetland Impact Analysis.....	Exhibit I
Visual Resource Evaluation.....	Exhibit J
Eastern Box Turtle Survey.....	Exhibit K
Interim Bat Acoustical Study.....	Exhibit L
Breeding Bird Study	Exhibit M
Noise Study.....	Exhibit N

EXHIBIT I

Wind Prospect
Proposed Wind Energy Facility

178 New Haven Road
Prospect, Connecticut

Prepared for



Prepared by

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Table of Contents

Table of Contents **i**

List of Figures **ii**

List of Tables **ii**

List of Attachments **ii**

Introduction **1**

Site Description **2**

 Topography and Drainage Basins 2

 Geology 2

 Mapped Soil Types 3

Habitat Study Methodology **4**

 Vegetation Assessment 4

 Habitat Structure Assessment 4

 Wildlife Analysis 4

Habitat Descriptions **6**

 Fauna 8

 Natural Diversity Data Base Species 12

Terrestrial Wildlife Habitat Impact Analysis **15**

Proposed Activities Relative to Wetlands and Impact Analysis **17**

Summary **18**

List of Figures

Figure No.	Description
1	Property Location Map
2	Habitat Type Map
3	Environmental Resources Screen

List of Tables

Table No.	Description	Page
Table 1:	A New England Wildlife Database Search of Possible Amphibians, Reptiles and Mammals Anticipated To Use the Property	13

List of Attachments

Attachment	Description
Attachment A	Wetlands Delineation Report
Attachment B	Photographic Documentation
Attachment C	Eastern Box Turtle Habitat Survey
Attachment D	Upland Meadow Creations & Wetland Restoration

1

Introduction

BNE Energy Inc. (“BNE”) is proposing to construct and operate a wind generating facility on its property located at 178 New Haven Road in Prospect, Connecticut (the “Property”). The 67.5-acre Property is located approximately 1.50 miles south of the Prospect town center. BNE proposes to install two wind turbines at the Property, both in the western portion of the Property with one in the southwest corner and one in northwestern portion of the Property. BNE will utilize GE 1.6-82.5 Hz wind turbines on the Property resulting in a total capacity to generate 3.2 megawatts (MW) of electricity. The hub height of the turbines will be 100 meters, which is the equivalent of 328 feet. The blade diameter of the turbines will be 82 meters (269 feet) to 100 meters (328 feet). In addition to the two turbines, the development will include an ancillary storage building, access road and associated ground equipment including an electrical collector yard and associated utility infrastructure so that the turbines can be interconnected to the electrical grid (collectively the “Project”). Current access to the Property exists off of Kluge Road. BNE proposes to construct a gravel access road through a meadow area and second growth forest to access the proposed turbine locations. The *Property Location Map*, provided as Figure 1, depicts the approximate Property boundary location.

The overall goal of this study is to identify and document the vegetative and wetland communities existing on the entire 67.5-acre Property and to determine potential impacts of the proposed wind development on terrestrial wildlife and wetlands.

Site Description

The Property occupies a drumlinoid¹ landform situated west of New Haven Road (State Highway 69) and south of the Prospect town center. In its entirety, the Property encompasses approximately 67.5 acres of land. Second growth upland hardwood forest dominates the cover type along with several forested hillside seep wetlands and watercourses as well as nine acres of early old field meadow habitat situated at the highest elevation on the Property. An existing telecommunications facility lies within this hilltop meadow.

Topography and Drainage Basins

The general topography of the Property is moderately sloping from east to north and west. The highest elevations occur at approximately 810 feet within the meadow at the southeast portion of the Property and the lowest elevations are approximately 590 feet along the northern boundary.

The Property is located in the Beacon Hill Brook drainage basin. This drainage basin is located within the Naugatuck Regional Complex, which is within the Housatonic Major Basin.

Geology

According to the [Bedrock Geological Map of Connecticut](#) (Connecticut Geological and Natural History Survey, 1985), the bedrock underlying the Property is characterized as a Basal member of the Straights Schist which consists of schist, with amphibolites, marble and quartzite. Schist is a coarse to very coarse grained, strongly to very strongly layered metamorphic rock whose layering is typically defined by parallel alignment of micas. This bedrock is primarily composed of mica, quartz, and feldspar; occasionally spotted with conspicuous garnets. Amphibolites are fine to coarse grained, massive to poorly layered metamorphic rock containing amphibole and plagioclase with little or no quartz. Marble is a medium to coarse grained, massive to layered metamorphic rock composed of calcite and/or dolomite. It is a metamorphosed limestone and underlies several valleys in the Western Uplands. Quartzite is massive to layered medium grained metamorphic rock. It is very hard and resistant as a metamorphosed sandstone composed primarily of quartz.

¹ Drumlinoid is a family of landforms created as a result of glacial retreat and advance. They are generally orientated in a north-south direction and comprised of varying amounts of glacial till and bedrock.

The Surficial Materials Map of Connecticut indicates that most of the Property is underlain by thick till. Thick till is characterized by areas where till is greater than 10-15 feet thick and including drumlins in which till thickness commonly exceeds 100 feet. Although upper till is the surface deposit, the lower till constitutes the bulk of the material in these areas. Lower till is moderately to very compact, and is commonly finer-grained and less stony than upper till. An oxidized zone, the lowest part of a soil profile formed during a period of interglacial weathering, is generally present in the upper part of the lower till. This zone commonly shows closely-spaced joints that are stained with iron and manganese oxides.

Mapped Soil Types

Digitally available updated soil survey information was obtained from the Natural Resources Conservation Service (NRCS). Soil classifications present on the Site are as follows:

Glacial Till (unstratified sand, silt & rock) deposited upland soils:

- Woodbridge (47)
- Canton and Charlton (62)
- Paxton and Montauk (84, 85)

Glacial Till (unstratified sand, silt & rock) deposited wetland soils:

- Ridgebury, Leicester, and Whitman (3)

These soil types were generally field confirmed during a wetland investigation and delineation conducted by Vanasse Hangen Brustlin, Inc. (VHB) Registered Soil Scientist, Matthew Davison. Details of the wetland delineation as well as detailed published soils information including a soil map and soil description report are contained within the *Wetlands Delineation Report* provided in Attachment A.

Habitat Study Methodology

The wildlife habitat evaluation was divided into three parts: 1) Vegetation Assessment, 2) Habitat Structure Assessment and 3) Wildlife Analysis. All three components of the wildlife habitat evaluation were completed for the entire Property. The following sections discuss the methodology used to perform the wildlife habitat study.

Vegetation Assessment

The Property was segmented into three identified major habitat types, which were delineated using upland and wetland boundaries and dominant vegetative cover types. The boundaries of each habitat type are outlined in the *Habitat Type Map*, which is provided as Figure 2. The three habitat types are identified as second growth upland hardwood forest, palustrine forested wetland, and early old field meadow. The dominant tree, shrub and herbaceous layers of each habitat type were identified and documented by a VHB scientist experienced in plant identification. Representative photographs of the dominant habitat types are included in the *Photographic Documentation* provided in Attachment B.

Habitat Structure Assessment

Various habitat structural features were identified and documented for each habitat type. Forested areas were evaluated for canopy cover, perch height and midstory composition. All habitat areas were assessed to determine soil and substrate type, depth to bedrock, slash piles, depth of leaf litter, topography and groundwater elevation. The locations of dirt paths, structures and stone walls were also documented. VHB scientists searched for and documented the occurrence of burrows, tree cavities, snags and vernal pools (no vernal pool habitat was identified on the Property).

Wildlife Analysis

VHB environmental scientists used DeGraaf and Yamasaki's *New England Wildlife: Habitat, Natural History, and Distribution* (2001) as a reference and general predictive tool to identify potential fauna that may be occupying the Property. This reference book provides a compendium of natural history, distribution, and habitat relationships for 338 terrestrial and aquatic wildlife species that breed, winter, or reside in New England. The 2001 edition of the book is a revision of DeGraaf and Rudis' *New England Wildlife* (1986).

This reference provides a set of matrices based on dominant cover type that determine which avian, amphibian, reptile and mammal species may occupy an area based on general and specific habitat requirements. The habitat types found on the Property were correlated with cover types used in the matrices, and a list of potential species was identified. Based on this methodology, the list of potential wildlife species is typically quite extensive due to the general associations made between habitat types and typical species anticipated to use these habitat types. State-specific information about the distribution and habitat requirements of amphibians, reptiles, and some mammals was used to help narrow the list of potential species anticipated to utilize the habitats found on the Property. Klemens' *Amphibians and Reptiles of Connecticut and Adjacent Regions* (1993), and *Amphibians and Reptiles in Connecticut* by the same author (2000) provide distribution information and specific habitat comments pertinent to Connecticut's physiography that provide a more localized view of potential amphibian and reptiles species. Wildlife fact sheets from the Connecticut Department of Environmental Protection (CTDEP) Wildlife Division, and articles from the Wildlife Division's bimonthly magazine, *Connecticut Wildlife*, were also used to identify potential locations of species within the state. Potential species that may be utilizing the Property are described in narrative and tabular (Table 1) format in the Mammal and Herpetofauna Evaluation section of this report.

Habitat Descriptions

Three major habitat types exist on the property, including second growth upland hardwood forest, early old field meadow and Palustrine forested wetlands. These areas are depicted on Figure 2, *Habitat Type Map*. The majority of the Property is comprised of upland hardwood forest. The early old field meadow area exists within a hilltop on the southeast portion of the property and includes an existing telecommunications facility. Various hillside seepage wetlands and associated watercourses exist within the forested portion of the Property.

Second Growth Upland Hardwood Forest

The forested portion of the Property is dominated by hardwood poletimber (trees 4.0 to 11.9 inches diameter at breast height ["DBH"]) and small sawtimber (12 to 15 inches DBH). Generally, areas closer to the top of the cleared hilltop are dominated by hardwood poletimber comprised of early successional tree species, evidence of abandoned historic pastureland. Occasional wolf trees and deceased red cedar (*Juniperus virginiana*) were also noted within this area. Areas further down slope contain a larger proportion of sawtimber. Dominant species include white ash (*Fraxinus americana*), sugar maple (*Acer saccharinum*), tulip poplar (*Liriodendron tulipifera*) and yellow birch (*Betula allegheniensis*), interspersed with shagbark hickory (*Carya ovata*), black birch (*Betula lenta*), eastern hemlock (*Tsuga canadensis*) and black cherry (*Prunus serotina*). Red oak (*Quercus rubra*), generally a dominant species in this region of Connecticut, is noticeably absent from the forest. Cut over stumps of larger sawtimber trees suggest red oak may have been selectively harvested from the Property some time ago. The upland forest understory is dominated by Japanese barberry (*Berberis thunbergii*), a non-native, invasive species. The barberry cover is dense and forms a virtual monoculture up to three feet off the ground. Due to the thick barberry cover, there is very little herbaceous cover evident in the understory. Christmas fern (*Polystichum acrostichoides*) appears occasionally. Rotting logs, woody debris, and slash are abundant throughout forested portions of the Project site.

Early Old Field Meadow Habitat

A nine-acre, early old field meadow is situated in the southeast corner of the Property on the highest elevation of the Site. This field is separated from a smaller, one-acre field to the north by a hedgerow of saplings, shrubs, and trees, including red maple (*Acer rubrum*), white ash, gray dogwood (*Cornus racemosa*), black cherry, and Asiatic bittersweet (*Celastrus orbiculatus*). The larger field, which contains the telecommunications facility, is dominated by forbs such as goldenrod (*Solidago spp.*) and grasses including orchard grass (*Dactylis glomerata*), *Dicanthelium*, and *Agrostis* species. Patches of low shrubs approximately three to four feet

high also occur, including sweet fern (*Comptonia peregrina*) and gray dogwood. Vegetation cover in the smaller field is similar but also contains *Rubus* species.

Palustrine Forested Wetlands

Several hillside seep (groundwater exfiltration) wetlands and watercourses were delineated on the Property and are described in detail on the attached Wetlands Delineation Report (Attachment A). In total, four wetlands resource areas were delineated on the Property. They generally occur on the hillside where topographical gradient subsides and seasonal high perched groundwater persists long enough for reducing soil conditions to exist. However, several hillside seepage areas were delineated on side slopes where exfiltrated groundwater follows meandering drainage patterns downslope. Intermittent watercourse features were observed but not delineated within the interior of most of the delineated wetland areas.

All four delineated wetlands areas are forested hillside seep wetlands draining westerly towards the New Naugatuck Reservoir (also known as the Long Hill Reservoir). These wetland areas are remarkably similar in their characteristics and as such are described as a collective unit. The tree canopies are dominated by red maple, white ash and yellow birch, while the shrub layer includes spicebush and a vigorous Japanese barberry component which forms a virtual monoculture below three feet above ground.

The following are observations that differentiate each of these four wetlands systems. Wetland 1 occurs on the hillside where the topographical gradient transitions from convex to concave. It contains permanently saturated depressions which generally provide higher wetland functions and values than the other hillside seep wetlands. It drains via well-defined and diffuse surface flows west before terminating at a drainage swale along a historic dirt road which exists along the western Property boundary. Flows are then conveyed northerly within a swale along the road. Wetland 2 is a forested hillside seep draining northerly off-site into a perennial watercourse which flows southwest into the New Naugatuck Reservoir. A watercourse flows into the southern tip of this system from beneath New Haven Road. While not shown as a perennial watercourse on USGS mapping, field observations indicate this watercourse may be perennial. It is characterized by a wide, deeply scoured channel, abundant sediment loading, lack of silty deposits and steeply incised banks. Flows within the channel appear to be extremely flashy. Wetland 3 is a hillside seep that occurs where a gradual decrease in topographical gradient exists. This wetland boundary is diffuse and not clearly defined by a slope break, distinct change in soil types or change in vegetation. The delineated wetland boundary generally captures a complex of somewhat poorly and poorly drained soil types and diffuse surface water drainage patterns. This wetland area drains via an intermittent watercourse towards an off-site perennial watercourse which flows southwest into the New Naugatuck Reservoir. Wetland 4 is a forested hillside seep complex consisting of three areas where groundwater exfiltration is occurring. Diffuse surface drainage patterns were observed connecting these delineated wetland systems. However, the diffuse surface flow patterns observed connecting these distinct wetland areas did not contain bank or channel characteristics and no wetland soil types were found in these areas. Therefore, these diffuse surface drainage areas were determined to be uplands and not regulated areas.

Fauna

This section describes the results of the field investigation conducted by VHB biologists in January and March 2010, as well as a subsequent wildlife evaluation based on collected field data and scientific literature references.

Mammal and Herpetofauna Evaluation

A mammal and herpetofauna evaluation was conducted to determine possible amphibian, reptile, and mammal species that may be using the habitats found on the Property. In addition to field investigations in which direct signs of wildlife were recorded, potential species were identified using the habitat matrices provided in *New England Wildlife*. The matrices featured in *New England Wildlife* include 11 forested cover types and 27 non-forested cover types. Species are listed taxonomically, and habitat use for each species associated with each cover type is identified in terms of seasonal use (breeding season or winter season), activity (feeding or shelter), and preference (preferred habitat or utilized habitat). Special habitat features unique to each species and required for occupancy are also briefly described.

To identify potential wildlife species occurring in the forested portions of the Property, the Pine-Oak-Maple column of the *New England Wildlife* matrix was used as it most closely resembles the forested habitat occupying the Property. This type of forest is described by DeGraaf and Yamasaki as comprised predominately of northern red oak, eastern white pine, and red maple, with white ash, paper, yellow, and sweet birches as associates, as well as sugar maple, beech, hemlock, and black cherry. Although much of the red oak on the Property has been logged, the Pine-Oak-Maple cover type is the most suitable of the 11 forested cover types to describe the Property's forested habitat. This cover type is described by DeGraaf and Yamasaki as occurring in southern New England to elevations of 1,500 feet, and is considered a common transition between northern hardwoods and oak forest types. There are some elements of northern hardwood forest on the Property which seems to confirm the transitional nature of the Property's forested habitat.

To identify potential wildlife species occurring in the early old field meadow portion of the Property, the Shrub/Old Field column of the *New England Wildlife* matrix was used. The authors describe this habitat type as "abandoned agricultural fields reverting to forest, characterized by grasses, shrubs, and small trees", which accurately describes the habitat identified on the Property.

Table 1 lists all potential mammal, reptile and amphibian species identified through the *New England Wildlife* matrices as potentially occurring on the Property based on existing cover types and special habitat features required for occupancy. Special habitat features required by each species are also described. Species that appear in bold print were directly observed during on-site investigations. A narrative description of the most likely species to occur on the Property is also provided below. This description includes any direct or indirect

observations of the species and identifies how the species might use habitat within the Property.

Ungulates

Wild ungulates, or hooved animals, in southwestern Connecticut are generally restricted to white-tailed deer (*Odocoileus virginianus*). Occasional sightings of moose (*Alces alces*) are reported in this part of the state, but are infrequent and often result in CTDEP Wildlife Division relocating the animal to a more remote location in the state. Evidence of white-tailed deer use of the Property was ample, as dozens of tracks and scat piles were found throughout the property during field investigations in which there was snow cover. This local population is having a profound impact on the site's ecosystem by actively selecting for the barberry understory in the wooded portion of the site. Hungry deer are consuming all other edible plant species in the understory, leaving behind the barberry, which flourishes in the absence of competition. The lack of variety in the botanical composition of the understory can then in turn influence the presence, or lack thereof, of other wildlife species.

Large to Medium-sized Mammals

Tracks of several medium-sized mammals were observed within the Property during the January field visit, including red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), and a probable fisher (*Martes pennanti*) or mink (*Mustela vison*) track. Red fox and raccoon are both common residents throughout Connecticut, with red fox primarily inhabiting a mosaic of forest and open field habitat, and raccoon preferring wooded areas near streams. Red fox as we know it today is considered to be a mix of the native red fox of North America and the European red fox, which was introduced in the middle of the 18th century. Both red fox and raccoon have adapted fairly well to humans, particularly raccoon, which is virtually synonymous with residential development. Fisher populations in Connecticut are steadily being restored after extirpation in the early 1900s caused by loss of forested habitat and over-hunting. Population restoration has occurred through a combination of natural range expansion from neighboring states and a re-introduction program by CTDEP. Fishers require relatively large tracts of coniferous or mixed forest and large trees for denning, making the Property possibly suitable for occupancy by this species.

Other medium-sized mammals that have the potential to occur within the Property include a variety of woodland and open field inhabitants. Virginia opossum (*Didelphis virginiana*), a woodland species, is often found in wet woods along streams. This species was not known to occur in Connecticut or New England prior to the early 1900s but is now relatively abundant and has the potential to nest within the many tree cavities found on the Property. Striped skunk (*Mephitis mephitis*) and woodchuck (*Marmota monax*), both common Connecticut residents, favor open fields with low, brushy vegetation such as occurs on-site. Striped skunk, much like raccoon, is highly adapted to surviving in human-dominated landscapes, but a favorite denning site for this species is abandoned woodchuck burrows. Such burrows could potentially occur in the smaller, northernmost field on the Property, although none were observed during field investigations.

Coyote (*Canis latrans*), although currently well-integrated into the state's ecosystem, was not reported in Connecticut until the 1950s. This species originally inhabited the western plains of the U.S. before pushing its way east. There was no evidence of coyote use of the Property, but

this relatively common Connecticut species could very easily occur, attracted to the combination of meadow and forest habitat found on the Property and resident small mammals, which comprise the bulk of its diet.

The largest mammal with the potential to occur on-site is black bear (*Ursus americanus*). The population of black bears in Connecticut appears to be growing, and sightings in New Haven County are not uncommon. Between February 2009 and February 2010 no black bears were reported in the town of Prospect, although there were reported sightings in neighboring towns including Waterbury and Cheshire. Home ranges for female black bears in Connecticut are approximately five to seven square miles while home ranges for males can extend from 12 to 60 square miles. It is possible that the Property is incorporated into the home range of one or more individuals, but the lack of reported sightings in Prospect suggests the area is not regularly, if at all, used by bear

Small Mammals

The Property contains plenty of leaf litter, woody debris, and food sources to attract several small mammals. White-footed mouse (*Peromyscus leucopus*) and meadow vole (*Microtus pennsylvanicus*) are probably the most likely of the small rodents to occur on-site. White-footed mouse will inhabit both field and forest, while meadow vole is more commonly found in fields. Both are abundant in Connecticut. Southern red-backed vole (*Clethrionomys gapperi*) is another possible resident. The nearby residential development to the east of the Property probably also attracts house mouse (*Mus musculus*) and Norway rat (*Rattus norvegicus*) to the area. Eastern cottontail (*Sylvilagus floridanus*) likely feeds in the site's meadow habitat. Mast-producing trees such as white ash and shagbark hickory likely attract and support eastern chipmunk (*Tamias striatus*) and gray squirrel (*Sciurus carolinensis*). It should be noted that mast production at the site is not at its peak, as most of the red oak on the site has been logged, eliminating the associated acorns, and poletimber stands are generally not mature enough to produce large amounts of nuts and seeds. However, the assemblage of small mammals with the potential to occur on-site is still likely sufficient to serve as a good source of food for numerous mammalian and avian predators.

Reptiles, Amphibians, and Fish

The Property does not appear to contain habitat that would support an extensive array of herpetofauna (reptiles and amphibians). There are no permanent or vernal pools on the Property, and due to its position largely on the side of a drumlin, much of the forested portion of the Property is located on a side slope. Thus the wetlands on the Property are forested hillside seeps, which do not support as wide a variety of herpetofauna as other wetland types. All of the wetlands on the Property ultimately drain to a larger wooded swamp associated with the New Naugatuck Reservoir to the west of the Property. This larger wetland system may support a greater assemblage of amphibians and reptiles.

Turtles

There is not sufficient wetland habitat to support most species of turtles; however, the CTDEP, in a response to a Natural Diversity Data Base (NDDB) request, indicated that there are records for eastern box turtle (*Terrapene c. carolina*) in the vicinity of the Property. See the Natural Diversity Data Base Species section below for a more detailed analysis of eastern box turtle on the Property.

Snakes

The Property holds potential for a small number of snake species. Northern ringneck snake (*Diadophis punctatus edwardsii*) is known to inhabit an exceptional variety of habitats, including, but not limited to, deciduous forest with closed canopy, rocky slopes, and meadows (Klemens 1993). Garter snake (*Thamnophis sirtalis*) is an abundant species can be found in virtually every kind of ecological environment in Connecticut, including forests and fields (Klemens 1993). Eastern milk snake (*Lampropeltis triangulum*) is widespread in Connecticut and has adapted well to human-altered landscapes, particularly those areas with a mosaic of fields, woods, and human habitation (Klemens 1993). Portions of the eastern side of Property might suit this species, while garter and northern ring-neck could also be found elsewhere. Populations of all three snake species described above are considered secure in Connecticut (Klemens 2000).

Salamanders

The Property's perennial stream is relatively high gradient and receives runoff and debris from Bethany Road/State Highway 69 to the east. During storm events the stream likely becomes flashy, as evidenced by undercut banks and scour. Consequently the stream lacks the muddy, organic bottom and slow-moving water that attracts many turtles and amphibians. The stream could conceivably support northern two-lined salamander (*Eurycea bislineata*), although none were discovered during a limited survey of the stream area. This species is Connecticut's most common stream salamander, and has a wider range of habitat tolerance than other stream salamanders, including swift-flowing streams (Klemens 2000). Redback salamander (*Plethodon cinereus*), perhaps the most widely distributed and abundant salamander in Connecticut, likely occurs in the woodland portion of the Property. This species is terrestrial and not dependent on standing water, and can be found in a variety of forested habitats (Klemens 2000).

Frogs and Toads

The lack of suitable wetlands on the Property limits the variety of frog and toad species that could reasonably be expected to occur. American toad (*Bufo a. americanus*) is a terrestrial species that is commonly found in woodlands throughout Connecticut and could occur on the Property. This species requires shallow water for breeding though, which is likely limited to a few small, protected pools associated with the intermittent stream. Northern spring peeper (*Pseudacris c. crucifer*) is also more likely to use the swamp off-site but could occur on the Property within the adjacent forested wetland. Spring peeper and American toad are widespread and common in Connecticut, and their respective populations are considered to be secure (Klemens 2000).

Fish

A young brook trout (*Salvelinus fontinalis*) was observed in the perennial stream that traverses Wetland 2. As water levels lower in the summer, fish use of the stream could diminish.

Natural Diversity Data Base Species

VHB personnel reviewed the CTDEP's Natural Diversity Database (NDDB) which identifies general areas of concern with regards to state and federally listed Endangered, Threatened, and Special Concern species and significant natural communities. No areas of concern with regard to threatened or endangered species and/or significant natural communities were identified at or in the vicinity of the Site (see Figure 3, *Environmental Resources Screen*). However, VHB completed and submitted a NDDB Review Request Form and supporting materials to the CTDEP for confirmation. CTDEP responded that eastern box turtle, a state species of special concern, occurs in the vicinity of the Property. As a result, VHB prepared and submitted an eastern box turtle habitat survey to CTDEP which details the likelihood this species may occur on the Property as well as various protection measures that are designed to prevent mortality during construction activities. Provided below is a summary of the eastern box turtle habitat survey and subsequent correspondence with CTDEP.

The subject Property is dominated by deciduous forest, which presents potential suitable eastern box turtle habitat. However, the elevations would suggest that portions of the subject Property would not likely provide suitable habitat. Elevations at the areas of the proposed development that would be subject to disturbance range from approximately 610 to 810 feet. Eastern box turtles are widely distributed from sea level to 500 feet, becoming increasingly scarce and localized to an elevation maximum of just above 700 feet (Klemens 1993). In addition, soils on the Property are dominated by glacial till derived Paxton and Montauk soil types which would not provide an ideal nesting substrate due to their dense basal till characteristics. Despite these findings and due to the fact that Property specific surveys for eastern box turtles will not be performed, VHB has recommended a number of protection measures to avoid potential mortality to a State Special Concern species, which CTDEP concurred with in a letter dated October 26, 2010. This concurrence letter and the *Eastern Box Turtle Habitat Survey*, which was submitted to the CTDEP are provided in Attachment C.

Table 1: New England Wildlife Database Search of Possible Amphibians, Reptiles and Mammals Anticipated To Use the Property

Common Name	Scientific Name	Habitat Type on the Property		Special Habitat features
AMPHIBIANS				
Northern Dusky Salamander	<i>Desmognathus fuscus</i>	Forest		Permanent forested seeps, springs, headwater streams.
Northern Redback Salamander	<i>Plethodon cinereus</i>	Forest		Logs, stumps, rocks, etc.
Northern Two-lined Salamander	<i>Eurcea bislineata</i>	Forest		Well-shaded streams for breeding.
Eastern American Toad	<i>Bufo a. americanus</i>	Forest	Old Field	Shallow, still water for breeding.
Northern Spring Peeper	<i>Pseudacris c. crucifer</i>	Forest		Pools for breeding adjacent to forested or shrub habitat. Pools may be located off-site.
Wood Frog	<i>Rana sylvatica</i>	Forest		Pools for breeding adjacent to forested habitat. Pools may be located off-site.
REPTILES				
Eastern Box Turtle**	<i>Terrapene c. carolina</i>	Forest	Old Field	Old fields, clearings, ecotones with sandy soils.
Black Rat Snake	<i>Elaphe o. obselea</i>	Forest	Old Field	None listed.
Common Garter Snake	<i>Thamnophis sirtalis</i>	Forest	Old Field	None listed.
Eastern Milk Snake	<i>Lampropeltis t. triangulatum</i>	Forest	Old Field	Slash, wood piles, debris or loose soils for egg laying.
Northern Black Racer	<i>Coluber c. constrictor</i>	Forest	Old Field	Upland areas that are periodically cleared or mowed; adjacent forest and wetlands.
Northern Brown Snake	<i>Storeria d. dekayi</i>	Forest	Old Field	Prefers disturbed areas.
Northern Ringneck Snake	<i>Diadophis punctuatus edwardsii</i>	Forest		Mesic areas with abundant cover.
MAMMALS				
Black Bear	<i>Ursus americanus</i>	Forest	Old Field	Dens in semi-protected areas; seeps and wet areas in early spring; mast.
Coyote	<i>Canis latrans</i>	Forest	Old Field	Well-drained secluded den sites.
Eastern Chipmunk	<i>Tamias striatus</i>	Forest	Old Field	Tree or shrub cover; elevated perches, decaying stumps and logs, stone walls/
Eastern Cottontail	<i>Sylvilagus floridanus</i>		Old Field	Brush piles, stone walls, dens or burrows; herbaceous and shrubby cover.
Eastern Mole	<i>Scalopus aquaticus</i>	Forest	Old Field	Soft moist soils containing earthworms.
Fisher*	<i>Martes pennanti</i>	Forest	Old Field	Hollow trees, logs; dense regenerating softwoods.

Common Name	Scientific Name	Habitat Type on the Property		Special Habitat features
Gray Fox	<i>Urocyon cinereoargenteus</i>	Forest	Old Field	Hollow logs, tree cavities, rock crevices; tends to hunt forest edges
Gray Squirrel	<i>Sciurus carolinensis</i>	Forest		Mast-producing trees; tall trees for dens and leaf nests.
House Mouse	<i>Mus musculus</i>		Old Field	
Long-tailed Weasel	<i>Mustela frenata</i>	Forest	Old Field	Areas of abundant prey; previously excavated den sites; areas of abundant prey.
Masked Shrew	<i>Sorex cinereus</i>	Forest	Old Field	High humidity, ground cover especially leaves, rotten logs, herbaceous vegetation.
Mink*	<i>Mustela vison</i>	Forest		Hollow logs, natural cavities, under tree roots; forest-wetland edges.
Northern Short-tailed Shrew	<i>Blarina brevicauda</i>	Forest	Old Field	Low vegetation, loose leaf litter, high humidity
Norway Rat	<i>Rattus norvegicus</i>		Old Field	
Raccoon	<i>Procyon lotor</i>	Forest	Old Field	Hollow trees, dens usually >10 feet above ground.
Red Fox	<i>Vulpes vulpes</i>	Forest	Old Field	Well-drained den sites; tends to hunt more open or semi-open habitats.
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	Forest		Woodlands with mature trees; conifers preferred.
Short-tailed Weasel	<i>Mustela erminea</i>	Forest	Old Field	Dense brushy cover, slash; areas of abundant prey.
Southern Flying Squirrel	<i>Glaucmys voluns</i>	Forest		Mature woodland with cavity trees; favors cavities with entrance diameters of 1.6-2 inches.
Southern Red-backed Vole	<i>Clethrionomys gapperi</i>	Forest	Old Field	Springs, brooks, seeps, bogs; debris or slash cover.
Striped Skunk	<i>Mephitis mephitis</i>	Forest	Old Field	Well-drained soils for burrows/den sites; open uplands; around human habitation.
Virginia Opossum	<i>Didelphis virginiana</i>	Forest	Old Field	Hollow log or tree cavity.
White-footed Mouse	<i>Peromyscus leucopus</i>	Forest	Old Field	Down logs rotting stumps, tree cavities, exposed rocks (stone walls, boulders and ledge).
White-tailed Deer	<i>Odocoileus virginianus</i>	Forest	Old Field	Dense cover for winter shelter, adequate browse.
Woodchuck	<i>Marmota monax</i>	Forest	Old Field	Open land with well-drained soils in which to burrow.
Woodland Vole	<i>Microtus pinetorum</i>	Forest	Old Field	Uses variable depths of leaf litter, duff or grass; moist well-drained soils

Species in bold were observed on the Property

*** Potential track observed in snow**

****NDDB Species**

5

Terrestrial Wildlife Habitat Impact Analysis

The results of the field inventories and assessment of the wildlife conditions indicate that most of the Property does not contribute high value wildlife habitat for the following reasons: there is limited diversity of fruit-, nut-, and seed-bearing vegetation in the forest (e.g. lack of oaks); and Japanese barberry forms a virtual monoculture in the forest understory, diminishing the variety of habitat structure that would enhance wildlife usage. Japanese barberry is a non-native, invasive species that provides nominal food value to most terrestrial wildlife. The dominance of this species is evidence of historic disturbance activities on the Property including farming, pasturing, and logging activities. Wetland habitat in the vicinity of the Project area consists of and several hillside seeps, which do not contain sufficient aquatic habitat to support a diversity of amphibian and reptile species.

The Property's nine-acre old field meadow provides some interspersed cover types, and adds to the habitat value of the Property. The meadow provides foraging opportunities for a number of species, from early successional specialists to those that use a variety of habitats, or habitat generalists. Old field meadows and other early successional habitats are declining in the Northeast due to reforestation and suburban development. Following development activities, disturbed areas with the exception of the access road, will be planted using a native herbaceous seed mixture, thereby providing additional meadow habitat.

Construction activities associated with the installation of the proposed Project are primarily expected to have a short-term impact on terrestrial wildlife. While construction activities may result in mortality for slower, less mobile wildlife species, such as snakes and toads, erosion and sedimentation controls established around the perimeter of disturbance will provide a protective barrier to help avoid impact to these species. Disturbances from noise and human activity are expected to drive some of the more mobile species from the Property. The proximity of similar forested habitats adjacent to the Property will allow for natural relocation of these individuals from the Project area. After construction activities have been completed, it is expected that many of these individuals and species will return to the Property and occupy suitable habitats once again.

Long-term impacts on wildlife resulting from operation of the proposed Project are expected to be minimal. The site will be unmanned, resulting in minimal human presence throughout the year. Of the 67.5-acre Property, approximately 7.00± acres of existing habitat would be disturbed as a result of the proposed Project. The area of disturbance includes approximately 5.15 acres of tree clearing in forested areas to accommodate the access road and turbine facilities. Disturbance activities associated with the proposed Project would primarily affect areas characterized by a second growth hardwood forest habitat type, which is an abundant forest type in proximity to the Property as well as throughout Connecticut. The loss and/or conversion of this small amount of forested habitat is not significant on either a site or a landscape scale, as there are several large areas of similar forested habitat adjacent to and in the vicinity of the Property.

VHB completed and submitted a CTDEP Natural Diversity Database Review Request Form and supporting materials to CTDEP and received written confirmation that eastern box turtle, a State Species of Special Concern, occurs in the vicinity of the Property. As a result, VHB prepared and submitted an eastern box turtle habitat survey to CTDEP which details the likelihood this species may occur on the Property as well as various protection measures that are designed to prevent mortality during construction activities. VHB received concurrence from the CTDEP in a letter dated October 26, 2010 that these measures are adequately protective.

Perhaps the greatest value of the Property is the role it plays as undeveloped, open space in the larger landscape of this section of the town of Prospect. The Property connects on the north, west and south to undeveloped land owned by the New Haven Water Company associated with the New Naugatuck Reservoir. Farther to the southeast across Routes 42 and 69 is additional open space, including Brooksvale Recreation Park. Due to this interconnection, the Property may serve as a habitat corridor for species that may travel throughout this larger landscape block.

6

Proposed Activities Relative to Wetlands and Impact Analysis

The proposed Project has been successful in avoiding direct impacts to wetland resources on the Property. Temporary disturbance activities in proximity to Wetland 3 are required in order to install Turbine Two and its associated gravel access road. These activities include clearing, grading, installation of Turbine Two and the associated utilities. Best Management Practices will be utilized in accordance with the *2002 Connecticut Guidelines for Erosion and Sediment Control* throughout the course of construction activities on the Property and maintained until disturbed areas have been permanently stabilized. Silt fencing and hay bales will generally be installed around the perimeter of construction activities protecting nearby resources, including the nearby wetlands. A Wildlife/Conservation seed mix containing native grasses and forbs will be used to stabilize exposed areas post construction. This activity is detailed on the *Turbine Location Two, Upland Meadow Creation and Restoration Plan, Sheet C-315* (provided in Attachment D). Following establishment of these plantings and permanent stabilization of exposed soils, erosion control measures will be removed so as not to impede migration of wildlife utilizing the Property.

7

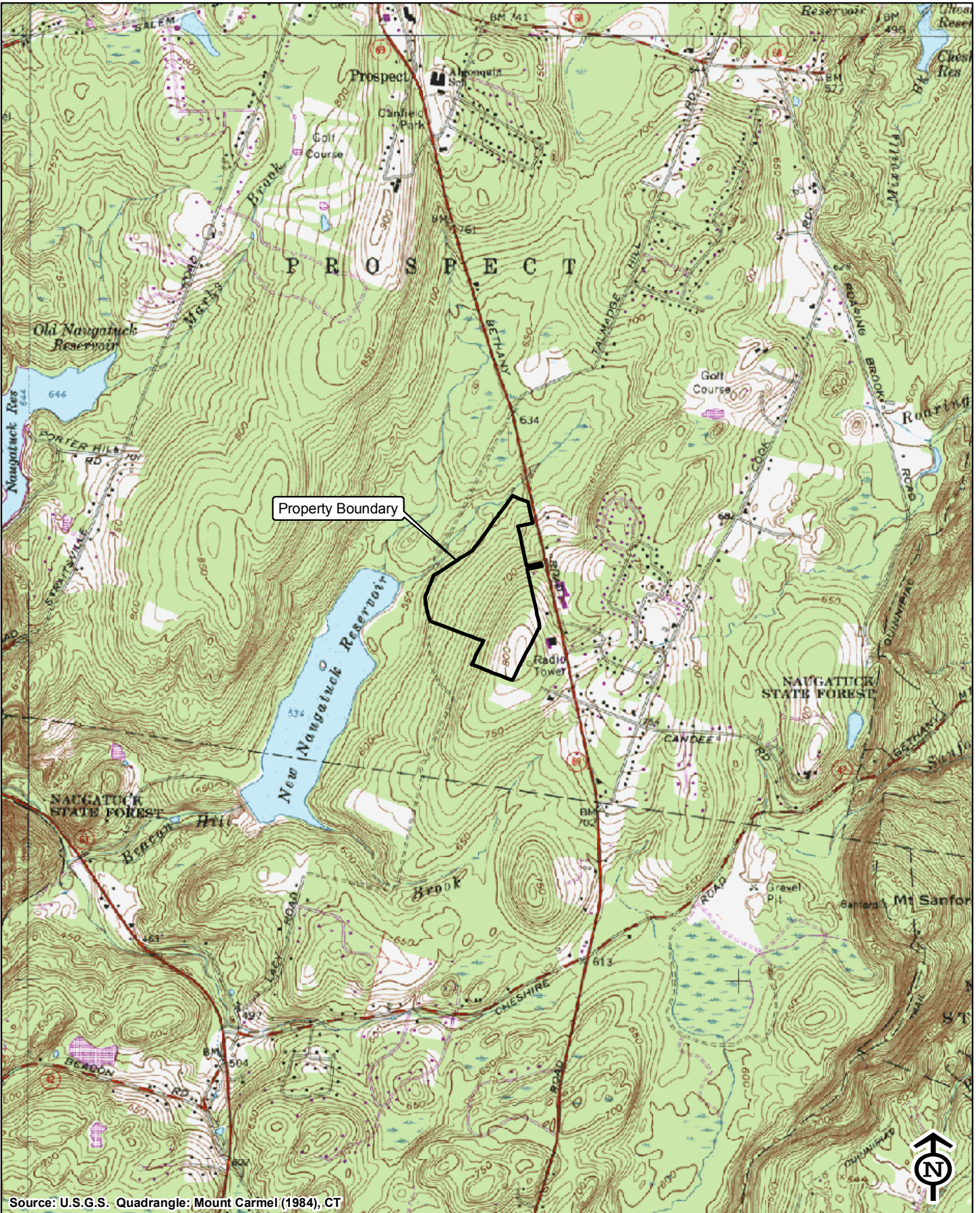
Summary

No direct wetland impacts are required for the proposed Project. Areas in proximity to wetland resources on the Property that are subject to temporary disturbance will be stabilized and restored with native vegetation following construction.

Overall the Property does not provide unique or exceptionally valuable wildlife habitat, but it does have the potential to be used by several dozen species common throughout Connecticut, ranging from very small amphibians and rodents to large mammals. The proposed Project would temporarily disturb some species of wildlife during construction activities, and would permanently convert or eliminate approximately 5.15 acres of forested habitat to meadow or gravel access road. It is not anticipated that the loss or conversion of this small amount of forested habitat will have a significant or long-term negative impact on most local terrestrial wildlife populations. The proposed Project may actually help local wildlife populations by preserving open space and protecting existing habitat from suburban development and habitat fragmentation.

Therefore, the proposed Project will not result in a long-term adverse impact to terrestrial wildlife or wetland resources.

Figures



Vanasse Hangen Brustlin, Inc.

Figure 1
Property Location Map
Wind Prospect
BNE Energy, Inc.
178 New Haven Road
Prospect, Connecticut

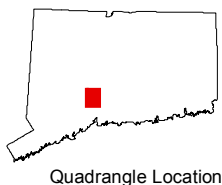


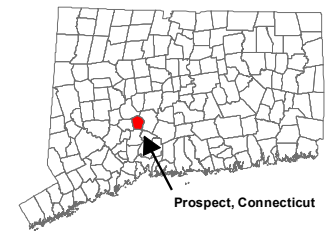
Figure 2 Habitat Type Map

Wind Prospect
178 New Haven Road
Prospect, CT



Legend

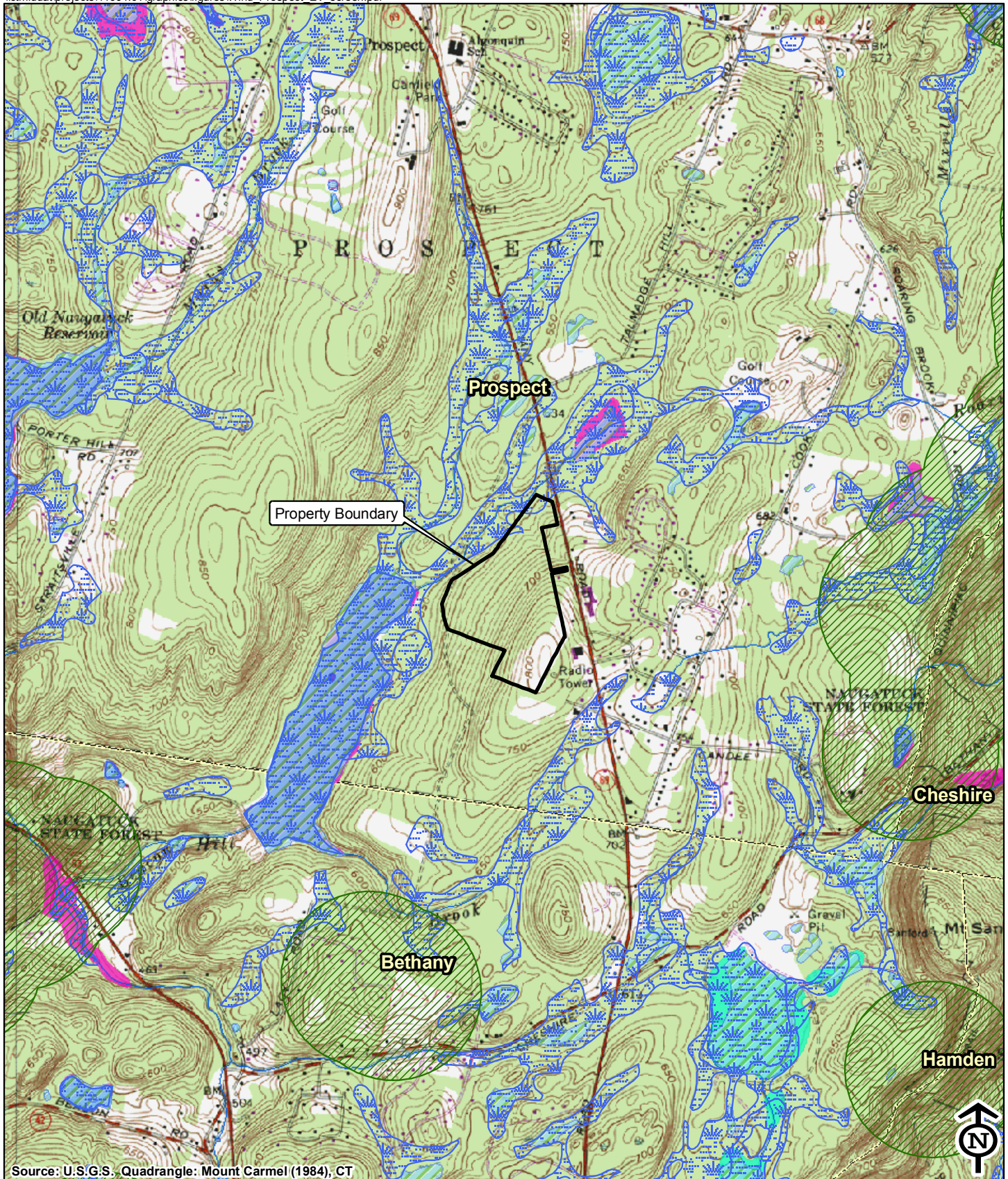
- Proposed Wind Turbine Location
- Property Boundary
- Habitat Type**
 - Early Old Field Meadow
 - Existing Telecommunications Tower Compound
 - Forested Wetlands
 - Second Growth Upland Hardwood Forest
 - Open Water



200 100 0 200
Feet

BNE Energy Inc.
Producer of green clean energy

VHB Vanasse Hangen Brustlin, Inc.



Source: U.S.G.S., Quadrangle: Mount Carmel (1984), CT

Legend

- Property Boundary
- NDDB Areas (buffered; last updated 08/2010)
- Wetlands
- National Wetland Inventory Wetlands
- Open Water
- Town Line
- FEMA Flood Zone 100 Year Flood Zone
- FEMA Flood Zone 500 Year Flood Zone
- Floodway in Zone AE
- Other Flood Areas

Vanasse Hangen Brustlin, Inc.

Figure 3
Environmental Resources Screen
Wind Prospect
BNE Energy, Inc.
178 New Haven Road
Prospect, Connecticut

October 25, 2010



Attachment A
Wetlands Delineation Report



WETLANDS DELINEATION REPORT

Vanasse Hangen Brustlin, Inc.

Date: March 30, 2010
Project No.: 41604.01
Prepared For: BNE Energy Inc.
29 South Main Street
Town Center Suite 200
West Hartford, CT 06107
Site Location: 178 New Haven Road
Prospect, Connecticut
Site Map: VHB Wetland Resources Map
Inspection Date: January 5/March 11/March 18, 2010
Field Conditions: Weather: overcast, low 30's General Soil Moisture: moist
/cloudy, 50's/sunny, 50's
Snow Depth: 2-4 inches/0 inches Frost Depth: 0-3 inches/0 inches

Type of Wetlands Identified and Delineated:

Connecticut Inland Wetlands and Watercourses
Tidal Wetlands
U.S. Army Corps of Engineers

Local Regulated Upland Review Areas: Wetlands: 100 feet Watercourses: 100 feet

Field Numbering Sequence of Wetlands Boundary: Connecticut – **W1:** WF 1-01 to 32 **W2:** WF 2-01 to 2-25-9, WF 2-32 to 2-26-10, WF 2-42 to 2-46, WF 2-56 to 2-61 **W3:** WF 3-01 to 3-60 **W4:** 4-01 to 4-06, 5-01 to 5-19, 6-01 to 6-17, IWC 1-01 to 1-04
[as depicted on attached Wetland Resources Map]

The classification systems of the National Cooperative Soil Survey, the U.S. Department of Agriculture, Natural Resources Conservation Service, County Soil Survey Identification Legend, Connecticut Department of Environmental Protection and United States Army Corps of Engineers New England District were used in this investigation.

All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

The wetlands delineation was conducted and reviewed by:



Matthew Davison
Registered Soil Scientist

Enclosures

Attachments

-
- Wetland Delineation Field Form
 - Soil Map
 - Soil Report
 - VHB Wetland Resources Map



Wetland Delineation Field Form

Project Address:	178 New Haven Road Prospect, Connecticut	Project Number:	41604.01
Inspection Date:	January 5/March 11/March 18, 2010	Inspector:	Matthew Davison
Wetland I.D.:	Wetlands 1, 2, 3, 4		

Field Conditions:	Weather: cloudy, low 30's/cloudy, low 50's/sunny, 50's	Snow Depth: 2-4 inches/0 inches
	General Soil Moisture: moist	Frost Depth: 0-3 inches/0 inches

Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>
	ACOE <input type="checkbox"/>
	Tidal <input type="checkbox"/>

Field Numbering Sequence: **W1:** WF 1-01 to 1-32 **W2:** WF 2-01 to 2-25-9, WF 2-32 to 2-26-10, WF 2-42 to 2-46, WF 2-56 to 2-61 **W3:** WF 3-01 to 3-32 **W4:** 4-01 to 06, 5-01 to 19, 6-01 to 17, IWC 1-01 to 04

WETLAND HYDROLOGY:

NONTIDAL

Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated – seepage <input checked="" type="checkbox"/>	Seasonally Saturated - perched <input type="checkbox"/>
Comments: Hillside seep wetlands generally occurring where topographical gradient subsides.		

TIDAL

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>	
Comments: N/A		

WETLAND TYPE:

SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: Palustrine Forested Wetlands (PFO)		

CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: See above		

WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>	Tidal <input type="checkbox"/>
Comments: Intermittent watercourse features are associated with most of these wetlands. A potential perennial watercourse is located in Wetland 2.		

SPECIAL AQUATIC HABITAT:

Vernal Pool <input type="checkbox"/>	Other <input type="checkbox"/>	
Comments: N/A		

Wetland Delineation Field Form (Cont.)

MAPPED SOILS:

SOIL SERIES (Map Unit Symbol)	WET	UP	NRCS MAPPED	FIELD IDD/ CONFIRMED
Paxton and Montauk (84, 85)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Canton and Charlton (62)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Woodbridge (47)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ridgebury, Leicester, Whitman (3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DOMINANT PLANTS:

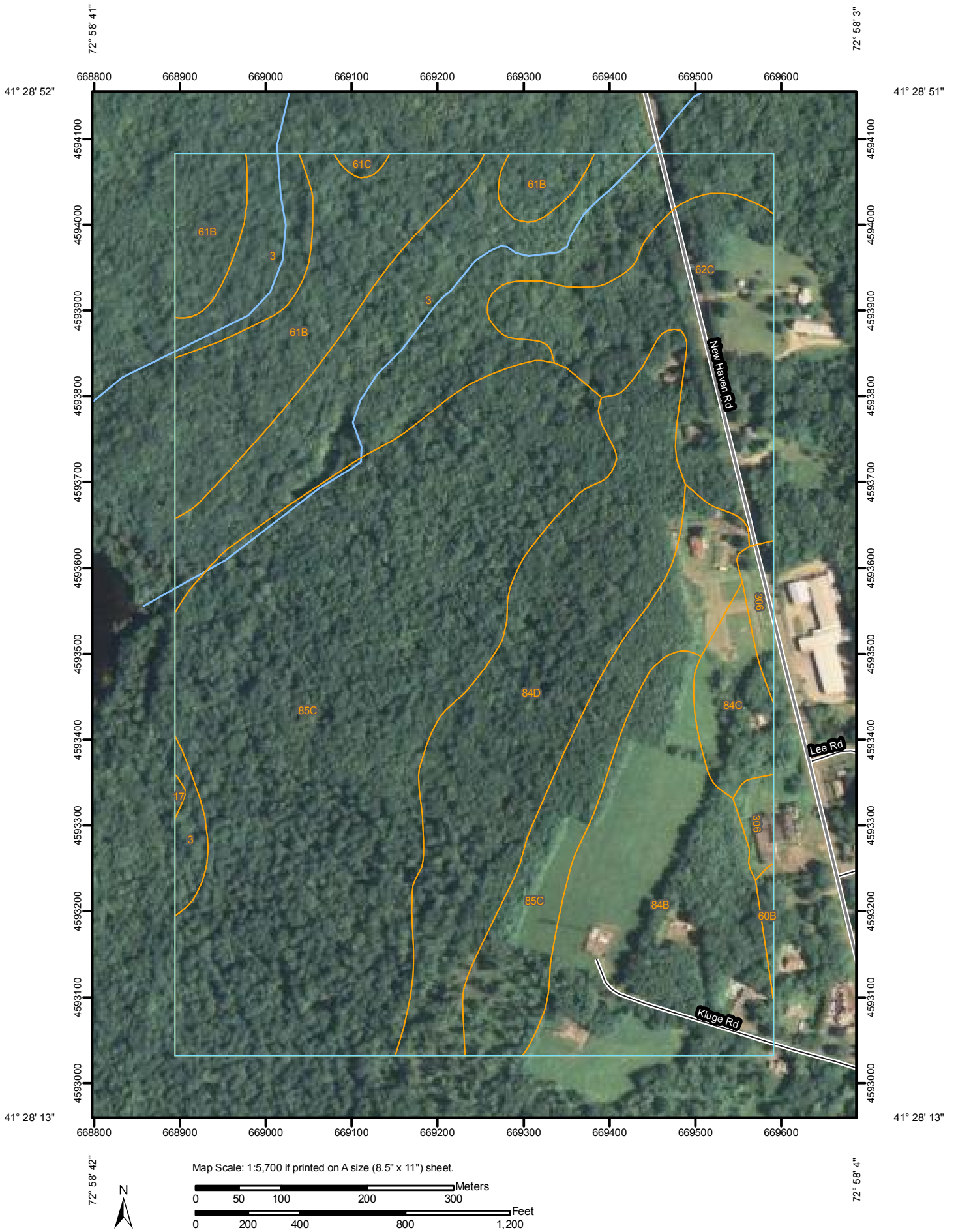
red maple (<i>Acer rubrum</i>)	Spicebush (<i>Lindera benzoin</i>)
white ash (<i>Fraxinus Americana</i>)	
yellow birch (<i>Betula allegheniensis</i>)	
American elm (<i>Ulmus Americana</i>)	
tulip poplar (<i>Liriodendron tulipifera</i>)	
Japanese barberry (<i>Berberis thunbergii</i>)	

WETLAND NARRATIVE:

Wetlands 1, 2, 3 and 4 are forested hillside seep wetlands draining westerly towards Long Hill Reservoir. They are remarkably similar in their characteristics and as such are described together. The tree canopies are dominated by red maple, white ash and yellow birch, while the shrub layer includes spicebush and a vigorous Japanese barberry component which forms a virtual monoculture below three feet above ground. The wetlands generally occur where topographical gradient decreases and groundwater breakout occurs. Intermittent watercourse features were noted within the interior of most of the delineated wetland areas.


The following are observations that differentiate each system. Wetland 1 occurs on the hillside where the topographical gradient subsides. It contains permanently saturated depressions which generally provide higher wetland functions and values than the other hillside seep wetlands. It drains via well-defined and diffuse surface flows west before terminating at a drainage swale along a historic dirt road which exists along the western Site boundary. Flows are then conveyed northerly within a swale along the road. Wetland 2 is a forested hillside seep draining northerly off-site into a perennial watercourse which flows southwest into the New Naugatuck Reservoir. A watercourse flows into the southern tip of this system from beneath Route 69. While not shown as a perennial watercourse on USGS mapping, field observations indicate this watercourse may be perennial. It is characterized by a wide, deeply scoured channel, abundant sediment loading, lack of silty deposits and steeply incised banks. Flows within the channel appear to be extremely flashy. Wetland 3 is a hillside seep that occurs where a gradual decrease in topographical gradient exists. This wetland boundary is diffuse and not clearly defined by a slope break, soil type or change in vegetation. The delineated wetland boundary generally captures a complex of somewhat poorly and poorly drained soil types and diffuse surface water drainage patterns. This wetland area drains, via an intermittent watercourse, towards an off-site perennial watercourse which flows southwest into the New Naugatuck Reservoir. Wetland 4 is a forested hillside seep complex consisting of three areas where groundwater exfiltration is occurring. Diffuse surface drainage patterns were observed connecting these systems, however, these patterns were not channelized and no wetland soil types were found in this area, therefore this area was determined to be upland.

Soil Map—State of Connecticut
(178 Hew Haven Road, Prospect)



MAP LEGEND






















Area of Interest (AOI)




 Area of Interest (AOI)

Soils




 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other



Special Line Features

-  Gully
-  Short Steep Slope
-  Other






Political Features

-  Cities

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:5,700 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 7, Dec 3, 2009

Date(s) aerial images were photographed: 8/14/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, extremely stony	28.1	15.5%
17	Timakwa and Natchaug soils	0.1	0.0%
60B	Canton and Charlton soils, 3 to 8 percent slopes	0.4	0.2%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	16.7	9.2%
61C	Canton and Charlton soils, 8 to 15 percent slopes, very stony	0.3	0.2%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	15.6	8.6%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	20.9	11.6%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	3.7	2.1%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	24.0	13.2%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	69.1	38.2%
306	Udorthents-Urban land complex	2.1	1.2%
Totals for Area of Interest		181.0	100.0%

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

State of Connecticut

Description Category: SOI

Map Unit: 3—Ridgebury, Leicester, and Whitman soils, extremely stony

Ridgebury, Leicester And Whitman Soils, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 50 inches (940 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Ridgebury soils, 35 percent Leicester soils, 15 percent Whitman soils. 10 percent minor components. Ridgebury soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is 20 to 30 inches to densic material. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 2.5 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 3 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 5 inches; fine sandy loam 5 to 14 inches; fine sandy loam 14 to 21 inches; fine sandy loam 21 to 60 inches; sandy loam Leicester soils This component occurs on upland drainageway and depression landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 9 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 7 inches; fine sandy loam 7 to 10 inches; fine sandy loam 10 to 18 inches; fine sandy loam 18 to 24 inches; fine sandy loam 24 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam Whitman soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from gneiss, schist, and granite. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is 12 to 20 inches to densic material. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 1.9 inches (very low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is occasional. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 9 inches; fine sandy loam 9 to 16 inches; fine sandy loam 16 to 22 inches; fine sandy loam 22 to 60 inches; fine sandy loam

Map Unit: 17—Timakwa and Natchaug soils

Timakwa And Natchaug Soils This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 40 to 50 inches (1016 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Timakwa soils, 40 percent Natchaug soils. 15 percent minor components. Timakwa soils This component occurs on depression landforms. The parent material consists of woody organic material over sandy and gravelly glaciofluvial deposits. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 5.95 in/hr (rapid), with about 16.2 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 4 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 10 inches; muck 10 to 21 inches; muck 21 to 24 inches; muck 24 to 37 inches; muck 37 to 47 inches; very gravelly loamy coarse sand 47 to 60 inches; gravelly loamy very fine sand Natchaug soils This component occurs on depression landforms. The parent material consists of woody organic material over loamy alluvium, loamy glaciofluvial deposits, or loamy till. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.20 in/hr (moderately slow), with about 15.6 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 2 inches; peat 2 to 4 inches; peat 4 to 6 inches; muck 6 to 11 inches; muck 11 to 18 inches; muck 18 to 24 inches; muck 24 to 33 inches; fine sandy loam 33 to 36 inches; fine sandy loam 36 to 80 inches; loam

Map Unit: 60B—Canton and Charlton soils, 3 to 8 percent slopes

Canton And Charlton Soils, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 61B—Canton and Charlton soils, 3 to 8 percent slopes, very stony

Canton And Charlton Soils, 3 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 61C—Canton and Charlton soils, 8 to 15 percent slopes, very stony

Canton And Charlton Soils, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 62C—Canton and Charlton soils, 3 to 15 percent slopes, extremely stony

Canton And Charlton Soils, 3 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 84B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes

Paxton And Montauk Fine Sandy Loams, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 84C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes

Paxton And Montauk Fine Sandy Loams, 8 To 15 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 84D—Paxton and Montauk fine sandy loams, 15 to 25 percent slopes

Paxton And Montauk Fine Sandy Loams, 15 To 25 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 15 to 25 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 15 to 25 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 85C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony

Paxton And Montauk Fine Sandy Loams, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 56 inches (889 to 1422 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 306—Udorthents-Urban land complex

Udorthents-Urban Land Complex This map unit is in the New England and Eastern New York Upland, Southern Part Connecticut Valley Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 55 degrees F. (7 to 13 degrees C.) This map unit is 50 percent Udorthents soils, 35 percent Urban Land. 15 percent minor components. Udorthents soils This component occurs on cut (road, railroad, etc.), railroad bed, road bed, spoil pile, urban land, fill, and spoil pile landforms. The slope ranges from 0 to 25 percent and the runoff class is medium. The depth to a restrictive feature varies, but is commonly greater than 60 inches. The drainage class is typically well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 9.0 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.4 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table is greater than 60 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 5 inches; loam 5 to 21 inches; gravelly loam 21 to 80 inches; very gravelly sandy loam Urban Land Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 0 to 35 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 7, Dec 3, 2009

Wetland Resources Map

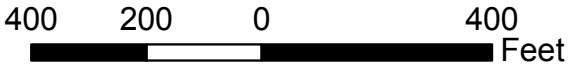
Wind Prospect
178 New Haven Road
Prospect, CT



Legend

- Potential WP 1.6 WT Location
- - - Delineated Intermittent Watercourse
- Delineated Wetland Boundary
- Wetland
- Open Water
- Site Property Boundary

Base Map Source: 2004 aerial photograph with 0.5-foot resolution.



VHB Vanasse Hangen Brustlin, Inc.

Attachment B
Photographic Documentation

Vanasse Hangen Brustlin, Inc.
PHOTOGRAPHIC DOCUMENTATION
Wind Prospect, Proposed Wind Energy Facility
Prospect, Connecticut



Photo 1: View of early old field meadow habitat. Meteorological tower and telecommunications tower are visible in the background.



Photo 2: View of second growth upland hardwood forest habitat. This photo is typical of this habitat type. Note the dominance of Japanese barberry (*Berberis thunbergii*)

Vanasse Hangen Brustlin, Inc.
PHOTOGRAPHIC DOCUMENTATION
Wind Prospect, Proposed Wind Energy Facility
Prospect, Connecticut



Photo 3: View of perennial watercourse within Wetland 2.



Photo 4: View of Wetland 3 at the proposed area of direct wetland impacts. Note dominance of Japanese barberry in the understory.

Attachment C
Eastern Box Turtle Habitat
Survey



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



October 26, 2010

Mr. Matthew Davison
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457-1847



re: proposed wind energy facility, 178 New Haven Road, Prospect

Dear Mr. Davison:

Your herpetological report and additional materials were received on 10/26/10 regarding the state species of special concern, Eastern Box Turtle (*Terrapene carolina*). Again since you do not yet have your permits, the DEP Wildlife Division recommends that you review the recommendations provided at the following link: http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html and consider conducting additional field surveys to address non-listed species that may occur at this site or fly over it and be impacted by a turbine.

The DEP Wildlife Division concurs with the Eastern Box Turtle measures paraphrased and listed here:
Isolation Measures:


1. Do not install conventional silt fencing until the project is scheduled to begin.
2. Inspect the fencing once a week or after storm events throughout the course of the project.
3. Monthly inspection reports submitted to the Siting council and observation of turtle reported to DEP Wildlife.

Contractor Education:

1. Prior to work on the site the Contractor will attend an orientation and educational session.
2. The contractor will immediately report any encounters to VHB. Posters will be posted around the job site.
3. Prior to the start of construction each day, the Contractor shall search the entire work area for Eastern box turtles. If a turtle is found, it should be handled carefully and placed outside of the isolation barrier in the direction that it was heading.

The Wildlife Division also recommends that standard protocols for protection of wetlands should be followed and maintained during the course of the project. Additionally, all silt fencing should be removed after soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted. And all precautions should be taken to avoid degradation to wetland habitats including any wet meadows and seasonal pools. No equipment or vehicles should be stored outside of the barrier fencing. Special care should be taken by the Contractor during early morning and evening hours so that possible basking or foraging turtles are not harmed by the construction activities. Please be advised that the Wildlife Division has not made a field inspection of the project nor have we seen detailed timetables for work to be done. Consultation with the Wildlife Division should not be substituted for site-specific surveys that may be required for environmental assessments. The time of year when this work will take place will affect these species if they are present on the site when the work is scheduled. Please be advised that should state permits be required or should state involvement occur in some other fashion, specific restrictions or conditions relating to the species discussed above may apply. In this situation, additional evaluation of the proposal by the DEP Wildlife Division should be requested. If the proposed project has not been initiated within 12 months of this review, contact the NDDB for an updated review. If you have any additional questions, please feel free to contact me at Julie.Victoria@ct.gov, please reference the NDDB # at the bottom of this letter when you e-mail or write. Thank you for the opportunity to comment.

Sincerely,


Julie Victoria, Wildlife Biologist
Franklin Swamp Wildlife Management Area
391 Route 32
N. Franklin, CT 06254

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199 Street • Hartford, CT 06106-5127

www.ct.gov/dep

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cc: NDDB – 17982



October 22, 2010

Vanasse Hangen Brustlin, Inc.

Ref: 41604.01

Ms. Julie Victoria
Wildlife Biologist
Department of Environmental Protection
Franklin Wildlife Management Area
391 Route 32
N. Franklin, Connecticut 06254

Re: Eastern Box Turtle Habitat Survey
Proposed Wind Prospect – Wind Energy Facility
NDDB - 17982
178 New Haven Road
Prospect, CT

Dear Ms. Victoria:

Vanasse Hangen Brustlin Inc. (VHB) has been retained by BNE Energy, Inc. ("BNE") to review environmental resource information, including threatened or endangered species or designated critical habitats on property located at 178 New Haven Road in Prospect, Connecticut ("Property"). A Property Location Map is enclosed for reference. BNE proposes to construct a wind energy facility on the aforementioned Site. The proposed facility includes construction of two 1.6 megawatt GE wind turbines, associated access roads, and utility interconnection to the existing electrical grid. Access to the Property will be from Kluge Road. Proposed activities associated with the proposed wind energy facility include construction of a new access road and installation of associated ground equipment including an electrical collector yard and associated utility infrastructure so that the turbines can be interconnected to the electrical grid. Please see attached Site Plan with Aerial Imagery, Sheet C-002.

A habitat survey was performed on the Property prior to your response letter of August 31, 2010 (enclosed). A summary of this inspection is provided below along with recommendations to be implemented during proposed construction activities to avoid possible impact to this Special Concern species.

In Connecticut, eastern box turtles (*Terrapene carolina*) are restricted to low-lying areas of the state, specifically coastal areas, the Central Connecticut Lowland, and the hilly regions of southwestern Connecticut. Box turtles are widely distributed from sea level up to 500 feet, becoming increasingly scarce and localized to an elevation maximum of just above 700 feet. The eastern box turtle favors old field habitat and deciduous forest ecotones, including

powerline cuts and logged-over woodland. Although strictly terrestrial, this species is seldom found far from water, usually a small stream or pond¹.

Habitat Survey

The Property occupies a drumlinoid² landform situated west of New Haven Road (State Highway 69) and south of the Prospect town center. Elevations at the Property range from 550 to 810 feet. The majority of the Property is covered by second growth, upland hardwood forest, but also includes several forested hillside seep wetlands and watercourses as well as nine acres of early old field meadow habitat situated at the highest elevation on the Property. An existing telecommunications facility is located within this hilltop meadow. Please see attached Habitat Type Map.

Forest Habitat

The forested portion of the Property is dominated by hardwood poletimber (trees 4.0 to 11.9 inches diameter at breast height ["DBH"]) and small sawtimber (12 to 15 inches DBH). Generally, areas closer to the top of the cleared hilltop are dominated by hardwood poletimber comprised of early successional tree species, evidence of abandoned pastureland. Occasional wolf trees and deceased red cedar (*Juniperus virginiana*) were also noted within this area. Areas further down slope contain a larger proportion of sawtimber. Dominant species include white ash (*Fraxinus americana*), sugar maple (*Acer saccharinum*), tulip poplar (*Liriodendron tulipifera*) and yellow birch (*Betula allegheniensis*), interspersed with shagbark hickory (*Carya ovata*), black birch (*Betula lenta*), eastern hemlock (*Tsuga canadensis*) and black cherry (*Prunus serotina*).

The upland forest understory is dominated by Japanese barberry (*Berberis thunbergii*), a non-native invasive species. The barberry cover is dense, and forms a virtual monoculture up to three feet off the ground. Due to the thick barberry cover, there is very little herbaceous cover evident in the understory. Christmas fern (*Polystichum acrostichoides*) appears occasionally. Rotting logs, woody debris, and slash are abundant throughout the Project site.

Meadow Habitat

The nine-acre, early old field meadow is situated in the southeast corner of the Property, on the highest elevation of the Site. This field is separated from a smaller, one acre field to the north by a hedgerow of saplings, shrubs, and trees, including red maple (*Acer rubrum*), white ash, gray dogwood (*Cornus racemosa*), black cherry, and Asiatic bittersweet (*Celastrus orbiculatus*). The larger field, which contains the telecommunications facility, is dominated by forbes such as goldenrod (*Solidago spp.*) and grasses including orchard grass (*Dactylis glomerata*), *Dicanthelium*, and *Agrostis* species. Patches of low shrubs approximately three to

¹ Klemens, M. W. (1993). Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut, Bulletin 112.

² Drumlinoid is a family of landforms created as a result of glacial retreat and advance. They are generally orientated in a north-south direction and comprised of varying amounts of glacial till and bedrock.



four feet high also occur, including sweet fern (*Comptonia peregrina*) and gray dogwood. Vegetation cover in the smaller field is similar but also contains *Rubus* species.

Wetlands Resources

Several forested hillside seep (groundwater exfiltration) wetlands and watercourses were delineated on the Property. See attached Habitat Type Map. In total, four wetlands resource areas were delineated on the Property. They generally occur on the hillside where topographical gradient subsides and seasonal high groundwater persists long enough for reducing soil conditions to exist. However, several hillside seepage areas were delineated on side slopes where exfiltrated groundwater follows meandering drainage patterns downslope. Intermittent watercourse features were observed but not delineated within most of the delineated wetland areas. The tree canopies are dominated by red maple, white ash and yellow birch, while the shrub layer includes spicebush and a vigorous Japanese barberry component which forms a virtual monoculture below three feet above ground.

Digitally available soil survey information was obtained from the Natural Resources Conservation Service (NRCS). A soil type map and descriptions are attached for reference. Soil classifications present on the Site include well drained Paxton and Montauk soils, and poorly drained Ridgebury and Leicester soils. These soil types were confirmed during a wetland delineation conducted by VHB Registered Soil Scientist Matthew Davison.

Discussion

The subject Property is dominated by deciduous forest, which presents potential suitable eastern box turtle habitat. However, the elevations would suggest that portions of the subject Property would not likely provide suitable habitat. Elevations at the areas of the proposed development that would be subject to disturbance range from approximately 610 to 810 feet. As previously noted, box turtles are widely distributed from sea level to 500 feet, becoming increasingly scarce and localized to an elevation maximum of just above 700 feet³. In addition, upland soils on the Property are dominated by glacial till derived Paxton and Montauk soil types which would not provide an ideal nesting substrate. Despite these findings and due to the fact that Property specific surveys for eastern box turtles will not be performed, VHB recommends the following protection measures to avoid potential mortality to a State Special Concern species as a result of proposed construction activities.

Eastern Box Turtle Protection Measures

The following is a methodological plan that will avoid mortality to a State Special Concern species as a result of construction activities for the site improvements proposed if work is proposed during the turtle's active period (April 1 to November 1).

The proposed eastern box turtle species protection program consists of periodic inspection of

³ Klemens, M. W. (1993). Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut, Bulletin 112.



the construction site and mandatory education of all contractors and sub-contractors prior to initiation of work on the site.

1. Isolation Measures

- a. **Schedule:** On-site work is tentatively scheduled to commence upon securing of all necessary permits during the spring of 2011 with an anticipated duration of approximately six to eight months. Installation of conventional silt fencing, which will also serve as an isolation of the work zone from surrounding areas and required for erosion control compliance, will be performed prior to any earthwork. A qualified professional will inspect the work zone area prior to barrier installation to ensure the area is free of eastern box turtles.
- b. **Specifications:** The fencing will consist of conventional erosion control woven fabric, installed approximately six inches below surface grade and staked at seven- to ten-foot intervals using four-foot oak stakes or approved equivalent. The fencing will be inspected for tears or breeches in the fabric following installation and at one-week intervals or after storm events of 0.5 inch or greater by a qualified professional between April 1 and November 1. Inspections will be conducted throughout this time period.
- c. **Reports:** Monthly inspection reports (brief narrative and applicable photos) will be submitted to the Connecticut Siting Council for compliance verification. Any observations of eastern box turtle will be reported to the Connecticut Department of Environmental Protection Wildlife Division.
- d. **Location:** The extent of the barrier fencing will be shown on the Erosion Control Plan.

2. Contractor Education:

- a. Prior to work on-site, the Contractor shall attend an educational session with a qualified professional. This orientation and educational session will consist of an introductory session with photos as well as measures to be taken should animals be encountered.
- b. Contractors will be provided with cell phone and email contacts for the qualified professional responsible for oversight to be used immediately upon encountering an eastern box turtle. Poster materials will be provided and posted on the job site to maintain worker awareness as the season progresses. A copy of the Eastern Box Turtle caution poster is enclosed.
- c. The Contractor will search the construction area each morning prior to



the start of construction and carefully move any turtles encountered out of the construction zone. Any encounters with eastern box turtle will be reported immediately to the qualified professional responsible for oversight.

3. Reporting

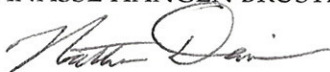
- a. Following completion of the construction project, a summary report will be provided to CTDEP documenting the monitoring and maintenance of the barrier fence.
- b. Any observations of the species of concern will be reported to CTDEP by the qualified professional responsible for oversight, with photo-documentation (if possible) and with specific information on the location and disposition of the animal.

The eastern box turtle protection measures detailed above will adequately protect this Special Concern species in the unlikely event that this species is encountered on the subject property during construction activities. Therefore, BNEs' proposed development at this property will not have an adverse affect on eastern box turtles.

We respectfully request a written opinion from your office regarding the potential effect of proposed activities on this State Species of Special Concern in light of documentation contained herein. At your earliest convenience, please forward correspondence to my attention. Thank you in advance for your assistance in this matter.

Very truly yours,

VANASSE HANGEN BRUSTLIN, INC.

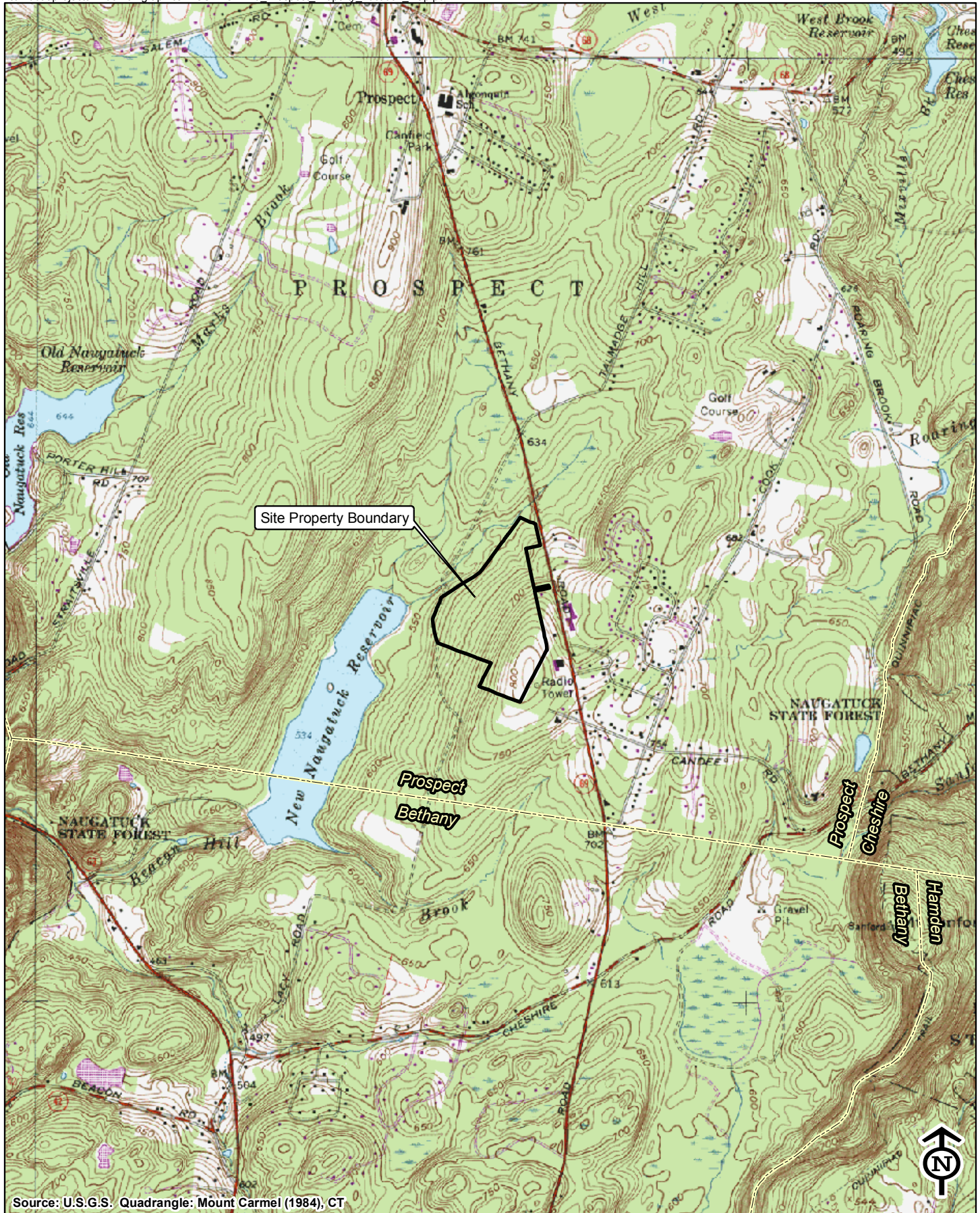


Matthew Davison
Registered Soil Scientist
CT Certified Forester 193

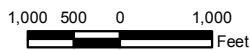
Enclosures



Property Location Map

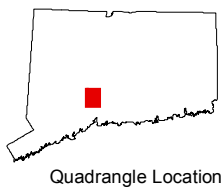


Source: U.S.G.S. Quadrangle: Mount Carmel (1984), CT



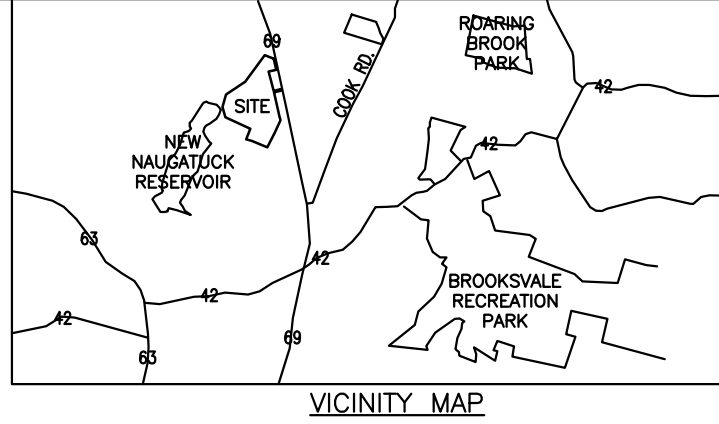
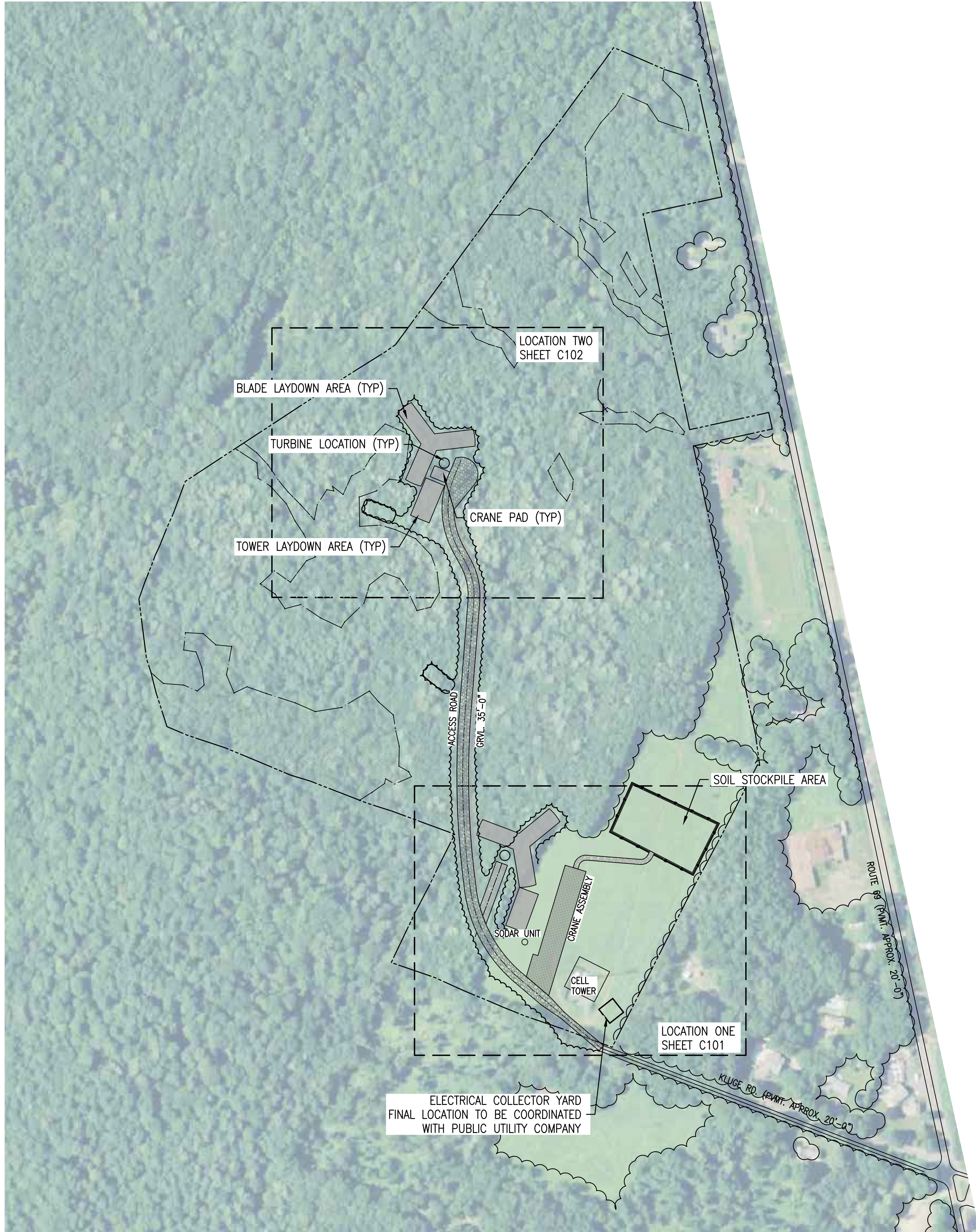
Vanasse Hangen Brustlin, Inc.

Property Location Map
Wind Prospect
BNE Energy, Inc.
178 New Haven Road
Prospect, Connecticut

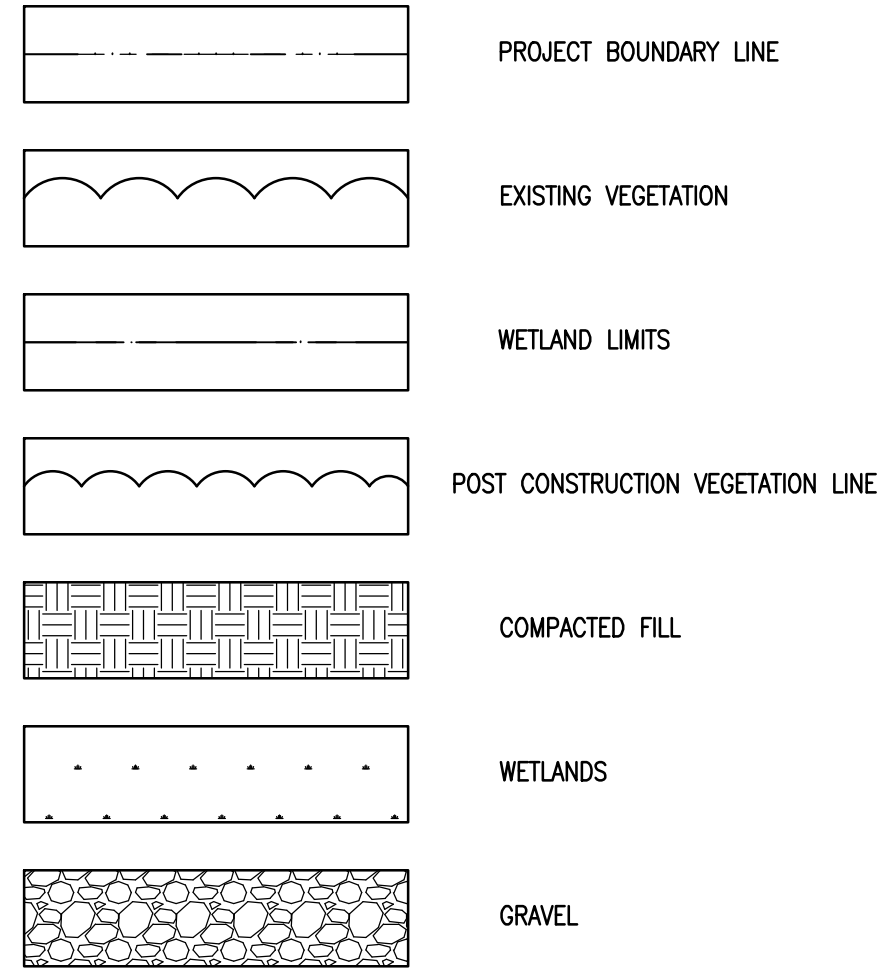


Quadrangle Location

**Site Plan with Aerial Imagery,
Sheet C-002**



LEGEND



LAYOUT AND MATERIALS NOTES

- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS AND EXISTING GROUND ELEVATIONS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS, AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

GENERAL NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS, LOCAL REQUIREMENTS AND GOVERNMENT REQUIREMENTS.
- AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE SIX INCHES OF TOPSOIL AND SHALL BE SEEDED, UNLESS OTHERWISE NOTED.
- UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS.
- TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE INDICATED.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE AS SOON AS PRACTICABLE.
- IN THE EVENT THAT SUSPECTED CONTAMINATED SOILS ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
- CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. CONTRACTOR SHALL DISPOSE OF DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES, AND STATUTES.
- DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR.
- CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY. ALL PAVEMENT, DITCHES, CURB AND GUTTER, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, FENCES, ETC. DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED AND/OR RESTORED.
- ALL ON SITE VEHICLE TRANSPORTATION ROUTES SHALL BE TEMPORARILY STABILIZED WITH STONE IMMEDIATELY AFTER GRADING TO PROVIDE READY ACCESS FOR EMERGENCY VEHICLES TO TRAVEL THROUGH AND AROUND THE CONSTRUCTION SITE DURING BOTH DRY AND WET WEATHER.
- EXCESS EXCAVATION MATERIAL SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR OR IN ON SITE AREAS APPROVED BY THE OWNER. NO SPOILS SHALL BE STORED ON SITE BEYOND SUBSTANTIAL COMPLETION.
- DEWATERING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR IS TO OBTAIN ALL PERMITS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF DEMOLITION OR RELOCATION WITH APPLICABLE UTILITY COMPANIES, IE, GAS, CABLE, POWER, TELEPHONE, WATER, SEWER, ETC.
- EQUIPMENT OPERATION, ACTIVITIES, OR PROCESSES PERFORMED BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH ALL FEDERAL AND STATE AIR EMISSION AND PERFORMANCE LAWS AND STANDARDS.
- CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- BURNING WILL NOT BE ALLOWED ON THE PROJECT SITE UNLESS AUTHORIZED IN WRITING BY THE OWNER. THE SPECIFIC TIME, LOCATION AND MANNER OF BURNING SHALL BE SUBJECT TO APPROVAL.
- SOLID WASTES (EXCLUDING CLEARING DEBRIS) SHALL BE PLACED IN CONTAINERS WHICH ARE EMPTIED ON A REGULAR SCHEDULE. HANDLING, STORAGE, AND DISPOSAL SHALL BE CONDUCTED TO PREVENT CONTAMINATION. SEGREGATION MEASURES SHALL BE EMPLOYED SO THAT NO HAZARDOUS OR TOXIC WASTE WILL BECOME CO-MINGLED WITH SOLID WASTE. THE CONTRACTOR SHALL TRANSPORT SOLID WASTE OFF SITE AND DISPOSE OF IT IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS FOR SOLID WASTE DISPOSAL. A SUBTITLE D RCRA PERMITTED LANDFILL SHALL BE THE MINIMUM ACCEPTABLE OFFSITE SOLID WASTE DISPOSAL OPTION. THE CONTRACTOR SHALL VERIFY THAT THE SELECTED TRANSPORTERS AND DISPOSAL FACILITIES HAVE THE NECESSARY PERMITS AND LICENSES TO OPERATE. THE CONTRACTOR SHALL COMPLY WITH FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS PERTAINING TO THE USE OF LANDFILL AREAS.
- PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL MARK THE AREAS THAT NEED NOT BE DISTURBED UNDER THIS CONTRACT. ISOLATED AREAS WITHIN THE GENERAL WORK AREA WHICH ARE NOT TO BE DISTURBED SHALL BE MARKED OR FENCED. MONUMENTS AND MARKERS SHALL BE PROTECTED BEFORE CONSTRUCTION OPERATIONS COMMENCE.
- THE CONTRACTOR SHALL MONITOR CONSTRUCTION ACTIVITIES TO PREVENT POLLUTION OF SURFACE AND GROUND WATERS AND SHALL COMPLY WITH THE CLEAN WATER ACT SECTION 404 REGULATIONS.
- CONTRACTOR SHALL ESTABLISH AND VERIFY POINT OF BEGINNING (P.O.B) AND STAKE SITE AS INDICATED ON CONSTRUCTION DOCUMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING, OR CENTERLINE UNLESS OTHERWISE NOTED.
- ALL DETAILS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH SPECIFICATIONS AND CONSTRUCTION DOCUMENTS.



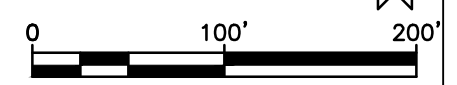
MARK	DESCRIPTION	DATE	TLK	APPR.
1	CONNECTICUT SITING COUNCIL SUBMISSION	10-21-10		

DESIGNED BY:	DATE:	DESIGNED BY:	DATE:
CHKD BY:	DATE:	CHKD BY:	DATE:
RSW	10-21-10	TLK	10-21-10
BY:		BY:	
FOR:		FOR:	
PROJECT:		PROJECT:	
FILE NAME:		FILE NAME:	
ANSI D		ANSI D	

ZAPATA
 6502 LAWRENCE ROAD, SUITE 200, WESTPORT, CT 06880
 PHONE: (203) 356-8940
 FAX: (203) 356-8977
 WWW.ZAPATAINC.COM

WIND PROSPECT
 CONNECTICUT
 SITE PLAN WITH AERIAL IMAGERY

SHEET
 IDENTIFICATION
C-002



CT DEP letter dated August 31, 2010



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



September 3, 2010

Mr. Matthew Davison
Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, CT 06457-1847



re: proposed wind energy facility, 178 New Haven Road, Prospect

Dear Mr. Davison:

Your request was forwarded to me on 9/1/10 from Dawn McKay of the Department of Environmental Protection (DEP) Natural Diversity Data Base. Their records indicate that a state species of special concern, Eastern Box Turtle (*Terrapene carolina*) occurs in the vicinity of this project. Additional populations of non-listed species may occur at this site or fly over it, please see the additional recommendations provided at the following link:

http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html

Eastern Box Turtles require old field and deciduous forest habitats, which can include power lines and logged woodlands. They are often found near small streams and ponds, the adults are completely terrestrial but the young may be semiaquatic, and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. This species is dormant from November 1 to April 1. It has been negatively impacted by the loss of suitable habitat:

The Wildlife Division has not been provided with details or a timetable of the work to be done. Past practices do not preclude the existence of this species on this property. If this work will be conducted in this species' habitat or any staging areas or equipment or access roads will be located in this species' habitats, the Wildlife Division recommends that a herpetologist familiar with the habitat requirements of this species conduct surveys. A report summarizing the results of such surveys should include habitat descriptions, herptile species list and a statement/resume giving the herpetologist' qualifications. The DEP doesn't maintain a list of qualified surveyors. A DEP Wildlife Division permit may be required by the surveyors to conduct survey work, you should ask if your surveyor has one. The results of this investigation can be forwarded to the Wildlife Division and, after evaluation, recommendations for additional surveys, if any, will be made.

Standard protocols for protection of wetlands should be followed and maintained during the course of the project. Additionally, all silt fencing should be removed after soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted. Please be advised that the Wildlife Division has not made a field inspection of the project nor have we seen detailed timetables for work to be done. Consultation with the Wildlife Division should not be substituted for site-specific surveys that may be required for environmental assessments. The time of year when this work will take place will affect these species if they are present on the site when the work is scheduled. Please be advised that should state permits be required or should state involvement occur in some other fashion, specific restrictions or conditions relating to the species discussed above may apply. In this situation, additional evaluation of the proposal by the DEP Wildlife Division should be requested. If the proposed project has not been initiated within 12 months of this review, contact the NDDDB for an updated review. If you have any additional questions, please feel free to contact me at Julie.Victoria@ct.gov, please reference the NDDDB # at the bottom of this letter when you e-mail or write. Thank you for the opportunity to comment.

Sincerely,

Julie Victoria, Wildlife Biologist
Franklin Swamp Wildlife Management Area
391 Route 32
N. Franklin, CT 06254

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cc: NDDDB – 17982

Habitat Type Map

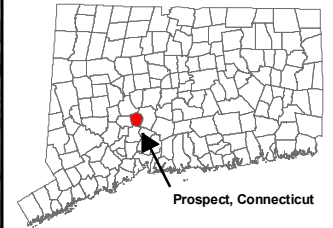
Habitat Type Map

Wind Prospect
178 New Haven Road
Prospect, CT

Legend

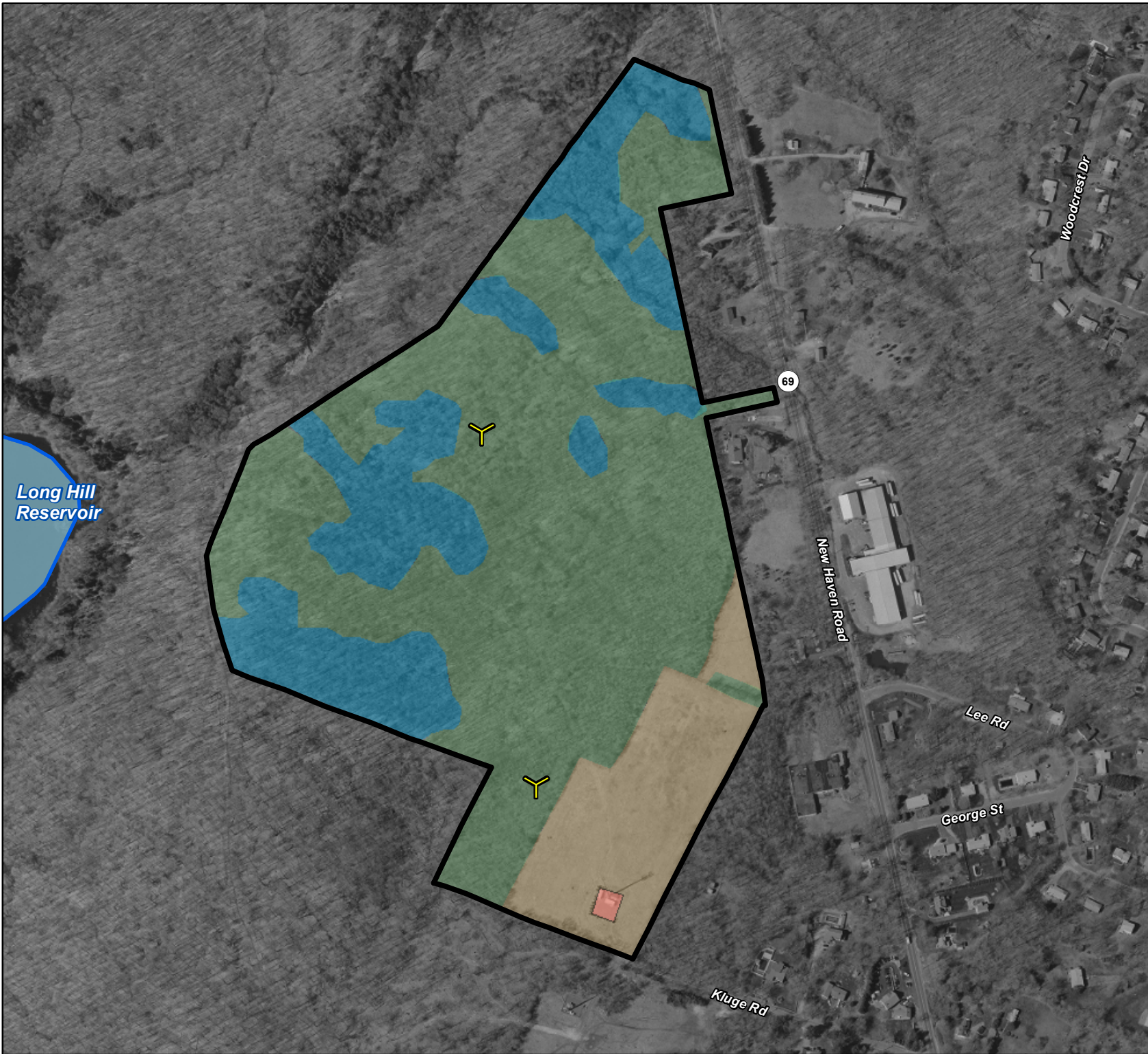
-  Proposed Wind Turbine Location
- Habitat Type**
-  Early Old Field Meadow
-  Forested Wetlands
-  Second Growth Upland Hardwood Forest
-  Existing Telecommunications Tower Compound
-  Open Water
-  Site Property Boundary

Base Map Source: 2004 aerial photograph with 0.5-foot resolution.



200 100 0 200 Feet

 Vanasse Hangen Brustlin, Inc.




Soil Type Map and Descriptions

Soil Map—State of Connecticut
(178 Hew Haven Road, Prospect)



MAP LEGEND






















Area of Interest (AOI)




 Area of Interest (AOI)

Soils




 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other



Special Line Features

-  Gully
-  Short Steep Slope
-  Other






Political Features

-  Cities

Water Features

-  Oceans
-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:5,700 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 7, Dec 3, 2009

Date(s) aerial images were photographed: 8/14/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, extremely stony	28.1	15.5%
17	Timakwa and Natchaug soils	0.1	0.0%
60B	Canton and Charlton soils, 3 to 8 percent slopes	0.4	0.2%
61B	Canton and Charlton soils, 3 to 8 percent slopes, very stony	16.7	9.2%
61C	Canton and Charlton soils, 8 to 15 percent slopes, very stony	0.3	0.2%
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	15.6	8.6%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	20.9	11.6%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	3.7	2.1%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	24.0	13.2%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	69.1	38.2%
306	Udorthents-Urban land complex	2.1	1.2%
Totals for Area of Interest		181.0	100.0%

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

State of Connecticut

Description Category: SOI

Map Unit: 3—Ridgebury, Leicester, and Whitman soils, extremely stony

Ridgebury, Leicester And Whitman Soils, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 50 inches (940 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Ridgebury soils, 35 percent Leicester soils, 15 percent Whitman soils. 10 percent minor components. Ridgebury soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is 20 to 30 inches to densic material. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 2.5 inches (low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 3 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 5 inches; fine sandy loam 5 to 14 inches; fine sandy loam 14 to 21 inches; fine sandy loam 21 to 60 inches; sandy loam Leicester soils This component occurs on upland drainageway and depression landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 9 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 7 inches; fine sandy loam 7 to 10 inches; fine sandy loam 10 to 18 inches; fine sandy loam 18 to 24 inches; fine sandy loam 24 to 43 inches; gravelly fine sandy loam 43 to 65 inches; gravelly fine sandy loam Whitman soils This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from gneiss, schist, and granite. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is 12 to 20 inches to densic material. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 1.9 inches (very low) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is occasional. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; slightly decomposed plant material 1 to 9 inches; fine sandy loam 9 to 16 inches; fine sandy loam 16 to 22 inches; fine sandy loam 22 to 60 inches; fine sandy loam

Map Unit: 17—Timakwa and Natchaug soils

Timakwa And Natchaug Soils This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 40 to 50 inches (1016 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Timakwa soils, 40 percent Natchaug soils. 15 percent minor components.

Timakwa soils This component occurs on depression landforms. The parent material consists of woody organic material over sandy and gravelly glaciofluvial deposits. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 5.95 in/hr (rapid), with about 16.2 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 4 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 10 inches; muck 10 to 21 inches; muck 21 to 24 inches; muck 24 to 37 inches; muck 37 to 47 inches; very gravelly loamy coarse sand 47 to 60 inches; gravelly loamy very fine sand

Natchaug soils This component occurs on depression landforms. The parent material consists of woody organic material over loamy alluvium, loamy glaciofluvial deposits, or loamy till. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.20 in/hr (moderately slow), with about 15.6 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 2 inches; peat 2 to 4 inches; peat 4 to 6 inches; muck 6 to 11 inches; muck 11 to 18 inches; muck 18 to 24 inches; muck 24 to 33 inches; fine sandy loam 33 to 36 inches; fine sandy loam 36 to 80 inches; loam

Map Unit: 60B—Canton and Charlton soils, 3 to 8 percent slopes

Canton And Charlton Soils, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 61B—Canton and Charlton soils, 3 to 8 percent slopes, very stony

Canton And Charlton Soils, 3 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 61C—Canton and Charlton soils, 8 to 15 percent slopes, very stony

Canton And Charlton Soils, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 62C—Canton and Charlton soils, 3 to 15 percent slopes, extremely stony

Canton And Charlton Soils, 3 To 15 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components. Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 84B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes

Paxton And Montauk Fine Sandy Loams, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 84C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes

Paxton And Montauk Fine Sandy Loams, 8 To 15 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 84D—Paxton and Montauk fine sandy loams, 15 to 25 percent slopes

Paxton And Montauk Fine Sandy Loams, 15 To 25 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 50 inches (889 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 15 to 25 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 15 to 25 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 4e Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 85C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony

Paxton And Montauk Fine Sandy Loams, 8 To 15 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 35 to 56 inches (889 to 1422 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 55 percent Paxton soils, 30 percent Montauk soils. 15 percent minor components. Paxton soils This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 8 inches; fine sandy loam 8 to 15 inches; fine sandy loam 15 to 26 inches; fine sandy loam 26 to 65 inches; gravelly fine sandy loam Montauk soils This component occurs on upland hill and drumlin landforms. The parent material consists of sandy lodgement till derived from granite and gneiss. The slope ranges from 8 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 38 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 27 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 14 inches; fine sandy loam 14 to 25 inches; sandy loam 25 to 39 inches; gravelly loamy coarse sand 39 to 60 inches; gravelly sandy loam

Map Unit: 306—Udorthents-Urban land complex

Udorthents-Urban Land Complex This map unit is in the New England and Eastern New York Upland, Southern Part Connecticut Valley Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 55 degrees F. (7 to 13 degrees C.) This map unit is 50 percent Udorthents soils, 35 percent Urban Land, 15 percent minor components. Udorthents soils This component occurs on cut (road, railroad, etc.), railroad bed, road bed, spoil pile, urban land, fill, and spoil pile landforms. The slope ranges from 0 to 25 percent and the runoff class is medium. The depth to a restrictive feature varies, but is commonly greater than 60 inches. The drainage class is typically well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 9.0 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.4 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table is greater than 60 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 3e Typical Profile: 0 to 5 inches; loam 5 to 21 inches; gravelly loam 21 to 80 inches; very gravelly sandy loam Urban Land Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 0 to 35 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 7, Dec 3, 2009

Eastern Box Turtle Caution Poster

CAUTION

BOX TURTLES ARE KNOWN TO INHABIT THIS AREA



Identification: Eastern box turtles (*Terrapene carolina*) are small, terrestrial turtles ranging from 4.5 to 6.6 inches in length. The shell (carapace) is readily distinguished by its high domed shaped. The color of the shell is brown or black with numerous irregular yellow, orange or reddish markings. The belly (plastron) typically has a light and dark variable pattern, but may be completely tan, brown or black. The head, neck and legs also vary in color but are generally dark with orange or yellow mottling. Box turtles are terrestrial and inhabit many types of habitats including deciduous forests, brushy fields, thickets, streams, ponds and wetlands.

What to do if you find a box turtle: Box turtles are protected by Connecticut's threatened and endangered species legislation and **cannot** be injured, killed, or retained as a pet. If you find a box turtle move the turtle to a safe location away from any construction activity in the direction that the turtle was heading. Pick up the turtle by its shell (carapace) between the front and hind legs. Be sure to hold the turtle closer to their hind legs as they can reach over and bite if your hands are too close to the head. The turtle may hiss and should retract into its shell.

Attachment D
Upland Meadow Creation &
Wetland Restoration

1

2

3

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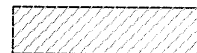


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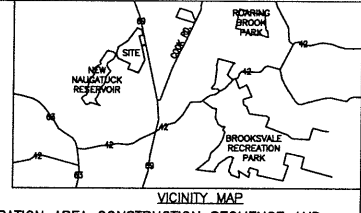
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A

LEGEND

-  UPLAND MEADOW CREATION AREA
-  UPLAND MEADOW RESTORATION AREA
-  WETLAND RESTORATION AREA



WETLAND RESTORATION AREA CONSTRUCTION SEQUENCE AND PLANTING SCHEDULE

1. PRIOR TO ANY EARTHWORK, A SILT FENCE EROSION CONTROL BARRIER WILL BE INSTALLED BETWEEN THE EXISTING WETLAND AND WETLAND RESTORATION AREA AS SHOWN ON THE EROSION CONTROL PLAN.
2. A QUALIFIED WETLAND SCIENTIST RESPONSIBLE FOR THE WETLAND RESTORATION AREA SHALL BE NOTIFIED A MINIMUM OF SEVEN (7) BUSINESS DAYS PRIOR TO ANY PHASE OF THE MITIGATION PROJECT.
3. NO GRADING IS PROPOSED WITHIN THE WETLAND RESTORATION AREA AND AS SUCH, THE EXISTING SOIL MEDIUM SHOULD BE SUFFICIENT TO SUPPORT THE PROPOSED PLANTINGS. IF THE WETLAND SCIENTIST DEEMS THE SOIL MEDIUM TO BE INADEQUATE, THE AREA WILL BE BACKFILLED WITH A MINIMUM OF 6 INCHES OF CLEAN TOPSOIL.
4. WETLAND RESTORATION AREA PLANTINGS SHALL TAKE PLACE ONCE THE ABOVE LISTED TASKS HAVE BEEN COMPLETED. THE WETLAND RESTORATION AREA WILL BE PLANTED WITH NATIVE TREES, SHRUBS AND HERBACEOUS VEGETATION AS NOTED IN THE PLANTING SCHEDULE.
5. ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERMEN. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
6. ALL PLANTINGS TO BE SPACED RANDOMLY AT THE DIRECTION OF THE WETLAND SCIENTIST TO SIMULATE NATURAL GROWTH PATTERNS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CAREFUL INSTALLATION, MAINTENANCE (INCLUDING WATERING), AND ESTABLISHMENT OF THE PLANT MATERIAL IN THE RESTORATION AREA. A MAINTENANCE SCHEDULE FOR IRRIGATION WILL BE ESTABLISHED BY THE CONTRACTOR. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR TO REMAIN ALIVE AND HEALTHY FOR THE FULL TWELVE (12) MONTH PERIOD.
8. ROCKS AND BOULDERS, UNCOVERED DURING THE EXCAVATION, MAY BE LEFT IN PLACE PROVIDED THAT THEY DO NOT SIGNIFICANTLY DECREASE THE PLANTABLE AREA OF THE RESTORATION AREA. THESE ROCKS AND BOULDERS WILL BE PLACED IN SUCH A WAY AS TO PROVIDE CREVICES AND CAVITIES SUITABLE FOR USE BY WILDLIFE.
9. FALLEN LOGS, BRANCHES, STUMPS AND OTHER NATURAL DEBRIS WILL BE RELOCATED TO THE RESTORATION AREA TO PROVIDE BENEFICIAL HABITAT FEATURES FOR WILDLIFE. THIS WILL INCLUDE DOWNED AND UNCOVERED MATERIAL THAT IS ACQUIRED DURING GRADING ACTIVITIES AND WILL BE DISTRIBUTED TO COVER 2% OF THE AREA'S SUBSTRATE SURFACE. THE NATURAL DEBRIS SHOULD BE OF VARYING SIZES AND IN VARYING DEGREES OF DECOMPOSITION.
10. THE EROSION CONTROL BARRIERS SHALL BE DISASSEMBLED PROMPTLY FOLLOWING SUCCESSFUL STABILIZATION OF THIS AREA. SEDIMENT COLLECTED BY THESE DEVICES WILL BE REMOVED AND DISPOSED OF IN A MANNER THAT PREVENTS EROSION AND TRANSPORT TO A WATERWAY OR WETLAND.

Botanical Name	Common Name	Size	Spacing (minimum)	Quantity
Trees				
<i>Acer rubrum</i>	Red Maple	4-6 feet	10 feet	3
Shrubs				
<i>Aronia m. melanocarpa</i>	Black Chokeberry	3-4 feet	5 feet	10
<i>Lindera benzoin</i>	Common Spicebush	3-4 feet	5 feet	10
<i>Viburnum dentatum</i>	Northern Arrowwood	3-4 feet	5 feet	10

WETLAND RESTORATION AREA WILL BE UNDER-SOWN WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX (OR EQUIVALENT) AT 1750 SQ.FT./LB. OR AS RECOMMENDED BY MANUFACTURER. SEED MIX TO BE PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC. (413-548-8000), OR APPROVED SUPPLIER.

UPLAND MEADOW (CREATION & RESTORATION) AREA CONSTRUCTION SEQUENCE AND PLANTING SCHEDULES

1. PRIOR TO ALL WORK, EROSION CONTROL BARRIERS ARE TO BE INSTALLED AS DETAILED ON THE EROSION CONTROL PLAN.
2. WHERE ADEQUATE TOPSOIL (±6 INCHES) DOES NOT EXIST, THE UPLAND MEADOW CREATION AND RESTORATION AREAS SHALL THEN BE BACKFILLED TO A MINIMUM DEPTH OF 6 INCHES WITH CLEAN TOPSOIL. ONCE FINAL TOPSOIL IS IN PLACE, IT SHALL BE GRADED TO ACHIEVE A RELATIVELY SMOOTH SURFACE.
3. ONCE THE ABOVE LISTED TASKS HAVE BEEN COMPLETED, THESE AREAS WILL BE PLANTED WITH NEW ENGLAND CONSERVATION/WILDLIFE GRASS SEED MIX AFTER THE GRADING IS COMPLETED. THE SEED MIX WILL BE APPLIED TO THE ENHANCEMENT AREA AT A RATE OF 1 LB/1,750 SQUARE FEET. SOIL CONDITIONING ACTIVITIES, INCLUDING RAKING, WILL BE COMBINED WITH THE SEED APPLICATION PROCESS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CAREFUL INSTALLATION, MAINTENANCE (INCLUDING WATERING), AND ESTABLISHMENT OF NATIVE PLANT MATERIAL IN THESE AREAS. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR TO REMAIN ALIVE AND HEALTHY FOR A FULL TWENTY FOUR (24) MONTH PERIOD.
5. THE EROSION CONTROL BARRIERS SHALL BE DISASSEMBLED FOLLOWING SUCCESSFUL STABILIZATION OF THIS AREA. SEDIMENT COLLECTED BY THESE DEVICES WILL BE REMOVED AND DISPOSED OF IN A MANNER THAT PREVENTS EROSION AND TRANSPORT TO A WATERWAY OR WETLAND.

UPLAND MEADOW CREATION AREA PLANTING SCHEDULE

UPLAND MEADOW CREATION AREA WILL BE PLANTED WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX (OR EQUIVALENT) AT 1750 SQ.FT./LB. OR AS RECOMMENDED BY MANUFACTURER. SEED MIX TO BE PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC. (413-548-8000), OR APPROVED SUPPLIER.

UPLAND MEADOW RESTORATION AREA PLANTING SCHEDULE

UPLAND MEADOW RESTORATION AREA WILL BE PLANTED WITH NEW ENGLAND CONSERVATION/WILDLIFE MIX (OR EQUIVALENT) AT 1750 SQ.FT./LB. OR AS RECOMMENDED BY MANUFACTURER. SEED MIX TO BE PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC. (413-548-8000), OR APPROVED SUPPLIER.

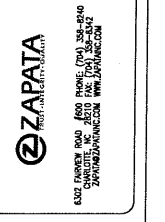


BNE Energy Inc.
Producer of great clean energy



DATE	DESCRIPTION	DATE	APPR
10-22-10	CONNECTICUT EROSION CONTROL SUBMISSION	10-22-10	TLK
	MARK		

DESIGNED BY:	DATE:	OWNER:	PARCEL NO.:
RES	10-22-10	BNE ENERGY	TAX MAP 12, BLOCK 96, LOT 176
DRAWN BY:	CHECKED BY:	SUBMITTED BY:	FILE NUMBER:
RSW	TLK	ZAPATA INC.	1335
		PROJECT:	FILE NAME:
		WIND PROSPECT TURBINE LOCATION TWO	UPLAND MEADOW (CREATION AND RESTORATION) AND WETLAND RESTORATION PLAN
		DATE:	SCALE:
		10-22-10	AS SHOWN
			SIZE:
			AS D



WIND PROSPECT
CONNECTICUT
TURBINE LOCATION TWO
UPLAND MEADOW (CREATION AND RESTORATION)
AND WETLAND RESTORATION PLAN

SHEET IDENTIFICATION
C-315

