

Appendix B
Ecological Report and Agency Correspondence

Ecological Report

Derby Junction to Ansonia 115-kV Transmission Line Rebuild Project



An AVANGRID Company

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Project No. (insert here)

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 Derby Junction to Ansonia 115-kV
 Transmission Line Rebuild Project

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1 Introduction

This Ecological Report has been prepared for The United Illuminating Company (UI, the Company) for the Derby Junction to Ansonia 115-kV Transmission Line Rebuild Project (the Project) in Shelton, Derby, and Ansonia, Connecticut (*Figure B.1*). This ecological assessment is based upon Project location information provided to Fuss & O'Neill by UI. The purpose of this assessment was to determine the State and Federal jurisdictional wetlands and watercourses (or waters of the US) within the ROW and evaluate the overall ecological resources along and within the vicinity of the transmission ROW (ROW) including soils, vegetation, wildlife, fisheries, vernal pools and listed species.

In order to maintain the reliability of the transmission grid in conformance with the National Electrical Safety Code (NESC), UI proposes to rebuild the existing 115-kilovolt (kV) overhead transmission lines located along an approximately 4.1-mile right-of-way (ROW) in Shelton, Derby, and Ansonia, Connecticut. The lines are currently supported on 40 structures, 29 of which are lattice steel towers. The transmission line begins at Derby Junction in the City of Shelton (Fairfield County), spans the Housatonic River to Indian Well Substation and through the City of Derby, to Ansonia Substation in the City of Ansonia (New Haven County). The existing 115-kV lines originally were built in 1924 and facilitated operation of 13.8-kV lines in a double circuit (DCT) configuration. The lines were upgraded to 69 kV in the 1930s and then to 115-kV in 1967/1968. After UI upgraded structure foundations in 2008/2009 and after approximately 10 years of engineering studies, it was determined that the 115-kV circuits required rebuilding. The current design includes a total of approximately 41 new self-supporting steel poles (25 double circuit, 15 single circuit and 1 single-circuit H frame) will be built replacing all the existing lattice tower structures (to be removed)

The existing 115-kV transmission line ROW varies in width but is generally 80 feet wide in Shelton and 50 feet wide in Derby and Ansonia, with some areas in Derby of undefined width, a small section that is 40 feet wide, and a segment that is 100 feet wide approaching Ansonia Substation. The areas of undefined easement width date to the original establishment of the electric lines. In conjunction with the rebuild work, UI also will establish a defined ROW width in locations where the permanent easement is presently unspecified and will expand the width of the existing ROW as necessary to align the new transmission line structures such that the distance from conductors adheres to NESC blowout clearance requirements. In most locations, UI proposes an approximately 80-foot-wide ROW. For example, due to the length of the span over the Housatonic River crossing, a 260-foot-wide ROW will be required over the river. In addition, additional ROW will be required to manage vegetation due to the steep topography through Osbornedale State Park.

2 Water Resources

2.1 Regulatory Framework

2.1.1 Connecticut Jurisdictional Wetlands and Watercourses

A wetland soil, regulated under the Connecticut Inland Wetland and Watercourses Act, is, in general, defined as a soil that is saturated to within 20 inches of the surface during a portion of the growing season. These soils have redoximorphic features, a deficiency of oxygen near the surface, and/or ponded

water during the growing season. They are poorly drained, very poorly drained, alluvial, or fluvial as specified by the USDA Natural Resource Conservation Service (NRCS). Depth to seasonal high water table is determined by low-chroma mottling or wetness indicators. Hydric soils have a similar definition.

Watercourses are also regulated under the Connecticut Inland Wetland and Watercourses Act. Watercourses are rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water including natural or artificial, vernal or intermittent, public or private. A defined permanent channel and bank, and the occurrence of two or more of the following characteristics delineate intermittent watercourses:

- Evidence of scour or deposits of recent alluvium or detritus
- Presence of standing or flowing water for a duration longer than a particular storm incident
- Presence of hydrophytic vegetation

Tidal wetlands and watercourses are regulated in the State of Connecticut by Connecticut General Statutes, Tidal Wetlands Act, Chapter 440, sections 22a-28 to 22a-35a. Tidal wetlands are defined as “those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all, of the following: [species list omitted].”

2.1.2 Federal Jurisdictional Wetlands

The U.S. Army Corps of Engineers (USACE) (Federal Register 1982) and the Environmental Protection Agency (Federal Register 1980) jointly define wetlands as:

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Wetlands are generally identified and delineated through the positive evidence of the following diagnostic environmental characteristics: 1) hydrophytic vegetation, 2) hydric soil, and 3) evidence of hydrological indicators. The 1987 USACE Wetland Delineation Manual (Technical Report Y-87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (ERDC/EL TR-12-1) provides the specific guidelines and methodology required to complete Federal wetland delineations.

2.2 Wetland Delineation

On May 3 and 4, 2016 Fuss & O'Neill conducted an on-site wetland and watercourse investigation and delineation within and along the ROW located between Derby Junction in Shelton and the Ansonia Substation in Ansonia, Connecticut. The Project area was revisited on August 19, 2020 and again on

October 6, 2020 to verify the limits of the previous delineation. This recent field inspection did not identify any necessary edits or alterations to the previously delineated wetlands and watercourses.

To prepare for the field investigation, the following current literature and mapping were reviewed:

- USGS 7.5 Minute Topographic Mapping (Ansonia, 1984)
- NRCS Web Soil Survey (Release 3.4.0) (<http://websoilsurvey.nrcs.usda.gov/>)
- Environmental GIS Data for Connecticut (CTECO, 2020)
- U.S. Fish and Wildlife National Wetlands Inventory (USFWS, 2020)
- Site mapping and aerial imagery from UI

UI's ROW, which was established in 1924, traverses a varied physiography. Topography ranges from rocky slopes to rolling hills that lead down to both the Housatonic and Naugatuck Rivers. A portion of the ROW follows along Coon Hollow Road. Elevations range from approximately 500 feet (NAVD-88) at Derby Junction to approximately 35 feet (NAVD-88) at Ansonia Substation. The geology of the Project limits includes till deposits, stream-terrace deposits, bedrock outcrops, and deposits of related sediment-dammed ponds and related series of ice-dammed ponds. Similarly, the hydrology within the Project limits, which is dictated by topography and geology, ranges from flowing perennial rivers (the Naugatuck River and the Housatonic River), intermittent tributary streams, floodplains, hillside groundwater seeps, and depressional, groundwater-fed wetlands.

Fuss & O'Neill delineated wetlands within and along the ROW. A wetland scientist, registered with the Society of Soil Scientists of Southern New England, delineated the boundaries of Federal and State jurisdictional wetlands and watercourses located within the Project. Fuss & O'Neill designated the boundary of wetlands and watercourses on site with a prefix letter and numbered in a logical sequence. Federal Wetland Delineation Field Data Forms were also prepared (*Attachment B.1*).

Soils throughout the Project area are also quite variable. Mapped wetland soils include the poorly drained Ridgebury, Leicester, Whitman, and Walpole series. Mapped upland soils include the moderately well drained Woodbridge series, and the well-drained Agawam, Hinckley, Canton, Charlton, Chatfield, Hollis, Paxton, and Montauk series (*Attachment B.2*).

Delineated wetlands and watercourses are depicted on mapping provided in *Appendix A* of the Connecticut Siting Council filing document. The wetlands and watercourses, their corresponding mapping designation, their National Wetland Inventory (NWI) classification, and their approximate location along the ROW are summarized in *Table B.1*.

Table B.1 – Summary of Wetlands and Watercourses

Appendix A Mapping Designation	Field Designation (Flag Series)	NWI Classification	Location along ROW, by Structure No.
Shelton			
W1	Wetland A (A100-A108)	PSS1	West of Derby Jct. Str. 1364
W2	Wetland I-J	PSS1	Between Str. 351 & 352

Table B.1 – Summary of Wetlands and Watercourses

Appendix A Mapping Designation	Field Designation (Flag Series)	NWI Classification	Location along ROW, by Structure No.
	(I899-I905; J100-J107)		
W3, WC1	Wetland K (K200-K219)	PSS1	Between Str. 352 & 353
W4, WC2	Wetland L-M (L300-L337; M384-M410)	PEM2/SS1	Between Str. 354 & 356
W5, WC3	Wetland N-O (N500-N506; O600-O605)	PSS1	Between Str. 357 & 358
Shelton/Derby			
WC6	Housatonic River (not flagged)	L1UBHh (upstream of the Ousatonic Dam); RIUBV (downstream of the dam)	Spanned between Str. 359-360
Derby			
TW1	Wetland G (G700-G715)	R1US5	South of Str. 360
WC5	Canal (not flagged)	R1UBHx	Between Str. 360 & 2/2B
WC6	Watercourse A (A100-A108)	R4SB3	Between Str. 3A/B & 4A/B
W6, WC7	Wetland Q (Q800-Q810)	PEM2/UB4	Between Str. 6 & 7
W7, WC8	Wetland P (P700-P724)	PEM2/SS1	Between Str. 6 & 8
Ansonia			
WC9	Watercourse B (B200-B205)	R4SB3	Between Str. 10 & 11
W8	Wetland C (C300-C308)	PSS1	Between Str. 15 & 16
W9*, WC10	Wetland D-E-F (D400-D404; E500-E506; F600-F620*)	PEM1/SS1	Between Str. 19 & 20

References: Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. Fish and Wildlife Service, US Department of the Interior.

* Indicates delineated wetlands are classified as State-jurisdictional only

In accordance with *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979), wetlands delineated for the proposed Project were characterized using the NWI classifications as follows: palustrine scrub-shrub (PSS), palustrine emergent (PEM), and palustrine unconsolidated bottom (PUB). Waterbodies within the Project area were classified as lacustrine limnetic (L1), tidal riverine (R1), and intermittent riverine (R4). Not all wetlands that intersect the ROW have been mapped by the U.S.

Fish and Wildlife Service (see *Figure B.2*). The wetland and waterbody classifications that were observed based on delineated resources are characterized as follows:

- Palustrine Scrub-Shrub Wetlands (PSS): Scrub-shrub wetlands are typically dominated by woody vegetation less than 6 meters (approximately 20 feet) tall. Scrub-shrub wetland types may represent a successional stage leading to a forested wetland and include shrubs, saplings, and trees or shrubs that are small and/or stunted due to environmental conditions or human vegetation management practices.
- Palustrine Emergent Wetlands (PEM): Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes not including mosses and lichens. These wetlands maintain the same appearance year after year, are typically dominated by perennial plants, and the vegetation of these wetlands is present for the majority of the growing season.
- Palustrine Unconsolidated Bottom (PUB): Areas of open water with unconsolidated bottoms that border on palustrine systems are referred to as PUB.
- Lacustrine Limnetic (L1): Deepwater habitats that are situated in a topographic depression or a dammed river channel; lack trees, shrubs, persistent emergents with greater than 30% areal coverage; and are greater than 20 acres in size.
- Tidal Riverine (R1): Wetlands and deepwater habitats where the gradient is low and water velocities fluctuate under tidal influence. Like all Riverine classes, the habitats are contained with a channel that are not dominated by trees, shrubs, persistent emergents; contain freshwater (i.e., ocean-derived salts less than 0.5 ppt).
- Intermittent Riverine (R4): Wetlands and deepwater habitats contained with a channel that are not dominated by trees, shrubs, persistent emergents; contain freshwater (i.e., ocean-derived salts less than 0.5 ppt); and contain flowing water for only part of the year.

Some wetlands along the ROW exhibit more than one wetland classification type (i.e., PSS/PEM) or have inclusions of multiple vegetative cover types. In such situations, transitions between wetland types are categorized by the most dominant classification type.

The results of the wetland field surveys demonstrate that wetland types within the existing ROW vary. Many of the wetlands along the ROW have been historically affected by ROW maintenance activities, which promote low-growing vegetation to ensure the safe operation of the existing overhead transmission lines. Thus, most of the wetlands in the ROW are well-vegetated and dominated by PSS and shallow PEM communities. Much of the PSS and PEM wetlands located on the managed portions of the ROW also extend into adjacent areas or in currently unmanaged portions of the ROW, transitioning into PFO wetlands characterized by mixed hardwood deciduous and coniferous forested vegetation.

3 Ecological Assessment

3.1 Vegetation

Vegetative communities found in the Project area and along the ROW are varied, consisting of a mix of cover types. In general, these communities are characteristic of southern New England and range from open fields and forests to urban commercial/industrial developments with minimal vegetation and suburban areas with lawns, trees, and landscaping. Riparian and wetland habitat types also are found along the Housatonic River and the streams and wetlands in the Project area.

Osbornedale State Park, which encompasses 350 acres mostly west of the ROW, is characterized by large tracts of upland forest, interspersed with open fields and several ponds. The ROW extends for approximately 1,465 feet across the northeastern portion of the park, east of Silver Hill Road, in Ansonia. In this area, vegetation communities include shrub-scrub habitat along the UI ROW, open fields, a forested buffer strip and State Route 8 to the east and forested areas and Silver Hill Road to the west. Residential/commercial uses and the vegetation types associated with them are found to the southeast and north. While the central portion of Osbornedale State Park consists of small core forest (<250 acres), the portion of the park through which the ROW runs is considered edge forest habitat to the west and old field/shrub habitat to the east (*Figure B.3*).

The most diverse vegetative cover types are found along or near the ROW in Shelton, along Coon Hollow Road in Derby, and northeast of Division Street in Ansonia (including where the ROW traverses Osbornedale State Park). In these areas, the predominant vegetative cover types include a mix of old field/shrub land, upland forest, and agricultural lands. Some of the upland forest areas that abut the ROW include edge forest habitat similar to what is found along Osbornedale State Park (*Figure B.3*). Other portions of the ROW extend across commercial/industrial areas or suburban lawn areas.

Pursuant to national and Company required clearance standards, UI presently manages vegetation along its ROW to maintain low-growth species that will not interfere with the overhead transmission lines. Seven habitat types/land uses were documented along or within the ROW:

- Upland Forest: This forest type includes mature mixed deciduous/coniferous forests adjacent to the existing ROW in upland areas. Mature mixed forests consist typically of tree species common to the Northeast such as maples, oaks, hickories, spruce, and pine. The ratio of deciduous to coniferous species and age of stands varies. Much of this habitat is located along the edge of the existing ROW such as between Structures 355 and 356 in Shelton and between Structures 10 and 14 near Osbornedale State Park.
- Old Field/Shrub Land: This habitat type includes the existing managed ROW in most areas, as well as adjacent abandoned fields, natural shrub lands, and early successional forests. Examples of these habitats are located in Shelton between Structures 354 and 355. Vegetation in these areas consist of a mixture of native vegetation (e.g., silky dogwood, mountain laurel, golden rods, bedstraw, orchard grass) as well as invasives (e.g., multiflora rose, mugwort, reed canary grass)

- **Scrub-Shrub Wetland:** Shrub swamp areas exist either within or adjacent to the existing ROW. These types of wetlands typically include components of emergent marsh, where shrub coverage is substantial. An example of this habitat is located between Structure 15 and 16 in Ansonia. Vegetation in these areas consist of native (e.g., alders, sweet pepperbush, grey dogwood) and invasive (e.g., glossy buckthorn, garlic mustard, multiflora rose) vegetation
- **Emergent Wetland:** Emergent marshes are dominated by herbaceous wetland plant species and can be found along Coon Hollow Road between Structures 6 and 8. These emergent wetlands are vegetated by species including native sedges, rushes and grasses, sensitive fern, and cattails. Some invasive species within emergent wetlands include common reed and purple loosestrife.
- **Open Water:** This includes the vegetation bordering large open water areas such as the Housatonic River. The Housatonic River is the most notable open water habitat associated with the ROW; however, smaller open water habitats (small ponds) can be found such as one along Coon Hollow Road near Structure 6.
- **Agricultural Land:** This includes cultivated fields, croplands, hay fields, and pastures in active agricultural use such as those in Shelton between Structures 350 and 353 and in Ansonia (Osbornedale State Park) between Structures 11 and 12.
- **Urban Areas:** Urban areas refer to suburban and urban residential developments, subdivisions, areas developed for industrial or commercial use, recreational areas such as parks and golf courses, maintained lawns, and roadside vegetation. Examples of this habitat are abundant along this particular ROW such as between Indian Well Substation and Structure 4, or between Structure 19 and Ansonia Substation.

As part of ROW vegetation management program, woody vegetation that could interfere with the operation of the overhead transmission lines is periodically removed from the managed portion of the ROW, and trees located along the edges of the managed ROW are periodically trimmed or removed. As a result of vegetation management program, the predominant vegetation types within the managed portions of the transmission line ROW consist of dense shrub and herbaceous species (old field/shrubland).

In New England, old field/shrubland areas are often disturbance-dependent and ephemeral. Historically, the occurrence and distribution of shrublands and other early successional cover types were largely influenced by humans. The widespread abandonment of farms in the early 20th Century, along with increases in suburban development and fire suppression, has led to a consistent decline in the area of early successional cover types over the last century and the subsequent decline in several wildlife species dependent on this habitat.

3.2 Wildlife and Fisheries

3.2.1 Wildlife

The wildlife that may be found in the Project area can be expected to be typical of the vegetative communities and water resource habitats identified along and near the ROW. Common wildlife species may vary depending on the habitats available along different portions of the ROW (e.g., agricultural areas bordered by forest land in Shelton vs. urban/suburban development along Route 34 in Derby).

The following summarizes the wildlife habitats and representative species that commonly occur in the vegetative communities found along and in the vicinity of the ROW, as identified based on both research and field investigations:

- Upland Forest: Forests in southern New England support a wide array of wildlife and is the dominant cover type in the State. Typically, common mammalian species in forested habitats include a variety of rodents (e.g., mice, voles, moles and shrews), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), grey fox (*Urocyon cinereoargenteus*), white-tailed deer (*Odocoileus virginianus*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), chipmunk (*Tamias striatus*) and grey squirrel (*Sciurus carolinensis*). Less common forest-dwelling species include black bear (*Ursus americanus*), fisher (*Martes pennanti*) and porcupine (*Erithizon dorsatum*). Birds typical of forested areas include raptors (owls, hawks), wild turkey, woodpeckers and migratory songbirds, including a number of species solely associated with forested habitats (i.e., habitat specialists). Reptiles and amphibians likely to occur include toads and hylid treefrogs.
- Old Field/Shrublands: Old field/shrubland habitats are some of the rarest and most critical wildlife habitats in the State. Common mammalian wildlife species include small mammals such as meadow voles (*Blarina brevicauda*), shrews, various mice, woodchuck (*Marmota monax*), rabbits, and white-tailed deer. Predatory and scavenging species such as red fox, coyote, weasels, skunk, and raccoon (*Procyon lotor*) often forage or bed in fields. Various species of shrubland-dependent birds including the prairie warbler (*Setophaga discolor*) and blue-winged warbler (*Vermivora cyanoptera*) are common.
- Wetlands/Open Water: Freshwater wetlands (i.e., scrub-shrub and emergent wetlands) and other aquatic habitat (e.g., streams, ponds) provide excellent habitat for a wide range of wetland-dependent wildlife. Many of the species using upland forest and shrubland habitats also utilize forested wetland, shrub swamp, shallow marsh, or wet meadow communities. Several common mammalian species are adapted primarily to wetlands or other aquatic habitat including muskrat (*Ondatra zibethicus*). Reptiles and amphibians are particularly adapted to wetlands and aquatic habitats. Typical species include salamanders, ranid frogs, toads (*Bufo* sp.), hylid treefrogs, turtles and various snakes including the eastern ribbon snake (*Thamnophis sauritus*).
- Agricultural/Urban Lands: A variety of wildlife habitats are included in this category. These include hayfields, suburban and urban residential areas, commercial and industrial developments, developed recreational areas (e.g., State and Federal parks, municipal parks, playgrounds),

maintained lawns, and road corridors. Wildlife in these habitats can be abundant, as animals are attracted to human food sources (e.g., crop fields, orchards, bird feeders, landfills), but the species inhabiting them must be tolerant to some degree of human disturbance. Some of the most recognizable wildlife species can be found in these areas, such as white-tailed deer, raccoon, woodchuck, and birds such as Canada geese (*Branta canadensis*), robin (*Turdus migratorius*), house sparrow (*Passer domesticus*), and other numerous bird species frequenting feeders. Other common but less visible species, such as red fox, coyote and skunk are also common. Nuisance wildlife species such as crows, rats, and other small rodents are also often abundant in these habitats. Some wildlife species are even dependent on human activity to thrive, such as birds nesting almost exclusively in human structures (e.g., chimney swift, barn swallow). Reptiles and amphibians tend to be scarce in these habitats because they are typically less tolerant of human activity than birds or mammals. Common amphibian and reptile species in suburban habitats include green frog (*Rana clamitans*), bullfrog (*Rana catesbeiana*) and garter snake (*Thamnophis sirtalis*).

3.2.2 Breeding Birds

To assess the birds that may breed in the habitats found in the Project area, UI conducted baseline research using published data regarding breeding birds in Connecticut, supplemented by observations during biological field studies performed for the Project. The following summarizes the results of these analyses.

For this evaluation, potential suitable habitat for breeding birds was assumed to be areas within approximately 100 feet of the ROW. To assess the potential for breeding birds in the Project area, an initial inventory was generated based on the presence of suitable habitat. That preliminary list was then refined by considering such factors as bio-geographical distribution, the presence or absence of critical habitat features and minimum patch size requirements (i.e., for area-sensitive species).

The resulting list of birds that could potentially breed in the Project area, subdivided by habitat type, is presented in *Table B.2*. A species is listed under the habitat that represents its primary breeding type. However, a species may be present within the ecotones associated with their primary habitat at any given time.

The list of birds in *Table B.2* was developed utilizing a habitat-based catalog of known breeding birds in Connecticut. The primary source was *The Atlas of Breeding Birds of Connecticut*, which is the result of a five-year study (1982-1986) of all bird species known to breed in the State. This study is the most comprehensive review to date of Connecticut's breeding birds. Additional resources on habitat utilized include *New England Wildlife: Habitat, Natural History and Distribution* (DeGraaf and Yamasaki, 2001).

Table B.2 – List of Birds Potentially Breeding in the General Project Area

Common Name	Scientific Name	Common Name	Scientific Name
American Crow	<i>Corvus brachyrhynchos</i>	House Finch	<i>Carpodacus mexicanus</i>
American Goldfinch	<i>Carduelis tristis</i>	House Sparrow	<i>Passer domesticus</i>
American Robin	<i>Turdus migratorius</i>	House Wren	<i>Troglodytes aedon</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i> ^T	Indigo Bunting	<i>Passerina cyanea</i>
Baltimore Oriole	<i>Icterus galbula</i>	Killdeer	<i>Charadrius vociferus</i>

Table B.2 – List of Birds Potentially Breeding in the General Project Area

Common Name	Scientific Name	Common Name	Scientific Name
Barn Swallow	<i>Hirundo rustica</i>	Mallard	<i>Anas platyrhynchos</i>
Barred Owl	<i>Strix varia</i>	Mallard	<i>Anas platyrhynchos</i>
Belted Kingfisher	<i>Ceryle alcyon</i>	Mourning Dove	<i>Zenaidura macroura</i>
Black-capped Chickadee	<i>Parus atricapillus</i>	Northern Cardinal	<i>Cardinalis</i>
Blue Jay	<i>Cyanocitta cristata</i>	Northern Flicker	<i>Colaptes auratus</i>
Blue-headed vireo	<i>Vireo solitarius</i>	Northern Mockingbird	<i>Mimus polyglottos</i>
Blue-winged warbler	<i>Vermivora cyanoptera</i>	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Brown-headed Cowbird	<i>Molothrus ater</i>	Osprey	<i>Pandion haliaetus</i>
Canada Goose	<i>Branta canadensis</i>	Ovenbird	<i>Seiurus aurocapillus</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>	Peregrine Falcon	<i>Falco peregrinus</i>
Cedar Waxwing	<i>Bombocilla Vieillot</i>	Pileated Woodpecker	<i>Dryocopus pileatus</i>
Chimney Swift	<i>Chaetura pelagica</i>	Pine Warbler	<i>Setophaga pinus</i>
Chipping Sparrow	<i>Spizella passerina</i>	Prairie Warbler	<i>Setophaga discolor</i>
Common Grackle	<i>Quiscalus quiscula</i>	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Common Raven	<i>Corvus corax</i>	Red-eyed Vireo	<i>Vireo olivaceus</i>
Common Yellowthroat	<i>Geothlypis trichas</i>	Red-shouldered Hawk	<i>Buteo lineatus</i>
Cooper's Hawk	<i>Accipiter cooperii</i>	Red-tailed Hawk	<i>Buteo jamaicensis</i>
Downy Woodpecker	<i>Picoides pubescens</i>	Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Eastern Kingbird	<i>Tyrannus</i>	Rock Dove	<i>Columba livia</i>
Eastern Phoebe	<i>Sayornis phoebe</i>	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Eastern Wood-Pewee	<i>Contopus virens</i>	Ruby-throated Hummingbird	<i>Archilochus colubris</i>
European Starling	<i>Sturnus vulgaris</i>	Scarlet Tanager	<i>Piranga olivacea</i>
Field Sparrow	<i>Spizella pusilla</i>	Sedge wren	<i>Cistothorus platensis</i> ^E
Fish Crow	<i>Corvus ossifragus</i>	Song Sparrow	<i>Melospiza melodia</i>
Gray Catbird	<i>Dumetella carolinensis</i>	Tree Swallow	<i>Tachycineta bicolor</i>
Gray Catbird	<i>Dumetella carolinensis</i>	Tufted Titmouse	<i>Parus bicolor</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Warbling Vireo	<i>Vireo gilvus</i>
Great Horned Owl	<i>Bubo virginianus</i>	White-breasted Nuthatch	<i>Sitta carolinensis</i>
Green Heron	<i>Butorides virescens</i>	Wild Turkey	<i>Meleagris gallopavo</i>
Green Heron	<i>Butorides virescens</i>	Wood Thrush	<i>Hylocichla mustelina</i>
Hairy Woodpecker	<i>Picoides villosus</i>	Yellow-rumped Warbler	<i>Dendroica coronata</i>

References: Ed. Bevier, L. R. 1994. The Atlas of Breeding Birds of Connecticut, CT DEEP. Birds of the World (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. DeGraaf, R.M. and Yamasaki, M. 2001. New England Wildlife: Habitat, Natural History and Distribution. University Press of New England.

Note: ^TIndicates species is State-listed Threatened; ^EIndicated species is State-listed Endangered

3.2.3 Fisheries

The UI ROW spans the Housatonic River, and crosses seven small intermittent or perennial streams. The principal fisheries that are associated with the ROW are in the Housatonic River. The presence of the

Ousatonic Dam creates a contrast of intertidal and non-tidal habitats. The intertidal waters have a direct connection to Long Island Sound, but the dam is a barrier to upstream migration by most species. Conversely, the non-tidal waters are isolated from Long Island Sound and any viable diadromous migration. *Table B.3* below summarizes the most common finfish species that have been inventoried upstream and downstream of the Ousatonic Dam in the Housatonic River.

Table B.3 – List of Fisheries Identified by DEEP in the Housatonic River

Common Name	Scientific Name	Upstream of Dam	Downstream of Dam
<i>Anguilla rostrata</i>	American Eel	X	X
<i>Catostomus commersoni</i>	White Sucker	X	X
<i>Cyprinus carpio</i>	Eurasian Carp	X	
<i>Esox lucius</i>	Tiger musky	X	
<i>Etheostoma olmstedi</i>	Tessellated Darter	X	X
<i>Lipomis auritus</i>	Redbreast Sunfish		X
<i>Lipomis gibbosus</i>	Pumpkinseed		X
<i>Micropterus dolomieu</i>	Smallmouth Bass		X
<i>Micropterus salmoides</i>	Largemouth Bass		X
<i>Morone americanus</i>	White Perch		X
<i>Notemigonus crysoleucas</i>	Golden Shiner		X
<i>Notropis hudsonius</i>	Spotted Shiner		X
<i>Paralabrax clathratus</i>	Calico Bass	X	
<i>Rhinichthys atratulus</i>	Eastern Blacknose Dace	X	
<i>Rhinichthys cataractae</i>	Longnose Dace	X	
<i>Salmo trutta</i>	Brown Trout	X	
<i>Salvelinus fontinalis</i>	Brook trout	X	
<i>Sander vitreus</i>	Walleye	X	
<i>Trinectes maculatus</i>	Hogchoker		X

References: Hagstrom, N.T., M. Humphreys and W.A. Hyatt. 1992. A Survey of Connecticut Streams and Rivers - Lower Housatonic and Naugatuck River Drainages. CTDEEP, Hartford, CT. CT DEEP. 2021. 2021 Connecticut Fishing Guide: Inland and Marine

3.2.4 Vernal Pools

No official regulatory definition of a vernal pool currently exists for the State of Connecticut. However, the USACE Connecticut General Permit (CT GP) defines a vernal pool as:

[A]n often temporary body of water occurring in a shallow depression of natural or human origin that fills during spring rains and snow melt and typically dries up during summer months. Vernal pools support populations of species specially adapted to reproducing in these habitats (obligate species). Such species may include wood frogs, mole salamanders (*Ambystoma* sp.), fairy shrimp, fingernail clams, and other amphibians, reptiles and invertebrates. Vernal pools lack breeding populations of fish.

For the purposes of this Project, the definition provided in the CT GP was used, to the extent possible, to assess the presence of potential vernal pools on site. This determination was based on information and data gathered from field investigations and considering the time of year and site conditions. No vernal pools were observed within or directly adjacent to the Project limit in 2016 and 2020. However, because these surveys were not conducted during the optimal period for identifying species that might use vernal pools, a follow-up survey was conducted in April 2021 – a period in which active obligate vernal pool species could be observed. This follow-up survey verified that vernal pools are not present in the Project limits.

3.3 Federal and State-Listed Species

To evaluate the potential for Federal or State-listed species to occur in the Project area, UI conducted research, evaluated potential habitats during field investigations of the Project area, and consulted with both the USFWS and the CT DEEP Natural Diversity Database (NDDDB) program.

3.3.1 Federally-Listed Species

UI consulted with the USFWS to determine if the Project area coincides with the known habitat of species identified by the Federal government as threatened, endangered, or species of concern. Specifically, UI consulted with the USFWS's New England Ecological Services Field Office using the online Information for Planning and Consulting (iPaC) tool (*Attachment B.3*). The iPaC system identified two species:

- Northern Long-Eared Bat ([NLEB]; *Myotis septentrionalis*), a Federally-listed Threatened species, could potentially use trees in the Project area for summer roosting habitat. No critical habitat has been designated by the USFWS for this species. The Project area is not located within 150 feet of a known occupied maternity roost tree or within 0.25 mile of a known NLEB hibernaculum. There are currently no documented NLEB maternity roost trees in Connecticut. The nearest NLEB habitat resource to the proposed Project is located in North Branford, over 18 miles from the Project area.
- Monarch Butterfly (*Danaus plexippus*). The Monarch Butterfly was identified in December 2020 as a candidate species under consideration for listing, but not yet a Federally-listed species. Critical habitat is not listed for the species, which use milkweed as a host plant.

3.3.2 State-Listed Species

The NDDDB publishes maps, by municipality, that depict the approximate locations of (i) endangered, threatened and special concern species and (ii) significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CT DEEP staff, scientists, conservation groups, and landowners. In some cases, an occurrence represents a location derived from the literature, museum records, and/or specimens.

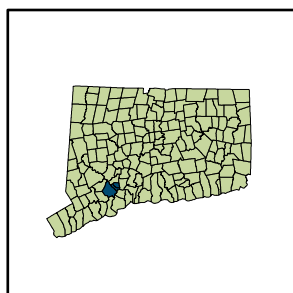
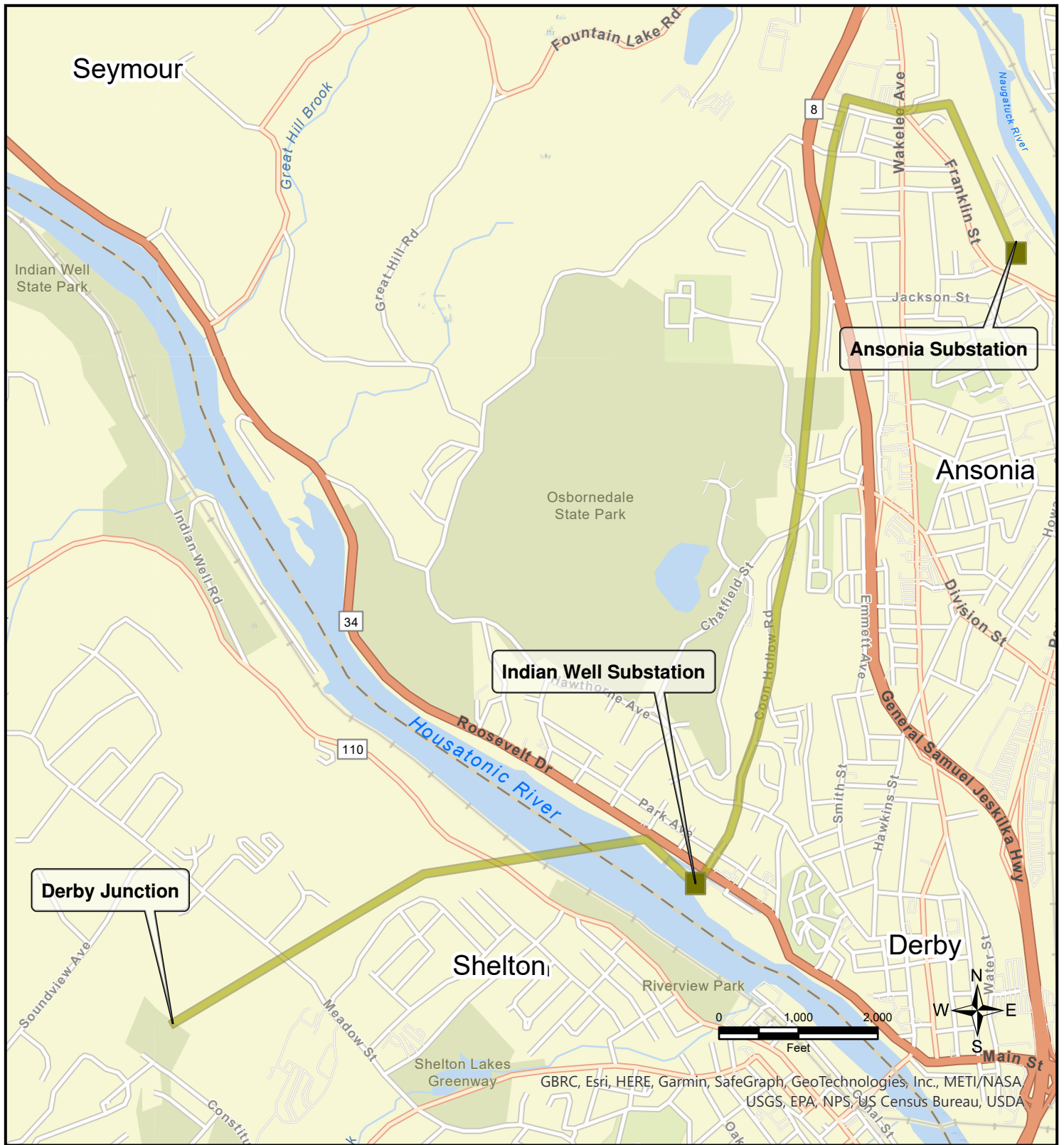
Based on review of NDDDB mapping (December 2021) and correspondence from NDDDB (*Attachment B.4*), two State-listed species (both birds) are known to inhabit the general Project area:

- Sedge Wren (*Cistothorus platensis*): As its common name suggests, this species nests in dense, tall growths of sedges and grasses in wet meadows, hayfields, retired croplands, upland margins of ponds and marshes, coastal marshes, and sphagnum bogs. This species was identified in the vicinity of the Derby Junction. The sedge wren nests between May and August. CT DEEP recommends reducing disturbance to any of these habitats in the Project area by avoiding construction during the breeding period or by conducting a species survey to determine if they are nesting in the area.
- Bald Eagle (*Haliaeetus leucocephalus*): Habitat use by bald eagles varies depending on the region, but proximity to large bodies of water with suitable foraging opportunities is critical. As such, they are generally restricted to coastal areas, lakes, and rivers. Preferred breeding sites are in forested areas adjacent to water in areas with minimal human disturbance. Large, tall conifers are often chosen for nesting, perching, and roosting. In some areas, the distance of the nest site to water is not as critical as the quality of available foraging habitat and the amount of human activity. The average distance from the nest tree to human development is >1,600 feet, with the minimum distance about 300 feet. Relatively open canopies, some type of habitat edge, and the availability of super-story trees providing good access to nests and stout horizontal perching branches are preferred habitat features for breeding pairs.

Pursuant to Conn. Gen. Stat. §26-93, it is illegal to disturb Bald eagles. This law prohibits disturbing the birds while they are roosting, feeding, or nesting. UI will work with CT DEEP to observe the following best management practices:

- Between February 1st and August 1st, maintain a 330 foot separation distance from active nest or roosting trees not in the line of site of the Project area or 660 feet within a line of site from the Project area.
- Minimize the removal of large trees, especially those known to be nesting, perching or roosting trees.
- Do not leave exposed food, trash or hazardous materials; and promptly remove any incidental carcasses that may appear on work site.

Figures



Legend

- Existing overhead line route (approx. 4 miles)

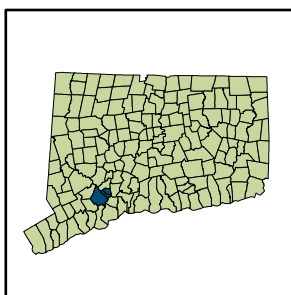
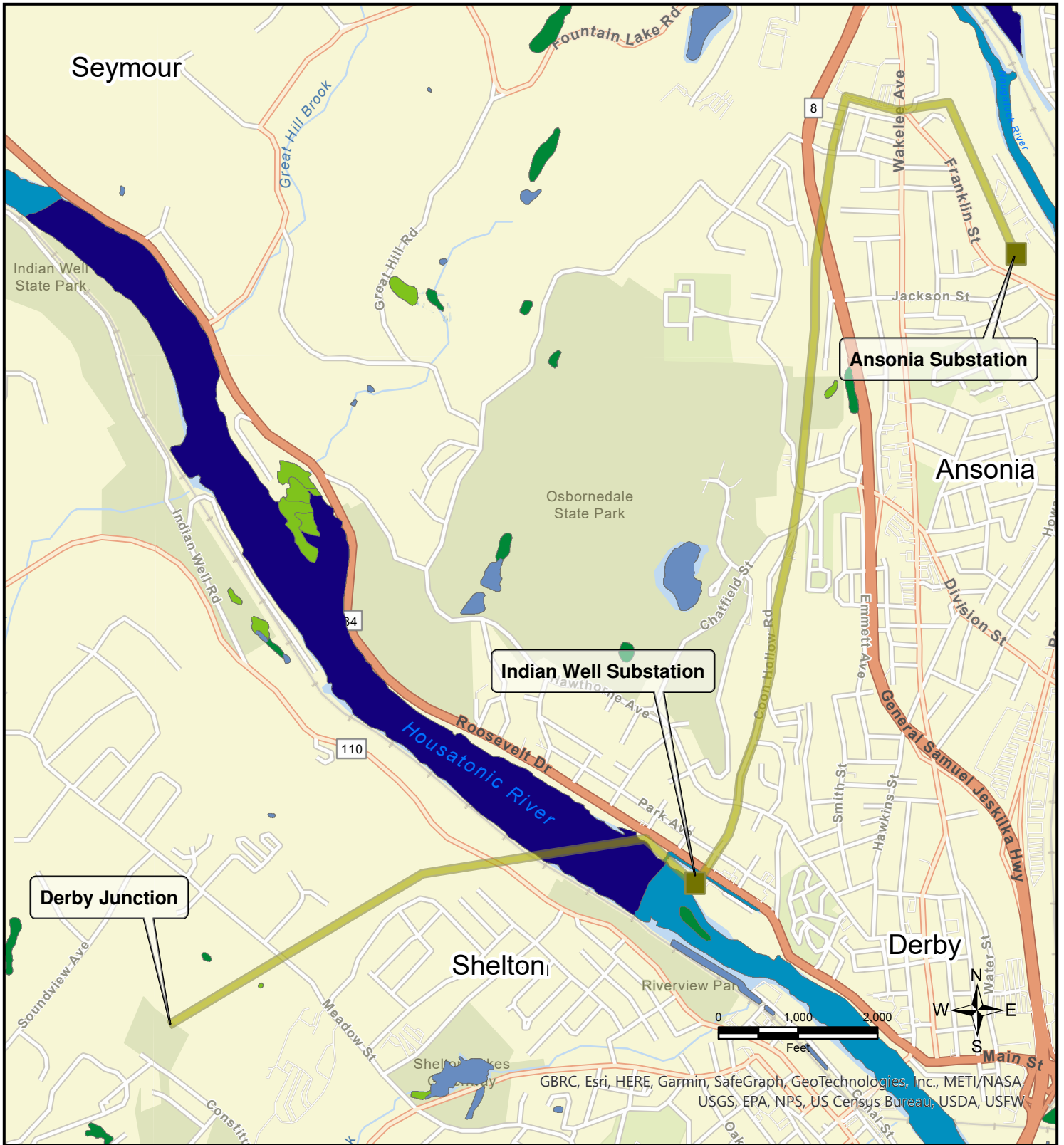
Disclaimer: This map is not the product of a Professional Land Survey. It was created by Fuss & O'Neill, Inc. for general reference, informational, planning and guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. Fuss & O'Neill, Inc. makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

SITE LOCATION
 Proposed Derby Junction-Ansonia 115-kV
 Transmission Line Rebuild Project

Shelton, Derby, Ansonia Connecticut

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 Manchester, CT 06040
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Figure 1



Legend

Existing overhead line route (approx. 4 miles)	Estuarine and Marine Wetlands
USFWS NWI Groups	Estuarine and Marine Deep Water
Freshwater Forest and Shrub Wetlands	Freshwater Ponds
Freshwater Emergent Wetland	Lakes
Other Freshwater Wetland	Riverine

Disclaimer: This map is not the product of a Professional Land Survey. It was created by Fuss & O'Neill, Inc. for general reference, informational, planning and guidance use, and is not a legally authoritative source as to location of natural or manmade features. Proper interpretation of this map may require the assistance of appropriate professional services. Fuss & O'Neill, Inc. makes no warranty, express or implied, related to the spatial accuracy, reliability, completeness, or currentness of this map.

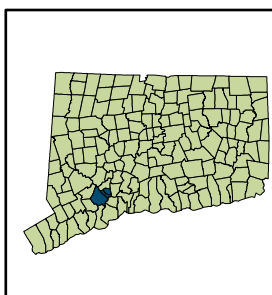
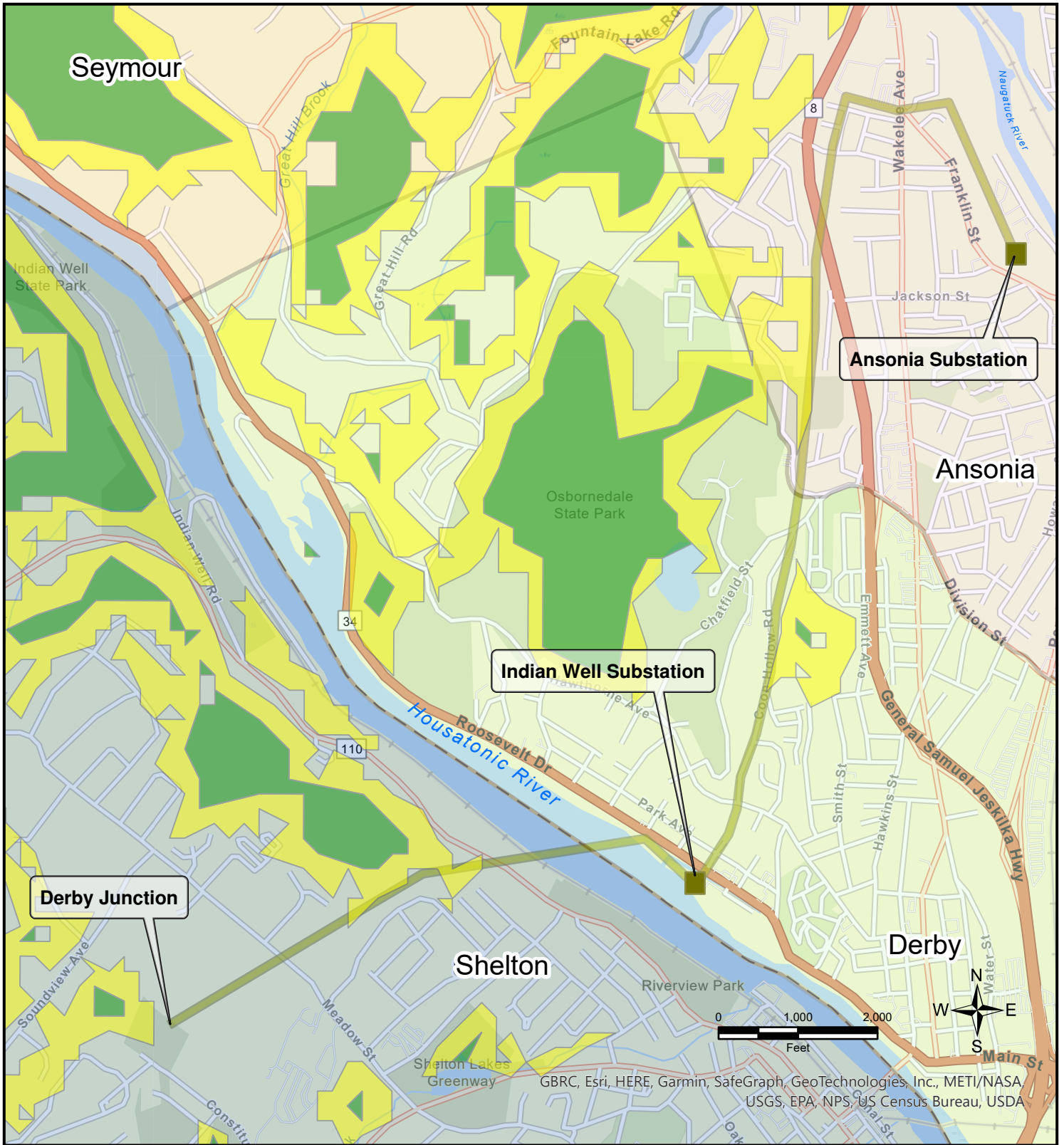
USFWS Nat'l Wetland Inventory
Proposed Derby Junction-Ansonia 115-kV
Transmission Line Rebuild Project

Shelton | Derby | Ansonia Connecticut

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Figure 2



Legend


- Existing overhead line route (approx. 4 miles)
- Forest Fragmentation Classes
 - Patch Forest
 - Edge Forest
 - Perforated Forest
 - Small Core Forest

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GBRC, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

FOREST FRAGMENTATION
 Proposed Derby Junction-Ansonia 115-kV
 Transmission Line Rebuild Project

Shelton, Derby, Ansonia Connecticut

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Figure 3

Attachment B.1

USACE Wetland Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: B1U1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.341335 Long: -73.095562 Datum: WGS84

Soil Map Unit Name Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: B1U1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																	
1. <u>Juglans nigra</u>	60	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Acer saccharum</u>	40	Yes	FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	100	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:left">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>130</u></td> <td>x 4 = <u>520</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Total: <u>150</u> (A)</td> <td><u>620</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>4.13</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>130</u>	x 4 = <u>520</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Total: <u>150</u> (A)	<u>620</u> (B)	Prevalence Index = B/A = <u>4.13</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>130</u>	x 4 = <u>520</u>																			
UPL species <u>20</u>	x 5 = <u>100</u>																			
Column Total: <u>150</u> (A)	<u>620</u> (B)																			
Prevalence Index = B/A = <u>4.13</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
<u>Herb Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																
1. <u>Rubus sp.</u>																				
2. <u>Alliaria petiolata</u>			FACU																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
12. _____																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. <u>Rosa multiflora</u>	30	Yes	FACU																	
2. <u>Celastrus orbiculatus</u>	20	Yes	UPL																	
3. _____																				
4. _____																				
	50	=Total Cover																		

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: B1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2						Loamy/Clayey	fsl
2-17	10YR 4/3						Loamy/Clayey	fsl
17-24	7.5YR 5/6						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u> _____
---	--

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: B1W1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.341230 Long: -73.095350 Datum: WGS84

Soil Map Unit Name Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)
 Single channel may be derived from stormwater only. Need to revisit during non rain event flow.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	_____ Surface Soil Cracks (B6)
<u>X</u> Surface Water (A1)	_____ Water-Stained Leaves (B9)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Stunted or Stressed Plants (D1)
_____ Iron Deposits (B5)	_____ Geomorphic Position (D2)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Shallow Aquitard (D3)
_____ Sparsely Vegetated Concave Surface (B8)	_____ Microtopographic Relief (D4)
_____ Other (Explain in Remarks)	_____ FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present? Yes <u>X</u> No _____
Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____	
Water Table Present? Yes _____ No _____ Depth (inches): _____	
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 Single channel stream flow.

VEGETATION – Use scientific names of plants.

Sampling Point: B1W1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)</p> <p>Total Number of Dominant Species Across All Strata: _____ (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; border-bottom: 1px solid black;">Total % Cover of:</td> <td style="width:50%; border-bottom: 1px solid black;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Total: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p>___ 1 - Rapid Test for Hydrophytic Vegetation</p> <p>___ 2 - Dominance Test is >50%</p> <p>___ 3 - Prevalence Index is $\leq 3.0^1$</p> <p>___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p>___ Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes _____ No <u>X</u> _____</p>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Total: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Total: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)
 Single channel rocky stream - no vegetation data collected.

SOIL

Sampling Point: B1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, **MLRA 149B**)
- Thin Dark Surface (S9) (LRR R, **MLRA 149B**)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, **MLRA 149B**)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X _____

Remarks:

Single channel rocky stream - no soil data collected.

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: C1U1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.350510 Long: -73.094564 Datum: WGS84

Soil Map Unit Name Charlton-Urban land complex, 3 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: C1U1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																		
1. <u>Quercus rubra</u>	20	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																	
2. <u>Prunus serotina</u>	10	Yes	FACU																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	30	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:left">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Total: <u>90</u> (A)</td> <td><u>390</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>4.33</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Total: <u>90</u> (A)	<u>390</u> (B)	Prevalence Index = B/A = <u>4.33</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>0</u>	x 2 = <u>0</u>																				
FAC species <u>0</u>	x 3 = <u>0</u>																				
FACU species <u>60</u>	x 4 = <u>240</u>																				
UPL species <u>30</u>	x 5 = <u>150</u>																				
Column Total: <u>90</u> (A)	<u>390</u> (B)																				
Prevalence Index = B/A = <u>4.33</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
		=Total Cover		Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤ 3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
<u>Herb Stratum</u> (Plot size: _____)																					
1. <u>Comptonia peregrina</u>	30	Yes	UPL																		
2. <u>Maianthemum canadense</u>	30	Yes	FACU																		
3. <u>Poa sp.</u>	30	Yes																			
4. <u>Rubus sp.</u>	10	No																			
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	100	=Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
<u>Woody Vine Stratum</u> (Plot size: _____)																					
1. _____																					
2. _____																					
3. _____																					
4. _____																					
		=Total Cover		Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																	

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: C1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 3/2						Loamy/Clayey	fsl
1-5	10YR 5/4						Loamy/Clayey	fsl
5-24	7.5YR 5/6						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	
Type: _____	
Depth (inches): _____	
Hydric Soil Present?	Yes _____ No <u>X</u>

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20
 Applicant/Owner: The United Illuminating Company State: CT Sampling Point: C1W1
 Investigator(s): Josh Wilson Section, Township, Range: _____
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none concave) Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.350460 Long: -73.094761 Datum: WGS84
 Soil Map Unit Name Charlton-Urban land complex, 3 to 8 percent slopes NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>6</u> Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: C1W1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																		
1. <u><i>Acer rubrum</i></u>	<u>30</u>	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																	
2. <u><i>Populus deltoides</i></u>	<u>50</u>	Yes	FAC																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>80</u> =Total Cover			Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Total: <u>130</u> (A)</td> <td><u>360</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>2.77</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Total: <u>130</u> (A)	<u>360</u> (B)	Prevalence Index = B/A = <u>2.77</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>15</u>	x 1 = <u>15</u>																				
FACW species <u>20</u>	x 2 = <u>40</u>																				
FAC species <u>80</u>	x 3 = <u>240</u>																				
FACU species <u>10</u>	x 4 = <u>40</u>																				
UPL species <u>5</u>	x 5 = <u>25</u>																				
Column Total: <u>130</u> (A)	<u>360</u> (B)																				
Prevalence Index = B/A = <u>2.77</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1. <u><i>Comus amomum</i></u>	<u>20</u>	Yes	FACW																		
2. _____																					
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>20</u> =Total Cover			Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																	
<u>Herb Stratum</u> (Plot size: _____)																					
1. <u><i>Carex lurida</i></u>	<u>15</u>	Yes	OBL																		
2. <u><i>Poa pratensis</i></u>	<u>10</u>	Yes	FACU																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	<u>25</u> =Total Cover			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																	
<u>Woody Vine Stratum</u> (Plot size: _____)																					
1. <u><i>Celastrus orbiculatus</i></u>	<u>5</u>	Yes	UPL																		
2. _____																					
3. _____																					
4. _____																					
	<u>5</u> =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: C1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/2						Loamy/Clayey	fsl
4-18	10YR 5/2		7.5YR 5/6	10	C	M	Loamy/Clayey	gravelly fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- ? Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: E1U1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): riverside Local relief (concave, convex, none concave) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.350974 Long: -73.087707 Datum: WGS84

Soil Map Unit Name Udortheents, smoothed NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: E1U1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																		
1. <u>Betula populifolia</u>	20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28.6%</u> (A/B)																	
2. <u>Prunus serotina</u>	10	No	FACU																		
3. <u>Fraxinus pennsylvanica</u>	10	No	FACW																		
4. <u>Quercus rubra</u>	20	Yes	FACU																		
5. <u>Acer platanoides</u>	10	No	UPL																		
6. _____																					
7. _____																					
	<u>70</u>	=Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>35</u></td> <td>x 5 = <u>175</u></td> </tr> <tr> <td>Column Total: <u>125</u> (A)</td> <td><u>485</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.88</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>35</u>	x 5 = <u>175</u>	Column Total: <u>125</u> (A)	<u>485</u> (B)	Prevalence Index = B/A = <u>3.88</u>	
Total % Cover of:	Multiply by:																				
OBL species <u>0</u>	x 1 = <u>0</u>																				
FACW species <u>10</u>	x 2 = <u>20</u>																				
FAC species <u>30</u>	x 3 = <u>90</u>																				
FACU species <u>50</u>	x 4 = <u>200</u>																				
UPL species <u>35</u>	x 5 = <u>175</u>																				
Column Total: <u>125</u> (A)	<u>485</u> (B)																				
Prevalence Index = B/A = <u>3.88</u>																					
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																	
1. <u>Lonicera sp.</u>	10	Yes																			
2. <u>Philadelphus inodorus</u>	10	Yes	UPL																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
	<u>20</u>	=Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u>																	
<u>Herb Stratum</u> (Plot size: _____)																					
1. <u>Fallopia japonica</u>	20	Yes	FACU																		
2. <u>Toxicodendron radicans</u>	10	Yes	FAC																		
3. _____																					
4. _____																					
5. _____																					
6. _____																					
7. _____																					
8. _____																					
9. _____																					
10. _____																					
11. _____																					
12. _____																					
	<u>30</u>	=Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)																					
1. <u>Celastrus orbiculatus</u>	15	Yes	UPL																		
2. _____																					
3. _____																					
4. _____																					
	<u>15</u>	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: E1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/2						Loamy/Clayey	fsl
4-8	10YR 5/6						Loamy/Clayey	fsl
8-24	7.5YR 5/6						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed): Type: _____ Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
--	--

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20
 Applicant/Owner: The United Illuminating Company State: CT Sampling Point: E1W1
 Investigator(s): Josh Wilson Section, Township, Range: _____
 Landform (hillside, terrace, etc.): riverside Local relief (concave, convex, none concave) Slope (%): _____
 Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.350710 Long: -73.087587 Datum: WGS84
 Soil Map Unit Name Udortheents, smoothed NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: E1W1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
1.	_____	_____	_____																	
2.	_____	_____	_____																	
3.	_____	_____	_____																	
4.	_____	_____	_____																	
5.	_____	_____	_____																	
6.	_____	_____	_____																	
7.	_____	_____	_____																	
			=Total Cover																	
Sapling/Shrub Stratum (Plot size: _____)																				
1.	_____	_____	_____																	
2.	_____	_____	_____																	
3.	_____	_____	_____																	
4.	_____	_____	_____																	
5.	_____	_____	_____																	
6.	_____	_____	_____																	
7.	_____	_____	_____																	
			=Total Cover																	
Herb Stratum (Plot size: _____)				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:left">Multiply by:</td> </tr> <tr> <td>OBL species <u>90</u></td> <td>x 1 = <u>90</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>115</u> (A)</td> <td><u>140</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>1.22</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>90</u>	x 1 = <u>90</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>115</u> (A)	<u>140</u> (B)	Prevalence Index = B/A = <u>1.22</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>90</u>	x 1 = <u>90</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>115</u> (A)	<u>140</u> (B)																			
Prevalence Index = B/A = <u>1.22</u>																				
1.	<u>Carex stricta</u>	<u>50</u>	<u>Yes</u>		<u>OBL</u>															
2.	<u>Typha latifolia</u>	<u>20</u>	<u>No</u>		<u>OBL</u>															
3.	<u>Juncus effusus</u>	<u>20</u>	<u>No</u>		<u>OBL</u>															
4.	<u>Salix alba</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																
5.	_____	_____	_____	_____																
6.	_____	_____	_____	_____																
7.	_____	_____	_____	_____																
8.	_____	_____	_____	_____																
9.	_____	_____	_____	_____																
10.	_____	_____	_____	_____																
11.	_____	_____	_____	_____																
12.	_____	_____	_____	_____																
			115 =Total Cover																	
Woody Vine Stratum (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1.	_____	_____	_____																	
2.	_____	_____	_____																	
3.	_____	_____	_____																	
4.	_____	_____	_____																	
			=Total Cover																	
Remarks: (Include photo numbers here or on a separate sheet.)				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

SOIL

Sampling Point: E1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1						Mucky Sand	
4-20	10YR 4/1						Mucky Sand	gravelly

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input checked="" type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: IJ1U1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.321231 Long: -73.123561 Datum: WGS84

Soil Map Unit Name Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: IJ1U1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p>___ 1 - Rapid Test for Hydrophytic Vegetation</p> <p>___ 2 - Dominance Test is >50%</p> <p>___ 3 - Prevalence Index is $\leq 3.0$¹</p> <p>___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p>___ Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>0</u> (A)	<u>0</u> (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>0</u> (A)	<u>0</u> (B)																			
Prevalence Index = B/A = _____																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: _____)																				
1. <u>Hayfield</u>	100	Yes	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 100 =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: IJ1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2						Loamy/Clayey	fsl
9-20	10YR 4/4						Loamy/Clayey	fsl
20-24	10YR 5/4						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)			
<input type="checkbox"/> Dark Surface (S7)					

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u> _____
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Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20
 Applicant/Ow ner: The United Illuminating Company State: CT Sampling Point: U1W1
 Investigator(s): Josh Wilson Section, Tow nship, Range _____
 Landform (hillside, terrace, etc.) hillside Local relief (concave, convex, non concave _____ Slope (%) _____
 Subregion (LRR or MLRA) LRR R, MLRA 144A Lat: 41.321297 Long: -73.123240 Datum: WGS84
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydic Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two require</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)
<u>X</u> High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Aquatic Fauna (B13)
_____ Water Marks (B1)	_____ Moss Trim Lines (B16)
_____ Sediment Deposits (B2)	_____ Marl Deposits (B15)
_____ Drift Deposits (B3)	_____ Hydrogen Sulfide Odor (C1)
_____ Algal Mat or Crust (B4)	_____ Oxidized Rhizospheres on Living Roots (C2)
_____ Iron Deposits (B5)	_____ Presence of Reduced Iron (C4)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Recent Iron Reduction in Tilled Soils (C6)
_____ Sparsely Vegetated Concave Surface (B8)	_____ Thin Muck Surface (C7)
	_____ Other (Explain in Remarks)
	_____ Saturation Visible on Aerial Imagery (C9)
	_____ Stunted or Stressed Plants (D1)
	_____ Geomorphic Position (D2)
	_____ Shallow Aquitard (D3)
	_____ Microtopographic Relief (D4)
	<u>X</u> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present Yes <u>X</u> No _____
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	
Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u>	
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: IJ1W1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status		
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
_____ =Total Cover					
<u>Sapling/Shrub Stratum</u> (Plot size: _____)					
1. <u>Comus amomum</u>	10	Yes	FACW		
2. <u>Salix discolor</u>	_____	_____	FACW		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
10 =Total Cover					
<u>Herb Stratum</u> (Plot size: _____)					
1. <u>Onoclea sensibilis</u>	10	No	FACW		
2. <u>Juncus effusus</u>	15	No	OBL		
3. <u>Asclepias incarnata</u>	20	Yes	OBL		
4. <u>Persicaria sagittata</u>	40	Yes	OBL		
5. <u>Spiraea tomentosa</u>	5	No	FACW		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	_____	_____	_____		
90 =Total Cover					
<u>Woody Vine Stratum</u> (Plot size: _____)					
1. _____	_____	_____	_____		
2. _____	_____	_____	_____		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
_____ =Total Cover					

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Total: <u>100</u> (A)	<u>125</u> (B)
Prevalence Index = B/A = <u>1.25</u>	

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0¹

4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: IJ1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Type: _____ Depth (inches): _____	

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: K1U1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.322704 Long: -73.120300 Datum: WGS84

Soil Map Unit Name Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: K1U1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0 </u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u> 1 </u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0% </u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 0 </u></td> <td>x 1 = <u> 0 </u></td> </tr> <tr> <td>FACW species <u> 0 </u></td> <td>x 2 = <u> 0 </u></td> </tr> <tr> <td>FAC species <u> 0 </u></td> <td>x 3 = <u> 0 </u></td> </tr> <tr> <td>FACU species <u> 0 </u></td> <td>x 4 = <u> 0 </u></td> </tr> <tr> <td>UPL species <u> 0 </u></td> <td>x 5 = <u> 0 </u></td> </tr> <tr> <td>Column Total: <u> 0 </u> (A)</td> <td><u> 0 </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u> </u> 2 - Dominance Test is >50%</p> <p><u> </u> 3 - Prevalence Index is $\leq 3.0^1$</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <u> </u> No <u> </u></p>	Total % Cover of:	Multiply by:	OBL species <u> 0 </u>	x 1 = <u> 0 </u>	FACW species <u> 0 </u>	x 2 = <u> 0 </u>	FAC species <u> 0 </u>	x 3 = <u> 0 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Total: <u> 0 </u> (A)	<u> 0 </u> (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species <u> 0 </u>	x 1 = <u> 0 </u>																			
FACW species <u> 0 </u>	x 2 = <u> 0 </u>																			
FAC species <u> 0 </u>	x 3 = <u> 0 </u>																			
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																			
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																			
Column Total: <u> 0 </u> (A)	<u> 0 </u> (B)																			
Prevalence Index = B/A = _____																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: _____)																				
1. <u>Hayfield</u>	100	Yes	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 100 =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: K1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2						Loamy/Clayey	fsl
12-24	10YR 5/4						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, **MLRA 149B**)
- Thin Dark Surface (S9) (LRR R, **MLRA 149B**)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, **MLRA 149B**)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed):</p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p>Hydric Soil Present? Yes _____ No <u> X </u></p>
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Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: K1W1

Investigator(s): Josh Wilson Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none concave) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.322416 Long: -73.120349 Datum: WGS84

Soil Map Unit Name Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): _____ Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: K1W1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u> 0 </u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u> 1 </u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u> 0.0% </u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u> 0 </u></td> <td>x 1 = <u> 0 </u></td> </tr> <tr> <td>FACW species <u> 0 </u></td> <td>x 2 = <u> 0 </u></td> </tr> <tr> <td>FAC species <u> 0 </u></td> <td>x 3 = <u> 0 </u></td> </tr> <tr> <td>FACU species <u> 0 </u></td> <td>x 4 = <u> 0 </u></td> </tr> <tr> <td>UPL species <u> 0 </u></td> <td>x 5 = <u> 0 </u></td> </tr> <tr> <td>Column Total: <u> 0 </u> (A)</td> <td><u> 0 </u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u> </u> 2 - Dominance Test is >50%</p> <p><u> </u> 3 - Prevalence Index is $\leq 3.0$¹</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u></p>	Total % Cover of:	Multiply by:	OBL species <u> 0 </u>	x 1 = <u> 0 </u>	FACW species <u> 0 </u>	x 2 = <u> 0 </u>	FAC species <u> 0 </u>	x 3 = <u> 0 </u>	FACU species <u> 0 </u>	x 4 = <u> 0 </u>	UPL species <u> 0 </u>	x 5 = <u> 0 </u>	Column Total: <u> 0 </u> (A)	<u> 0 </u> (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species <u> 0 </u>	x 1 = <u> 0 </u>																			
FACW species <u> 0 </u>	x 2 = <u> 0 </u>																			
FAC species <u> 0 </u>	x 3 = <u> 0 </u>																			
FACU species <u> 0 </u>	x 4 = <u> 0 </u>																			
UPL species <u> 0 </u>	x 5 = <u> 0 </u>																			
Column Total: <u> 0 </u> (A)	<u> 0 </u> (B)																			
Prevalence Index = B/A = _____																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: _____)																				
1. <u>Hayfield</u>	100	Yes	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ 100 =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: K1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1		10YR 3/4	20	C	PL	Loamy/Clayey	fsl
4-12	10YR 3/2		7.5YR 3/3	20	C	M	Loamy/Clayey	fsl. 5% iron concretions.
12-18	10YR 2/1	50	10YR 3/4	50	C	M	Loamy/Clayey	Fill. Distinct redox concentrations.
18-24	2.5Y 6/2		10YR 5/6		C	M	Sandy	Also concentrations of 10YR 3/6.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input checked="" type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: L1U1

Investigator(s): Robin Casioppo Section, Township, Range: _____

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.324400 Long: -73.116220 Datum: WGS84

Soil Map Unit Name Rock outcrop-Hollis complex, 3 to 45 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	---

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: L1U1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
			=Total Cover	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>7</u></td> <td>x 3 = <u>21</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>42</u> (A)</td> <td><u>161</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.83</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>7</u>	x 3 = <u>21</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>42</u> (A)	<u>161</u> (B)	Prevalence Index = B/A = <u>3.83</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>7</u>	x 3 = <u>21</u>																			
FACU species <u>35</u>	x 4 = <u>140</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>42</u> (A)	<u>161</u> (B)																			
Prevalence Index = B/A = <u>3.83</u>																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
			=Total Cover																	
Herb Stratum (Plot size: _____)																				
1. <u>Setaria faberi</u>	<u>20</u>	Yes	FACU																	
2. <u>Rubus sp.</u>	<u>5</u>	No																		
3. <u>Smilax rotundifolia</u>	<u>2</u>	No	FAC																	
4. <u>Barbarea vulgaris</u>	<u>5</u>	No	FAC																	
5. <u>Solidago sp.</u>	<u>2</u>	No																		
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
			=Total Cover																	
Woody Vine Stratum (Plot size: _____)																				
1. <u>Rosa multiflora</u>	<u>15</u>	Yes	FACU																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
			=Total Cover																	
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Hydrophytic Vegetation Present?</td> <td style="width:20%; text-align: center;">Yes <u> </u></td> <td style="width:20%; text-align: center;">No <u>X</u></td> </tr> </table>				Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>														
Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>																		

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: L1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR 2/2						Loamy/Clayey	fsl
1-5	10YR 3/3						Loamy/Clayey	fsl
5-20	7.5YR 4/4						Loamy/Clayey	fsl

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u> X </u>
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Remarks:
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Shelton Sampling Date: 10/6/20
 Applicant/Owner: The United Illuminating Company State: CT Sampling Point: L1W1
 Investigator(s): Robin Casioppo Section, Township, Range _____
 Landform (hillside, terrace, etc.) hillside Local relief (concave, convex, non concave) _____ Slope (%) _____
 Subregion (LRR or MLRA) LRR R, MLRA 144A Lat: 41.324533 Long: -73.115975 Datum: WGS84
 Soil Map Unit Name: Rock outcrop-Hollis complex, 3 to 45 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>X</u> Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Stunted or Stressed Plants (D1)
_____ Iron Deposits (B5)	_____ Geomorphic Position (D2)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Shallow Aquitard (D3)
_____ Sparsely Vegetated Concave Surface (B8)	_____ Microtopographic Relief (D4)
_____ Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
_____ Aquatic Fauna (B13)	
_____ Marl Deposits (B15)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots (C3)	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soils (C6)	
_____ Thin Muck Surface (C7)	
_____ Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present Yes <u>X</u> No _____
Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0-2</u>	
Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u>	
Saturation Present? Yes <u>X</u> No _____ Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: L1W1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>22</u></td> <td>x 1 = <u>22</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>49</u> (A)</td> <td><u>80</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>1.63</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>22</u>	x 1 = <u>22</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>49</u> (A)	<u>80</u> (B)	Prevalence Index = B/A = <u>1.63</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>22</u>	x 1 = <u>22</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>2</u>	x 4 = <u>8</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>49</u> (A)	<u>80</u> (B)																			
Prevalence Index = B/A = <u>1.63</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Onoclea sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Symplocarpus foetidus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
3. <u>Juncus effusus</u>	<u>15</u>	<u>No</u>	<u>OBL</u>																	
4. <u>Verbena hastata</u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
5. <u>Juncus canadensis</u>	<u>2</u>	<u>No</u>	<u>OBL</u>																	
6. <u>Solidago sp.</u>	<u>20</u>	<u>Yes</u>																		
7. <u>Poa sp.</u>	<u>10</u>	<u>No</u>																		
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. <u>Rosa multiflora</u>	<u>2</u>	<u>No</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: L1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Texture	Remarks	
	Color (moist)	%	Color (moist)	%	Type ¹			Loc ²
0-2	10YR 2/2						Mucky Loam/Clay	mucky fsl
2-12	10YR 3/1		10YR 3/6	2	C		Loamy/Clayey	Oxidized rhizospheres. Fsl
12-13	10YR 4/2						Loamy/Clayey	sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: rocks _____	
Depth (inches): _____	

Remarks:
Hit rocks around 12-13 inches and couldn't auger further.

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Ansonia Sampling Date: 10/6/20

Applicant/Owner: The United Illuminating Company State: CT Sampling Point: P1U1

Investigator(s): Robin Casioppo Section, Township, Range: _____

Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none _____) Slope (%): _____

Subregion (LRR or MLRA): LRR R, MLRA 144A Lat: 41.334936 Long: -73.096743 Datum: WGS84

Soil Map Unit Name Udorhents-Urban land complex NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: P1U1

	Absolute % Cover	Dominant	Indicator Status																	
Tree Stratum (Plot size: _____)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: right;">Total % Cover of:</td> <td style="width:50%; text-align: left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>100</u></td> <td>x 4 = <u>400</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>100</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><u> </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u> </u> 2 - Dominance Test is >50%</p> <p><u> </u> 3 - Prevalence Index is $\leq 3.0$¹</p> <p><u> </u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height.</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <u> </u> No <u> X </u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>100</u>	x 4 = <u>400</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>100</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>100</u>	x 4 = <u>400</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>100</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
Herb Stratum (Plot size: _____)																				
1. <u>Turf grass</u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
Woody Vine Stratum (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: P1U1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
								Fill - stones, wood chips. Couldn't auger down past 5'.

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR K, L)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u> _____
---	--

Remarks:
This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Ansonia-Derby T-line City/County: Derby Sampling Date: 10/6/20
 Applicant/Owner: The United Illuminating Company State: CT Sampling Point: P1W1
 Investigator(s): Robin Casioppo Section, Township, Range _____
 Landform (hillside, terrace, etc.) valley Local relief (concave, convex, non _____) Slope (%) _____
 Subregion (LRR or MLRA) LRR R, MLRA 144A Lat: 41.334862 Long: -73.096617 Datum: WGS84
 Soil Map Unit Name: Udorthents-Urban land complex NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>X</u> Surface Water (A1)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ Moss Trim Lines (B16)
_____ Water Marks (B1)	_____ Dry-Season Water Table (C2)
_____ Sediment Deposits (B2)	_____ Crayfish Burrows (C8)
_____ Drift Deposits (B3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Algal Mat or Crust (B4)	_____ Stunted or Stressed Plants (D1)
_____ Iron Deposits (B5)	_____ Geomorphic Position (D2)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Shallow Aquitard (D3)
_____ Sparsely Vegetated Concave Surface (B8)	_____ Microtopographic Relief (D4)
_____ Water-Stained Leaves (B9)	_____ FAC-Neutral Test (D5)
_____ Aquatic Fauna (B13)	
_____ Marl Deposits (B15)	
_____ Hydrogen Sulfide Odor (C1)	
_____ Oxidized Rhizospheres on Living Roots (C3)	
_____ Presence of Reduced Iron (C4)	
_____ Recent Iron Reduction in Tilled Soils (C6)	
_____ Thin Muck Surface (C7)	
_____ Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present Yes <u>X</u> No _____
Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u>	
Water Table Present? Yes _____ No _____ Depth (inches): _____	
Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: P1W1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant	Indicator Status																	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">Total % Cover of:</td> <td style="width:50%; text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>2</u></td> <td>x 2 = <u>4</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>50</u></td> <td>x 4 = <u>200</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Total: <u>67</u> (A)</td> <td><u>219</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.27</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>2</u>	x 2 = <u>4</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>50</u>	x 4 = <u>200</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Total: <u>67</u> (A)	<u>219</u> (B)	Prevalence Index = B/A = <u>3.27</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>15</u>	x 1 = <u>15</u>																			
FACW species <u>2</u>	x 2 = <u>4</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>50</u>	x 4 = <u>200</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Total: <u>67</u> (A)	<u>219</u> (B)																			
Prevalence Index = B/A = <u>3.27</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____)				Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height.																
1. <u>Fallopia japonica</u>	50	Yes	FACU																	
2. <u>Unidentified grass species</u>	30	Yes																		
3. <u>Symplocarpus foetidus</u>	15	No	OBL																	
4. <u>Impatiens capensis</u>	2	No	FACW																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
_____ 97 =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Present? Yes <u>X</u> No _____																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: P1W1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 4/2						Mucky Loam/Clay	Fill - mucky with woodchips.
4-8	10YR 2/1						Mucky Loam/Clay	mucky/organics
8-15	5Y 4/1							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> High Chroma Sands (S11) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> Marl (F10) (LRR K, L) |
| <input type="checkbox"/> Stripped Matrix (S6) | |
| <input type="checkbox"/> Dark Surface (S7) | |

Indicators for Problematic Hydric Soils³:

- | |
|--|
| <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to reflect the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Attachment B.2

NRCS Custom Soil Report



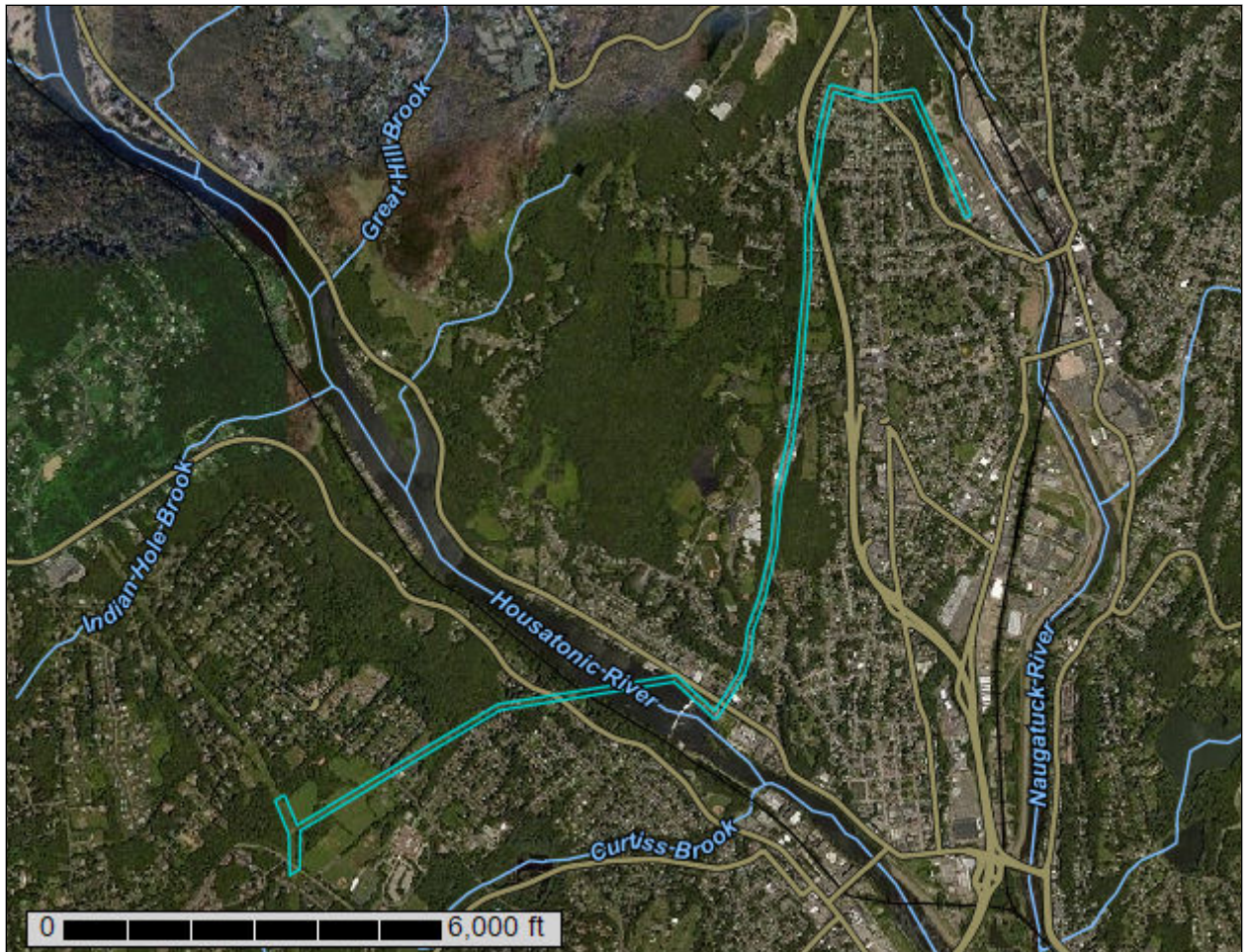
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Proposed Derby Junction- Ansonia 115-kV Transmission Line Rebuild Project



January 13, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

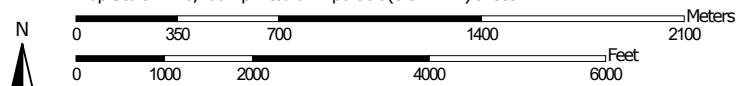
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:26,100 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)




















Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

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


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Nov 4, 2018

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ridgebury fine sandy loam, 0 to 3 percent slopes	0.3	0.6%
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	2.7	5.1%
29A	Agawam fine sandy loam, 0 to 3 percent slopes	0.8	1.5%
38C	Hinckley loamy sand, 3 to 15 percent slopes	1.9	3.5%
38E	Hinckley loamy sand, 15 to 45 percent slopes	2.4	4.5%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	2.8	5.3%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	0.3	0.5%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	4.5	8.5%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	0.1	0.2%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	0.9	1.7%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	5.6	10.5%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	2.7	5.1%
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	1.0	1.9%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	2.0	3.8%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	1.2	2.2%
229B	Agawam-Urban land complex, 0 to 8 percent slopes	4.8	9.1%
238C	Hinckley-Urban land complex, 3 to 15 percent slopes	0.4	0.7%
260B	Charlton-Urban land complex, 3 to 8 percent slopes	0.8	1.4%
260C	Charlton-Urban land complex, 8 to 15 percent slopes	0.7	1.3%

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
306	Udorthents-Urban land complex	7.0	13.1%
307	Urban land	3.1	5.8%
308	Udorthents, smoothed	4.0	7.6%
W	Water	3.3	6.2%
Totals for Area of Interest		53.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, 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.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

2—Ridgebury fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2w69f

Elevation: 0 to 1,480 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Ridgebury and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury

Setting

Landform: Ground moraines, hills, drumlins, depressions, drainageways

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 6 inches: fine sandy loam

Bw - 6 to 10 inches: sandy loam

Bg - 10 to 19 inches: gravelly sandy loam

Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: 15 to 35 inches to densic material

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: D

Ecological site: F144AY009CT - Wet Till Depressions

Hydric soil rating: Yes

Minor Components

Woodbridge

Percent of map unit: 9 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, footslope
Landform position (three-dimensional): Base slope, crest
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Whitman

Percent of map unit: 5 percent
Landform: Hills, drainageways, drumlins, ground moraines, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Leicester

Percent of map unit: 1 percent
Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

3—Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2t2qt
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, extremely stony, and similar soils: 40 percent
Leicester, extremely stony, and similar soils: 35 percent
Whitman, extremely stony, and similar soils: 17 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Extremely Stony

Setting

Landform: Drumlins, ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Description of Leicester, Extremely Stony

Setting

Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam

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C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Poorly drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B/D

Ecological site: F144AY009CT - Wet Till Depressions

Hydric soil rating: Yes

Description of Whitman, Extremely Stony

Setting

Landform: Drumlins, ground moraines, hills, drainageways, depressions

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

O_i - 0 to 1 inches: peat

A - 1 to 10 inches: fine sandy loam

B_g - 10 to 17 inches: gravelly fine sandy loam

C_{dg} - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: 7 to 38 inches to densic material

Drainage class: Very poorly drained

Runoff class: Negligible

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

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Hydrologic Soil Group: D
Ecological site: F144AY009CT - Wet Till Depressions
Hydric soil rating: Yes

Minor Components

Woodbridge, extremely stony

Percent of map unit: 6 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Swansea

Percent of map unit: 2 percent
Landform: Bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

29A—Agawam fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tyqw
Elevation: 0 to 1,040 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Agawam and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Agawam

Setting

Landform: Moraines, kames, kame terraces, outwash plains, outwash terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread, rise, dip
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite

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Typical profile

Ap - 0 to 11 inches: fine sandy loam
Bw1 - 11 to 16 inches: fine sandy loam
Bw2 - 16 to 26 inches: fine sandy loam
2C1 - 26 to 39 inches: loamy fine sand
2C2 - 39 to 55 inches: loamy fine sand
2C3 - 55 to 65 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 15 to 35 inches to strongly contrasting textural stratification
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Minor Components

Ninigret

Percent of map unit: 5 percent
Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Windsor

Percent of map unit: 4 percent
Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Walpole

Percent of map unit: 3 percent
Landform: Deltas, depressions, outwash terraces, depressions, outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Hinckley

Percent of map unit: 3 percent

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Landform: Deltas, kames, eskers, outwash plains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise

Down-slope shape: Convex

Across-slope shape: Convex, linear

Hydric soil rating: No

38C—Hinckley loamy sand, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svmb

Elevation: 0 to 1,290 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser, tread

Down-slope shape: Concave, convex, linear

Across-slope shape: Convex, linear, concave

Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 8 inches: loamy sand

Bw1 - 8 to 11 inches: gravelly loamy sand

Bw2 - 11 to 16 inches: gravelly loamy sand

BC - 16 to 19 inches: very gravelly loamy sand

C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Runoff class: Very low

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Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent

Landform: Kames, outwash plains, outwash terraces, moraines, eskers

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Windsor

Percent of map unit: 5 percent

Landform: Moraines, eskers, kames, outwash deltas, outwash terraces, outwash plains, kame terraces

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser, tread

Down-slope shape: Concave, convex, linear

Across-slope shape: Convex, linear, concave

Hydric soil rating: No

Agawam

Percent of map unit: 3 percent

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces

Landform position (two-dimensional): Summit, shoulder, backslope, footslope, toeslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser, tread

Down-slope shape: Concave, convex, linear

Across-slope shape: Convex, linear, concave

Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent

Landform: Outwash deltas, moraines, outwash plains, kame terraces, outwash terraces

Landform position (two-dimensional): Backslope, footslope

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Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

38E—Hinckley loamy sand, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 2svmj
Elevation: 0 to 1,280 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Eskers, kames, outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

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Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 5 percent
Landform: Eskers, kames, moraines, outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Agawam

Percent of map unit: 3 percent
Landform: Eskers, kame terraces, outwash deltas, outwash terraces, moraines, kames, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Kames, eskers, outwash deltas, outwash plains, kame terraces, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

45B—Woodbridge fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2ql
Elevation: 0 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodbridge, fine sandy loam, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Fine Sandy Loam

Setting

Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw1 - 7 to 18 inches: fine sandy loam
Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 10 percent

Landform: Drumlins, ground moraines, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope, crest

Down-slope shape: Convex, linear

Across-slope shape: Convex

Hydric soil rating: No

Ridgebury

Percent of map unit: 8 percent

Landform: Depressions, ground moraines, hills, drainageways

Landform position (two-dimensional): Toeslope, backslope, footslope

Landform position (three-dimensional): Base slope, head slope, dip

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

45C—Woodbridge fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w689

Elevation: 0 to 1,370 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodbridge and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge

Setting

Landform: Ground moraines, hills, drumlins

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam

Bw1 - 7 to 18 inches: fine sandy loam

Custom Soil Resource Report

Bw2 - 18 to 30 inches: fine sandy loam
Cd - 30 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton

Percent of map unit: 10 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury

Percent of map unit: 4 percent
Landform: Depressions, ground moraines, hills, drainageways, drumlins
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 1 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

46B—Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2t2qr
Elevation: 0 to 1,440 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 82 percent
Minor components: 18 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s

Custom Soil Resource Report

Hydrologic Soil Group: C/D

Ecological site: F144AY037MA - Moist Dense Till Uplands

Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 10 percent

Landform: Ground moraines, hills, drumlins

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 8 percent

Landform: Hills, drainageways, drumlins, depressions, ground moraines

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Head slope, base slope

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

46C—Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w687

Elevation: 0 to 1,420 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Ground moraines, hills, drumlins

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Custom Soil Resource Report

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Ecological site: F144AY037MA - Moist Dense Till Uplands
Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 9 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Drumlins, depressions, hills, drainageways, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, very stony

Percent of map unit: 1 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Whitman, very stony

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

73C—Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2w698
Elevation: 0 to 1,550 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton, very stony, and similar soils: 50 percent
Chatfield, very stony, and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton, Very Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

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Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Chatfield, Very Stony

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
B_w - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

Sutton, very stony

Percent of map unit: 5 percent
Landform: Ground moraines, hills

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Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester, very stony

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Hollis, very stony

Percent of map unit: 5 percent
Landform: Hills, ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

73E—Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 9lql
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 45 percent
Chatfield and similar soils: 30 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 7 inches: fine sandy loam

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Bw2 - 7 to 19 inches: fine sandy loam
Bw3 - 19 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Chatfield

Setting

Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
A - 1 to 6 inches: gravelly fine sandy loam
Bw1 - 6 to 15 inches: gravelly fine sandy loam
Bw2 - 15 to 29 inches: gravelly fine sandy loam
2R - 29 to 80 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B

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Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 10 percent
Hydric soil rating: No

Sutton

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Hollis

Percent of map unit: 3 percent
Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Unnamed, sandy subsoil

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, red parent material

Percent of map unit: 1 percent
Hydric soil rating: No

75E—Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes

Map Unit Setting

National map unit symbol: 9lqp
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 35 percent
Chatfield and similar soils: 30 percent

Custom Soil Resource Report

Rock outcrop: 15 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Ridges, hills

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material

A - 1 to 6 inches: gravelly fine sandy loam

Bw1 - 6 to 9 inches: channery fine sandy loam

Bw2 - 9 to 15 inches: gravelly fine sandy loam

2R - 15 to 80 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F144AY033MA - Shallow Dry Till Uplands

Hydric soil rating: No

Description of Chatfield

Setting

Landform: Ridges, hills

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material

A - 1 to 6 inches: gravelly fine sandy loam

Bw1 - 6 to 15 inches: gravelly fine sandy loam

Bw2 - 15 to 29 inches: gravelly fine sandy loam

2R - 29 to 80 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 45 percent

Custom Soil Resource Report

Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, red parent material

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, sandy subsoil

Percent of map unit: 1 percent
Hydric soil rating: No

Brimfield

Percent of map unit: 1 percent
Landform: Ridges, hills
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

76E—Rock outcrop-Hollis complex, 3 to 45 percent slopes

Map Unit Setting

National map unit symbol: 9lqq
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Rock outcrop: 55 percent
Hollis and similar soils: 25 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Outcrop

Setting

Landform: Ridges, hills

Properties and qualities

Slope: 3 to 45 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Description of Hollis

Setting

Landform: Ridges, hills
Down-slope shape: Convex

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Across-slope shape: Convex

Parent material: Loamy melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material

A - 1 to 6 inches: gravelly fine sandy loam

Bw1 - 6 to 9 inches: channery fine sandy loam

Bw2 - 9 to 15 inches: gravelly fine sandy loam

2R - 15 to 80 inches: bedrock

Properties and qualities

Slope: 3 to 45 percent

Surface area covered with cobbles, stones or boulders: 9.0 percent

Depth to restrictive feature: 10 to 20 inches to lithic bedrock

Drainage class: Somewhat excessively drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: D

Ecological site: F144AY033MA - Shallow Dry Till Uplands

Hydric soil rating: No

Minor Components

Chatfield

Percent of map unit: 10 percent

Landform: Ridges, hills

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Charlton

Percent of map unit: 6 percent

Landform: Hills

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Leicester

Percent of map unit: 2 percent

Landform: Drainageways, depressions

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Brimfield

Percent of map unit: 1 percent

Landform: Ridges, hills

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex
Hydric soil rating: No

Sutton

Percent of map unit: 1 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2w67g
Elevation: 30 to 1,470 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 55 percent
Montauk and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Custom Soil Resource Report

Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Description of Montauk

Setting

Landform: Recessional moraines, ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 26 inches: fine sandy loam
Bw2 - 26 to 34 inches: sandy loam
2Cd - 34 to 72 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 6 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 5 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 3 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

Stockbridge

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: 2w67f
Elevation: 0 to 1,520 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 55 percent
Montauk, very stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Hills, drumlins, ground moraines

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear

Across-slope shape: Convex

Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

A - 2 to 10 inches: fine sandy loam

Bw1 - 10 to 17 inches: fine sandy loam

Bw2 - 17 to 28 inches: fine sandy loam

Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent

Surface area covered with cobbles, stones or boulders: 1.6 percent

Depth to restrictive feature: 20 to 43 inches to densic material

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)

Depth to water table: About 18 to 37 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Ecological site: F144AY007CT - Well Drained Dense Till Uplands

Hydric soil rating: No

Description of Montauk, Very Stony

Setting

Landform: Recessional moraines, ground moraines, hills, drumlins

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex, linear

Across-slope shape: Convex

Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material

A - 2 to 6 inches: fine sandy loam

Bw1 - 6 to 28 inches: fine sandy loam

Bw2 - 28 to 36 inches: sandy loam

2Cd - 36 to 74 inches: gravelly loamy sand

Custom Soil Resource Report

Properties and qualities

Slope: 8 to 15 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 6 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 3 percent
Landform: Drumlins, depressions, ground moraines, hills, drainageways
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, very stony

Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave

Custom Soil Resource Report

Across-slope shape: Linear
Hydric soil rating: No

229B—Agawam-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9lkd
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Agawam and similar soils: 40 percent
Urban land: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Agawam

Setting

Landform: Terraces, outwash plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 14 inches: fine sandy loam
Bw2 - 14 to 24 inches: fine sandy loam
2C - 24 to 60 inches: stratified very gravelly coarse sand to fine sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Custom Soil Resource Report

Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Hinckley

Percent of map unit: 5 percent

Landform: Terraces, outwash plains, kames, eskers

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent

Landform: Terraces, outwash plains, kames

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Walpole

Percent of map unit: 5 percent

Landform: Drainageways on terraces, depressions on terraces

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Scarboro

Percent of map unit: 3 percent

Landform: Terraces, drainageways, depressions

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Unnamed, red parent material

Percent of map unit: 2 percent

Hydric soil rating: No

238C—Hinckley-Urban land complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9lkt
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 40 percent
Urban land: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Terraces, outwash plains, kames, eskers
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly glaciofluvial deposits derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 8 inches: gravelly sandy loam
Bw1 - 8 to 20 inches: very gravelly loamy sand
Bw2 - 20 to 27 inches: very gravelly sand
C1 - 27 to 42 inches: stratified cobbly coarse sand to extremely gravelly sand
C2 - 42 to 60 inches: stratified cobbly coarse sand to extremely gravelly sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash

Custom Soil Resource Report

Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Sudbury

Percent of map unit: 5 percent

Landform: Terraces, outwash plains

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Windsor

Percent of map unit: 5 percent

Landform: Terraces, outwash plains, kames

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Merrimac

Percent of map unit: 3 percent

Landform: Terraces, outwash plains, kames

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Walpole

Percent of map unit: 3 percent

Landform: Drainageways on terraces, depressions on terraces

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Agawam

Percent of map unit: 2 percent

Landform: Terraces, outwash plains

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Scarboro

Percent of map unit: 2 percent

Landform: Terraces, drainageways, depressions

Custom Soil Resource Report

Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

260B—Charlton-Urban land complex, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2x7f7
Elevation: 0 to 1,020 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 40 percent
Urban land: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Chatfield

Percent of map unit: 10 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester

Percent of map unit: 5 percent
Landform: Hills, ground moraines, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton

Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Ridges
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

260C—Charlton-Urban land complex, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2xf8
Elevation: 0 to 890 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Charlton and similar soils: 40 percent
Urban land: 35 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Charlton

Setting

Landform: Ridges, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Bw - 7 to 22 inches: gravelly fine sandy loam
C - 22 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Custom Soil Resource Report

Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Chatfield

Percent of map unit: 10 percent

Landform: Ridges, hills

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope, crest

Down-slope shape: Convex

Across-slope shape: Linear, convex

Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent

Landform: Ridges

Landform position (three-dimensional): Tread

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Hydric soil rating: No

Sutton

Percent of map unit: 5 percent

Landform: Ground moraines, hills

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Leicester

Percent of map unit: 5 percent

Custom Soil Resource Report

Landform: Hills, ground moraines, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

306—Udorthents-Urban land complex

Map Unit Setting

National map unit symbol: 9lmg
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Drift

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 54 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e

Custom Soil Resource Report

Hydrologic Soil Group: B
Hydric soil rating: No

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Unnamed, undisturbed soils

Percent of map unit: 8 percent
Hydric soil rating: No

Udorthents, wet substratum

Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent
Hydric soil rating: No

307—Urban land

Map Unit Setting

National map unit symbol: 9lmh
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Typical profile

H - 0 to 6 inches: material

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Udorthents, wet substratum

Percent of map unit: 10 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 10 percent
Hydric soil rating: No

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)

Custom Soil Resource Report

Depth to water table: About 24 to 54 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Udorthents, wet substratum

Percent of map unit: 7 percent

Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 7 percent

Hydric soil rating: No

Urban land

Percent of map unit: 5 percent

Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

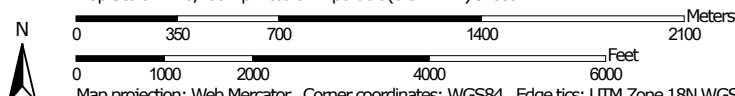
Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report Map—Farmland Classification



Map Scale: 1:26,100 if printed on A portrait (8.5" x 11") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Custom Soil Resource Report









MAP LEGEND








Area of Interest (AOI)






 Area of Interest (AOI)








Soils



Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season









-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season	Soil Rating Points			Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Not prime farmland		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if drained		Farmland of statewide importance, if thawed		Prime farmland if drained		Farmland of statewide importance
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of local importance		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if drained
	Farmland of statewide importance, if irrigated		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of local importance, if irrigated		Prime farmland if irrigated		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
							Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated
							Prime farmland if irrigated and drained		
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

Custom Soil Resource Report

<ul style="list-style-type: none"> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season Farmland of statewide importance, if irrigated and drained Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 	<ul style="list-style-type: none"> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season Farmland of statewide importance, if warm enough Farmland of statewide importance, if thawed Farmland of local importance Farmland of local importance, if irrigated 	<ul style="list-style-type: none"> Farmland of unique importance Not rated or not available <p>Water Features</p> <ul style="list-style-type: none"> Streams and Canals <p>Transportation</p> <ul style="list-style-type: none"> Rails Interstate Highways US Routes Major Roads Local Roads <p>Background</p> <ul style="list-style-type: none"> Aerial Photography 	<p>The soil surveys that comprise your AOI were mapped at 1:12,000.</p> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: State of Connecticut Survey Area Data: Version 21, Sep 7, 2021</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Mar 28, 2011—Nov 4, 2018</p> <p>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.</p>
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Custom Soil Resource Report

Table—Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2	Ridgebury fine sandy loam, 0 to 3 percent slopes	Farmland of statewide importance	0.3	0.6%
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	Not prime farmland	2.7	5.1%
29A	Agawam fine sandy loam, 0 to 3 percent slopes	All areas are prime farmland	0.8	1.5%
38C	Hinckley loamy sand, 3 to 15 percent slopes	Farmland of statewide importance	1.9	3.5%
38E	Hinckley loamy sand, 15 to 45 percent slopes	Not prime farmland	2.4	4.5%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	All areas are prime farmland	2.8	5.3%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	Farmland of statewide importance	0.3	0.5%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	Not prime farmland	4.5	8.5%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	Not prime farmland	0.1	0.2%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	Not prime farmland	0.9	1.7%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	Not prime farmland	5.6	10.5%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	Not prime farmland	2.7	5.1%
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	Not prime farmland	1.0	1.9%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	Not prime farmland	2.0	3.8%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	Not prime farmland	1.2	2.2%
229B	Agawam-Urban land complex, 0 to 8 percent slopes	Not prime farmland	4.8	9.1%

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
238C	Hinckley-Urban land complex, 3 to 15 percent slopes	Not prime farmland	0.4	0.7%
260B	Charlton-Urban land complex, 3 to 8 percent slopes	Not prime farmland	0.8	1.4%
260C	Charlton-Urban land complex, 8 to 15 percent slopes	Not prime farmland	0.7	1.3%
306	Udorthents-Urban land complex	Not prime farmland	7.0	13.1%
307	Urban land	Not prime farmland	3.1	5.8%
308	Udorthents, smoothed	Not prime farmland	4.0	7.6%
W	Water	Not prime farmland	3.3	6.2%
Totals for Area of Interest			53.2	100.0%

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either

Custom Soil Resource Report

saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

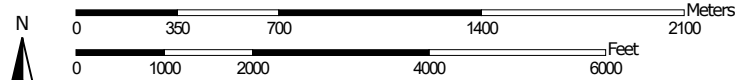
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report Map—Hydric Rating by Map Unit




Map Scale: 1:26,100 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84







MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils







Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available






Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Nov 4, 2018

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.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
2	Ridgebury fine sandy loam, 0 to 3 percent slopes	91	0.3	0.6%
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	94	2.7	5.1%
29A	Agawam fine sandy loam, 0 to 3 percent slopes	3	0.8	1.5%
38C	Hinckley loamy sand, 3 to 15 percent slopes	0	1.9	3.5%
38E	Hinckley loamy sand, 15 to 45 percent slopes	0	2.4	4.5%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	8	2.8	5.3%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	4	0.3	0.5%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	8	4.5	8.5%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	5	0.1	0.2%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	5	0.9	1.7%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	5	5.6	10.5%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	5	2.7	5.1%
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	2	1.0	1.9%
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	3	2.0	3.8%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	3	1.2	2.2%
229B	Agawam-Urban land complex, 0 to 8 percent slopes	8	4.8	9.1%

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Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
238C	Hinckley-Urban land complex, 3 to 15 percent slopes	5	0.4	0.7%
260B	Charlton-Urban land complex, 3 to 8 percent slopes	5	0.8	1.4%
260C	Charlton-Urban land complex, 8 to 15 percent slopes	5	0.7	1.3%
306	Udorthents-Urban land complex	0	7.0	13.1%
307	Urban land	0	3.1	5.8%
308	Udorthents, smoothed	0	4.0	7.6%
W	Water	0	3.3	6.2%
Totals for Area of Interest			53.2	100.0%

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Inland Wetlands (CT)

Connecticut Inland Wetland Soils

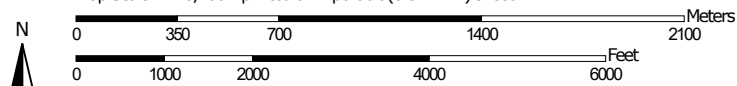
The State of Connecticut defines inland wetlands based on soils. The Connecticut Inland Wetlands and Watercourses Act defines wetland soils to include any of the soil types designated as poorly drained, very poorly drained, alluvial, or floodplain by the National Cooperative Soil Survey, as may be periodically amended, of the Natural Resources Conservation Service of the United States Department of Agriculture.

Map units dominated by Connecticut inland wetland soils may have inclusions of non-wetland soils, and non-wetland map units may have inclusions of Connecticut inland wetland soils. On site investigation is necessary to determine the presence or absence of wetland soils in a particular area.

Custom Soil Resource Report Map—Inland Wetlands (CT)




Map Scale: 1:26,100 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84




MAP LEGEND

Area of Interest (AOI)




 Area of Interest (AOI)

Soils




Soil Rating Polygons

-  CT nonwetland
-  CT wetland
-  Not rated or not available


Soil Rating Lines

-  CT nonwetland
-  CT wetland
-  Not rated or not available






Soil Rating Points

-  CT nonwetland
-  CT wetland
-  Not rated or not available


Water Features

 Streams and Canals

Transportation

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

Background

 Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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 21, Sep 7, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 28, 2011—Nov 4, 2018

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.

Custom Soil Resource Report

Table—Inland Wetlands (CT)

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
2	Ridgebury fine sandy loam, 0 to 3 percent slopes	CT wetland	Ridgebury (85%)	0.3	0.6%
			Whitman (5%)		
			Leicester (1%)		
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	CT wetland	Ridgebury, extremely stony (40%)	2.7	5.1%
			Leicester, extremely stony (35%)		
			Whitman, extremely stony (17%)		
			Swansea (2%)		
29A	Agawam fine sandy loam, 0 to 3 percent slopes	CT nonwetland	Agawam (85%)	0.8	1.5%
			Ninigret (5%)		
			Windsor (4%)		
			Hinckley (3%)		
38C	Hinckley loamy sand, 3 to 15 percent slopes	CT nonwetland	Hinckley (85%)	1.9	3.5%
			Merrimac (5%)		
			Windsor (5%)		
			Agawam (3%)		
			Sudbury (2%)		
38E	Hinckley loamy sand, 15 to 45 percent slopes	CT nonwetland	Hinckley (85%)	2.4	4.5%
			Windsor (5%)		
			Merrimac (5%)		
			Agawam (3%)		
			Sudbury (2%)		
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	CT nonwetland	Woodbridge, fine sandy loam (82%)	2.8	5.3%
			Paxton (10%)		
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	CT nonwetland	Woodbridge (85%)	0.3	0.5%
			Paxton (10%)		
			Sutton (1%)		
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	CT nonwetland	Woodbridge, very stony (82%)	4.5	8.5%
			Paxton, very stony (10%)		
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	CT nonwetland	Woodbridge, very stony (85%)	0.1	0.2%
			Paxton, very stony (9%)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
			Sutton, very stony (1%)		
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	CT nonwetland	Charlton, very stony (50%)	0.9	1.7%
			Chatfield, very stony (30%)		
			Hollis, very stony (5%)		
			Rock outcrop (5%)		
			Sutton, very stony (5%)		
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	CT nonwetland	Charlton (45%)	5.6	10.5%
			Chatfield (30%)		
			Rock outcrop (10%)		
			Sutton (5%)		
			Hollis (3%)		
			Unnamed, sandy subsoil (1%)		
			Unnamed, red parent material (1%)		
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	CT nonwetland	Hollis (35%)	2.7	5.1%
			Chatfield (30%)		
			Rock outcrop (15%)		
			Charlton (7%)		
			Sutton (5%)		
			Brimfield (1%)		
			Unnamed, sandy subsoil (1%)		
			Unnamed, red parent material (1%)		
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	CT nonwetland	Rock outcrop (55%)	1.0	1.9%
			Hollis (25%)		
			Chatfield (10%)		
			Charlton (6%)		
			Sutton (1%)		
			Brimfield (1%)		
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes	CT nonwetland	Paxton (55%)	2.0	3.8%
			Montauk (30%)		
			Charlton (6%)		
			Woodbridge (5%)		
			Stockbridge (1%)		

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	CT nonwetland	Paxton, very stony (55%)	1.2	2.2%
			Montauk, very stony (30%)		
			Woodbridge, very stony (6%)		
			Charlton, very stony (5%)		
			Stockbridge, very stony (1%)		
229B	Agawam-Urban land complex, 0 to 8 percent slopes	CT nonwetland	Agawam (40%)	4.8	9.1%
			Urban land (35%)		
			Hinckley (5%)		
			Udorthents (5%)		
			Merrimac (5%)		
			Unnamed, red parent material (2%)		
238C	Hinckley-Urban land complex, 3 to 15 percent slopes	CT nonwetland	Hinckley (40%)	0.4	0.7%
			Urban land (35%)		
			Udorthents (5%)		
			Sudbury (5%)		
			Windsor (5%)		
			Merrimac (3%)		
			Agawam (2%)		
260B	Charlton-Urban land complex, 3 to 8 percent slopes	CT nonwetland	Charlton (40%)	0.8	1.4%
			Urban land (35%)		
			Chatfield (10%)		
			Udorthents (5%)		
			Sutton (5%)		
260C	Charlton-Urban land complex, 8 to 15 percent slopes	CT nonwetland	Charlton (40%)	0.7	1.3%
			Urban land (35%)		
			Chatfield (10%)		
			Sutton (5%)		
			Udorthents (5%)		
306	Udorthents-Urban land complex	CT nonwetland	Udorthents (50%)	7.0	13.1%
			Urban land (35%)		
			Unnamed, undisturbed soils (8%)		
			Rock outcrop (2%)		
307	Urban land	CT nonwetland	Urban land (80%)	3.1	5.8%

Custom Soil Resource Report

Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
			Unnamed, undisturbed soils (10%)		
308	Udorthents, smoothed	CT nonwetland	Udorthents (80%)	4.0	7.6%
			Unnamed, undisturbed soils (7%)		
			Urban land (5%)		
			Rock outcrop (1%)		
W	Water	CT wetland	Water (100%)	3.3	6.2%
Totals for Area of Interest				53.2	100.0%

Rating Options—Inland Wetlands (CT)

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

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United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Attachment B.3

USFWS Information for Planning and Consulting (iPaC)



United States Department of the Interior



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

In Reply Refer To:
Project Code: 2022-0008736
Project Name: Derby-Ansonia Line Upgrade

February 16, 2022

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

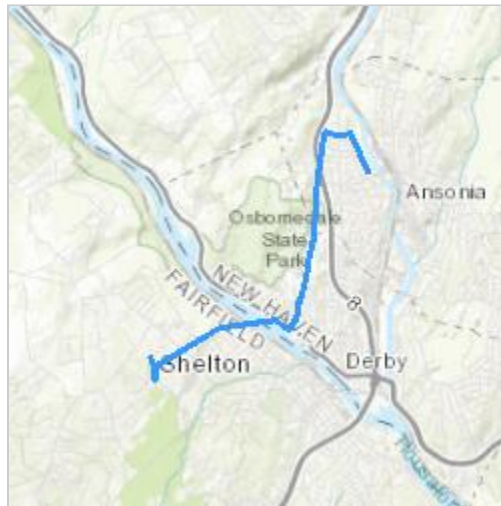
(603) 223-2541

Project Summary

Project Code: 2022-0008736
Event Code: None
Project Name: Derby-Ansonia Line Upgrade
Project Type: Transmission Line - Maintenance/Modification - Above Ground
Project Description: Upgrade of 115kV transmission line and towers from Derby Jct (Seymour) to Indian Well S/S (Derby) and to Ansonia S/S (Ansonia)

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.336287049999996,-73.09621380941033,14z>



Counties: Fairfield and New Haven counties, Connecticut

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

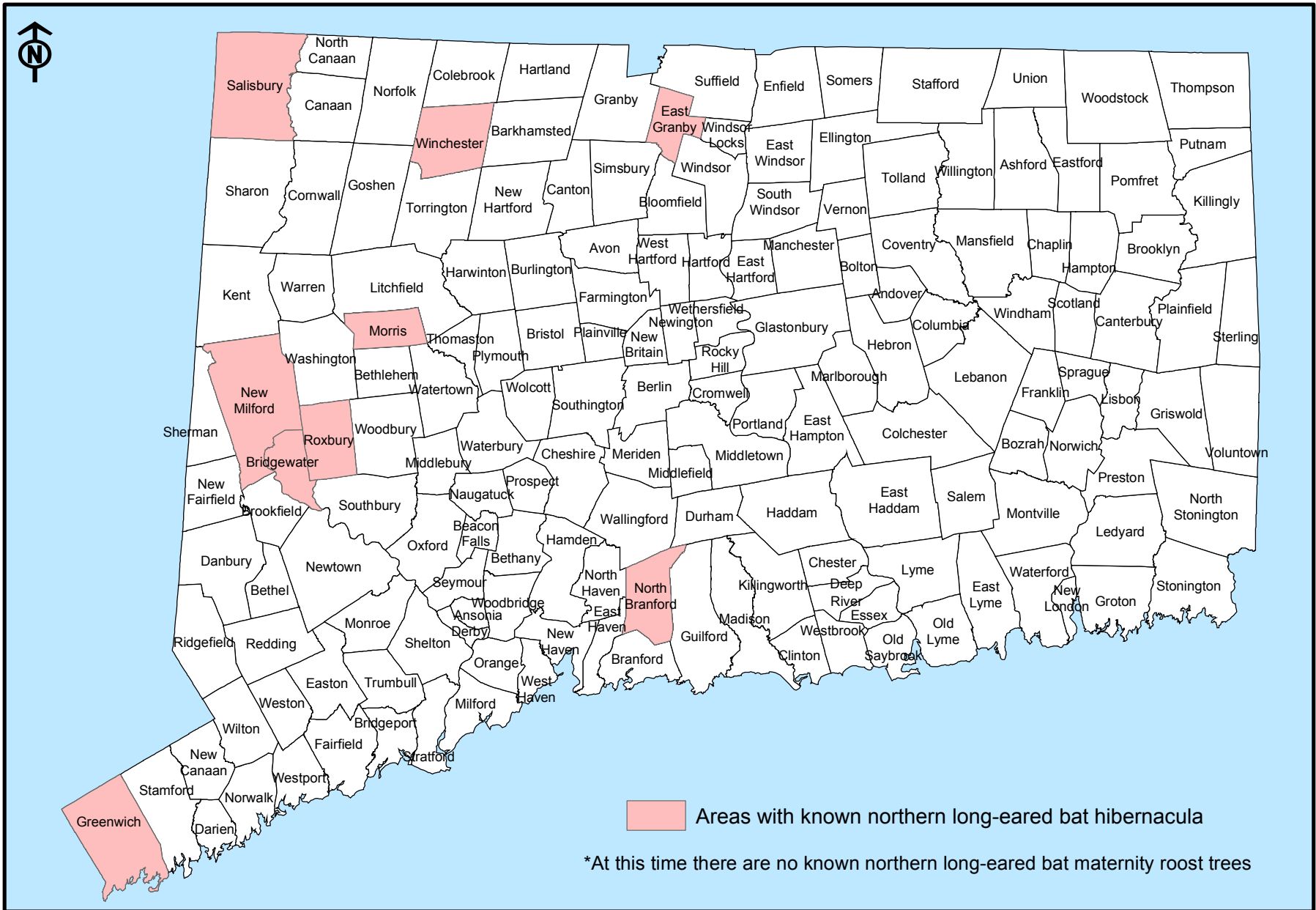
Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Name: Josh Wilson
Address: 146 Hartford Road
City: Manchester
State: CT
Zip: 06040
Email: jwilson@fando.com
Phone: 8606462469

Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance



March 6, 2019

For information on federal requirements visit <http://www.fws.gov/midwest/endangered/mammals/nleib/>

Attachment B.4

Connecticut DEEP Natural Diversity Databased Consultation Request and Response

January 18, 2022

Joshua Wilson
Fuss & O'Neill, INC
146 Hartford Rd
Manchester, CT 06040
jwilson@fando.com

NDDB DETERMINATION NUMBER: 202200275 updated 202100897

Project: Structure repair/replacements; United Illuminating Ansonia-Derby T-Line (lines 1560 & 1594) from Ansonia substation to the T junction, north of Constitution Blvd in Derby, Ansonia & Derby, CT

Expiration: January 18, 2024

I have reviewed Natural Diversity Database (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) that may occur within, or be affected by the proposed project area.

Sedge wren (*Cistothorus platensis*)- State Endangered

Location: T-Junction

This species nests in dense, tall growths of **sedges** and grasses in wet meadows, hayfields, retired croplands, upland margins of ponds and marshes, coastal marshes, and sphagnum bogs. They breed between May-August. Reducing disturbance to any of these habitat in your project area and enhancing wetland function will benefit this bird.

- Do not conduct work in suitable habitat near the T-Junction between May 1-August 31 unless surveys indicate birds are not present.

Bald eagle (*Haliaeetus leucocephalus*)- State Threatened

It is illegal pursuant to section 26-93 of the Connecticut General Statutes to disturb Bald eagles. This law prohibits disturbing the birds while they are roosting, feeding, or nesting. The wildlife division recommends a 660' setback with no public access from a bald eagle nest or critical roosting site. The critical time for nesting eagles is February 1- August 1. To determine if nest or roost in your area is active this year contact the DEEP Wildlife Biologist coordinating eagle monitoring (Brian.hess@ct.gov).

I have attached a map of the area of concern where you should apply the following restrictions.

- Work activities and staging areas are prohibited within 330 feet (approximately 100 meters) of active nests/roosts that are out of line of sight, or within 660 feet (approximately 200 meters) from nests/roosts that are in the line of sight during periods of eagle use, unless surveys demonstrate that the nest or roost is not being used.
 - **Critical nesting time is between February 1- August 1.**
- Minimize cutting of large trees. No known bald eagle nest trees, perch trees, or roost trees will be felled or modified.

- Eagles scavenge. Do not leave exposed food, trash or hazardous materials. Promptly remove any incidental carcasses that may appear on work site (road kill, euthanized or poisoned pest animals)

This is determination is valid for two years. Please submit an updated NDDDB Request for Review if the scope of the proposed work changes or if work has not begun by expiration date.

Natural Diversity Database information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Database and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

Attachments: (1): Bald Eagle Area of Concern Map



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

Legend

 Bald Eagle Area of Concern



Connecticut Department of
 Energy & Environmental Protection
 Bureau of Natural Resources
 Wildlife Division

CPPU USE ONLY	
App #:	_____
Doc #:	_____
Check #: No fee required	
Program: Natural Diversity Database Endangered Species	
Hardcopy _____	Electronic _____

Request for Natural Diversity Data Base (NDDDB) State Listed Species Review

Please complete this form in accordance with the [instructions](#) (DEEP-INST-007) to ensure proper handling of your request.

There are no fees associated with NDDB Reviews.

Part I: Preliminary Screening & Request Type

<p>Before submitting this request, you must review the most current Natural Diversity Data Base “State and Federal Listed Species and Significant Natural Communities Maps” found on the DEEP website. These maps are updated twice a year, usually in June and December.</p> <p>Does your site, including all affected areas, fall in an NDDB Area according to the map instructions: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Enter the date of the map reviewed for pre-screening: December 2021 _____</p>	
This form is being submitted for a :	
<input checked="" type="checkbox"/> <i>New NDDB request</i> <input type="checkbox"/> <i>Renewal/Extension of a NDDB Request, without modifications and within two years of issued NDDB determination (no attachments required)</i>	<input type="checkbox"/> <i>New Safe Harbor Determination (optional) must be associated with an application for a GP for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities</i> <input type="checkbox"/> <i>Renewal/Extension of an existing Safe Harbor Determination</i> <input type="checkbox"/> With modifications <input type="checkbox"/> Without modifications (no attachments required)
[CPPU Use Only - NDDB-Listed Species Determination # 1736]	[CPPU Use Only - NDDB-Safe Harbor Determination # 1736]
Enter NDDB Determination Number for Renewal/Extension:	Enter Safe Harbor Determination Number for Renewal/Extension:

Part II: Requester Information

If the requester is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of State. If applicable, the name shall be stated **exactly as it is registered with the Secretary of State. Please note, for those entities registered with the Secretary of State, the registered name will be the name used by DEEP. This information can be accessed at the Secretary of the State's database CONCORD. (www.concord-sots.ct.gov/CONCORD/index.jsp)*

If the requester is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.).

If there are any changes or corrections to your company/facility or individual mailing or billing address or contact information, please complete and submit the [Request to Change company/Individual Information](#) to the address indicated on the form.

1. Requester*

Company Name: Fuss & O'Neill, Inc.

Contact Name: Josh Wilson

Address: 146 Hartford Road

City/Town: Manchester

State: CT

Zip Code: 06040

Business Phone: (860) 646-2469

ext. 5303

**E-mail: jwilson@fando.com

**By providing this email address you are agreeing to receive official correspondence from the department, at this electronic address, concerning this request. Please remember to check your security settings to be sure you can receive emails from "ct.gov" addresses. Also, please notify the department if your e-mail address changes

a) Requester can best be described as:

Individual Federal Agency State agency Municipality Tribal

business entity (if a business entity complete i through iii):

i) Check type corporation limited liability company limited partnership
 limited liability partnership statutory trust Other:

ii) Provide Secretary of the State Business ID #: 0069164 This information can be accessed at the

Secretary of the State's database (CONCORD). (www.concord-sots.ct.gov/CONCORD/index.jsp)

iii) Check here if your business is **NOT** registered with the Secretary of State's office.

b) Acting as (Affiliation), pick one:

Property owner Consultant Engineer Facility owner Applicant

Biologist Pesticide Applicator Other representative:

2. List Primary Contact to receive Natural Diversity Data Base correspondence and inquiries, if different from requester.

Company Name:

Contact Person:

Title:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

**E-mail:

Part III: Site Information

This request can only be completed for one site. A separate request must be filed for each additional site.

<p>1. SITE NAME AND LOCATION</p> <p>Site Name or Project Name: United Illuminating Ansonia-Derby T-Line</p> <p>Town(s): Ansonia and Derby</p> <p>Street Address or Location Description: Existing utilities right-of-way from the Ansonia Substation at Riverside Drive in Ansonia to the T-junction north of Constitution Boulevard North in Derby.</p> <p>Size in acres, or site dimensions: 4.1-mile segment of variable-width (40-100' wide) right-of-way</p> <p>Latitude and longitude of the center of the site in decimal degrees (e.g., 41.23456 -71.68574):</p> <p>Latitude: 41.33674 Longitude: -73.09614</p> <p>Method of coordinate determination (check one):</p> <p><input type="checkbox"/> GPS <input checked="" type="checkbox"/> Photo interpolation using CTECO map viewer <input type="checkbox"/> Other (specify):</p> <p>2a. Describe the current land use and land cover of the site.</p> <p>Land within the right-of-way consists of vegetated land, residential neighborhoods, roadways, agricultural fields, Osbornedale State Park, and a portion tha crosses the Housatonic River.</p> <p>b. Check all that apply and enter the size in acres or % of area in the space after each checked category.</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Industrial/Commercial _____</td> <td><input type="checkbox"/> Residential _____</td> <td><input type="checkbox"/> Forest _____</td> </tr> <tr> <td><input type="checkbox"/> Wetland _____</td> <td><input type="checkbox"/> Field/grassland _____</td> <td><input type="checkbox"/> Agricultural _____</td> </tr> <tr> <td><input type="checkbox"/> Water _____</td> <td><input checked="" type="checkbox"/> Utility Right-of-way 100%</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Transportation Right-of-way _____</td> <td><input type="checkbox"/> Other (specify): _____</td> <td></td> </tr> </table>			<input type="checkbox"/> Industrial/Commercial _____	<input type="checkbox"/> Residential _____	<input type="checkbox"/> Forest _____	<input type="checkbox"/> Wetland _____	<input type="checkbox"/> Field/grassland _____	<input type="checkbox"/> Agricultural _____	<input type="checkbox"/> Water _____	<input checked="" type="checkbox"/> Utility Right-of-way 100%		<input type="checkbox"/> Transportation Right-of-way _____	<input type="checkbox"/> Other (specify): _____	
<input type="checkbox"/> Industrial/Commercial _____	<input type="checkbox"/> Residential _____	<input type="checkbox"/> Forest _____												
<input type="checkbox"/> Wetland _____	<input type="checkbox"/> Field/grassland _____	<input type="checkbox"/> Agricultural _____												
<input type="checkbox"/> Water _____	<input checked="" type="checkbox"/> Utility Right-of-way 100%													
<input type="checkbox"/> Transportation Right-of-way _____	<input type="checkbox"/> Other (specify): _____													

Part IV: Project Information

<p>1. PROJECT TYPE:</p> <p>Choose Project Type: Utility construction/modification , If other describe: _____</p>
<p>2. Is the subject activity limited to the maintenance, repair, or improvement of an existing structure within the existing footprint? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, explain.</p> <p>All transmission line improvements will be conducted within the right-of-way, which is regularly maintained.</p>

Part IV: Project Information (continued)

3. Give a detailed description of the activity which is the subject of this request and describe the methods and equipment that will be used. Include a description of steps that will be taken to minimize impacts to any known listed species.

The United Illuminating Company will be conducting improvements of its Ansonia-Derby Transmission Line (Lines 1560 & 1594) originating at the Ansonia Substation at Riverside Drive in Ansonia, Connecticut. Improvement activities within the right-of-way may include the repair and/or replacement of transmission structures; reconductoring; construction of temporary access roads; and/or vegetation clearing and maintenance. Sensitive areas will be taken into consideration during project planning to minimize and/or avoid potential adverse affects resulting from project activities. A previous NDDB response (NDDB Determination No. 201605897) noted that there are no anticipated negative impacts to State-listed species within the area of the Ansonia Substation. All efforts (including sedimentation/erosion control to minimize and/or avoid runoff or discharge to the river) will be implemented to ensure that project activities will not affect listed species that may be on site.

4. If this is a renewal or extension of an existing Safe Harbor request *with* modifications, explain what about the project has changed.

5. Provide a contact for questions about the project details if different from Part II primary contact.

Name: Todd Berman or Jasun Van Horn

Phone: (203) 499-3545 (TB) or (203) 499-2944 (JVH)

E-mail: todd.berman@uinet.com or jvan@uinet.com

Part V: Request Requirements and Associated Application Types

Check *one* box from either Group 1, Group 2 or Group 3, indicating the appropriate category for this request.

Group 1. If you check one of these boxes, complete Parts I – VII of this form and submit the required attachments A and B.

- Preliminary screening was negative but an NDDB review is still requested
- Request regards a municipally regulated or unregulated activity (no state permit/certificate needed)
- Request regards a preliminary site assessment or project feasibility study
- Request relates to land acquisition or protection
- Request is associated with a *renewal* of an existing permit or authorization, with no modifications

Group 2. If you check one of these boxes, complete Parts I – VII of this form and submit required attachments A, B, and C.

- Request is associated with a *new* state or federal permit or authorization application or registration
- Request is associated with modification of an existing permit or other authorization
- Request is associated with a permit enforcement action
- Request regards site management or planning, requiring detailed species recommendations
- Request regards a state funded project, state agency activity, or CEPA request

Group 3. If you are requesting a **Safe Harbor Determination**, complete Parts I-VII and submit required attachments A, B, and D. Safe Harbor determinations can only be requested if you are applying for a GP for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

If you are filing this request as part of a state or federal permit application(s) enter the application information below.

Permitting Agency and Application Name(s): _____

Related State DEEP Permit Number(s), if applicable: _____

State DEEP Enforcement Action Number, if applicable: _____

State DEEP Permit Analyst(s)/Engineer(s), if known: _____

Is this request related to a previously submitted NDDB request? Yes No

If yes, provide the previous NDDB Determination Number(s), if known: 201605897 _____

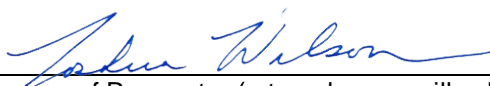
Part VI: Supporting Documents

Check each attachment submitted as verification that *all* applicable attachments have been supplied with this request form. Label each attachment as indicated in this part (e.g., Attachment A, etc.) and be sure to include the requester's name, site name and the date. **Please note that Attachments A and B are required for all new requests and Safe Harbor renewals/extensions with modifications.** Renewals/Extensions with no modifications do not need to submit any attachments. Attachments C and D are supplied at the end of this form.

<input checked="" type="checkbox"/> Attachment A:	Overview Map: an 8 1/2" X 11" print/copy of the relevant portion of a USGS Topographic Quadrangle Map clearly indicating the exact location of the site.
<input checked="" type="checkbox"/> Attachment B:	Detailed Site Map: fine scaled map showing site boundary and area of work details on aerial imagery with relevant landmarks labeled. (Site and work boundaries in GIS [ESRI ArcView shapefile, in NAD83, State Plane, feet] format can be substituted for detailed maps, see instruction document)
<input checked="" type="checkbox"/> Attachment C:	Supplemental Information, Group 2 requirement (attached, DEEP-APP-007C) <input checked="" type="checkbox"/> Section i: Supplemental Site Information and supporting documents <input checked="" type="checkbox"/> Section ii: Supplemental Project Information and supporting documents
<input type="checkbox"/> Attachment D:	Safe Harbor Report Requirements, Group 3 (attached, DEEP-APP-007D)

Part VII: Requester Certification

The requester *and* the individual(s) responsible for actually preparing the request must sign this part. A request will be considered incomplete unless all required signatures are provided.

<p>"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief."</p>	
 _____ Signature of Requester (a typed name will substitute for a handwritten signature)	1/6/2022 _____ Date
Joshua H. Wilson _____ Name of Requester (print or type)	Sr. Ecologist _____ Title (if applicable)
_____ Signature of Preparer (if different than above)	_____ Date
_____ Name of Preparer (print or type)	_____ Title (if applicable)

Note: Please submit the completed Request Form and all Supporting Documents to:

CENTRAL PERMIT PROCESSING UNIT
 DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
 79 ELM STREET
 HARTFORD, CT 06106-5127

Or email request to: deep.nddbrequest@ct.gov

Attachment C: Supplemental Information, Group 2 requirement

Section i: Supplemental Site Information

1. Existing Conditions

Describe all natural and man-made features including wetlands, watercourses, fish and wildlife habitat, floodplains and any existing structures potentially affected by the subject activity. Such features should be depicted and labeled on the site plan that must be submitted. Photographs of current site conditions may be helpful to reviewers.

Land use within the utilities right-of-way consists of forested land, agricultural fields, residential/commercial/industrial properties, paved road, and watercourses including the Housatonic River and its associated floodplain. Wetland delineations will be conducted within the project area to determine the presence and locations of wetlands and watercourses.

- Site Photographs (optional) attached**
- Site Plan/sketch of existing conditions attached**

2. Biological Surveys

Has a biologist visited the site and conducted a biological survey to determine the presence of any endangered, threatened or special concern species Yes No

If yes, complete the following questions and submit any reports of biological surveys, documentation of the biologist's qualifications, and any NDDDB survey forms.

Biologist(s) name: _____

Habitat and/or species targeted by survey: _____

Dates when surveys were conducted: _____

- Reports of biological surveys attached**
- Documentation of biologist's qualifications attached**
- [NDDDB Survey forms](#) for any listed species observations attached**

Section ii: Supplemental Project Information

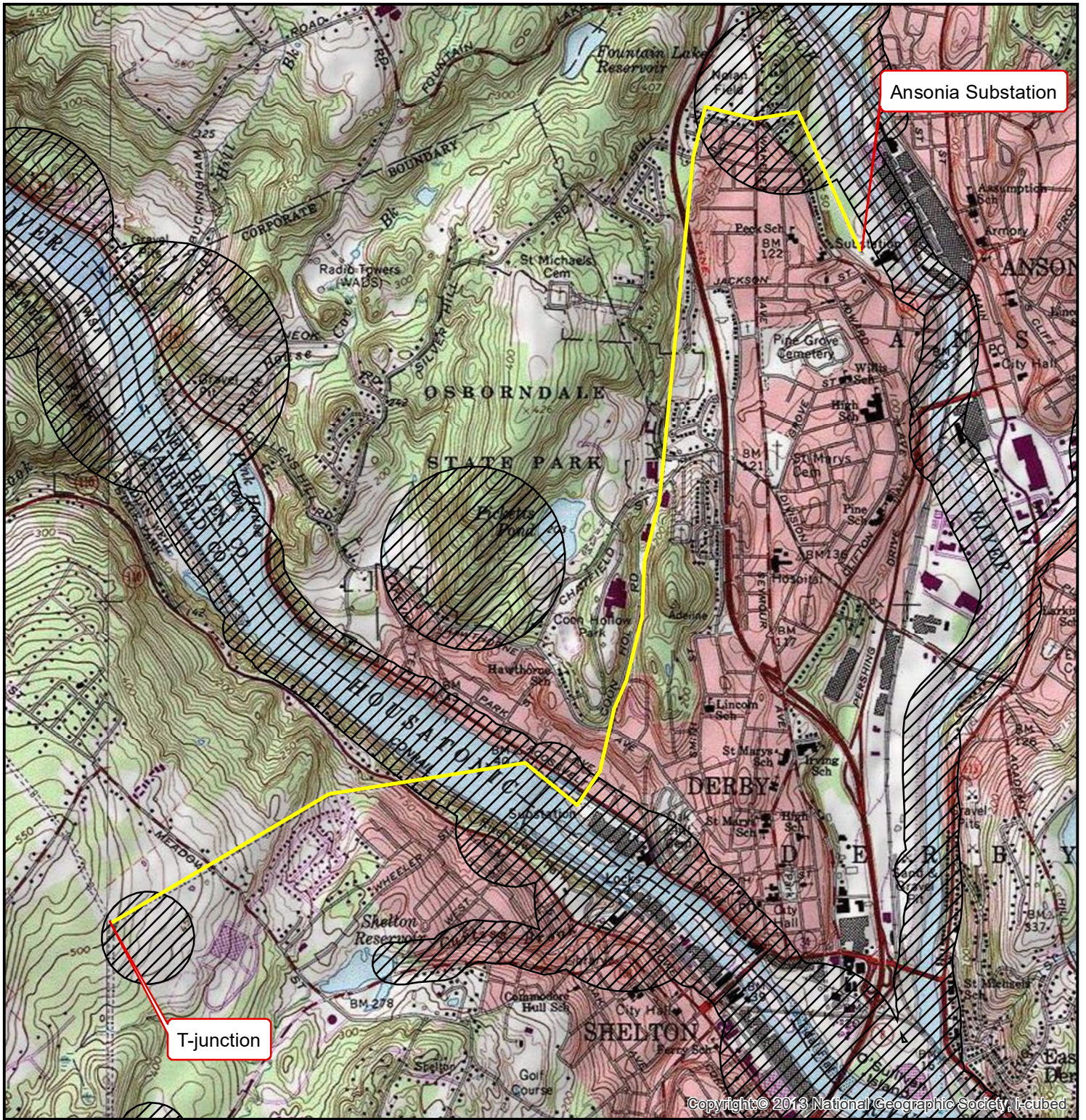
1. Provide a schedule for all phases of the project including the year, the month and/or season that the proposed activity will be initiated and the duration of the activity.

Construction scheduling for this project has not yet been determined. Consideration will be taken regarding time-of-year requirements for species identified within the on-site NDDDB areas.

2. Describe and quantify the proposed changes to existing conditions and describe any on-site or off-site impacts. In addition, provide an annotated site plan detailing the areas of impact and proposed changes to existing conditions.

Proposed changes to existing conditions may include the construction of permanent gravel access roads within and adjacent to the right-of-way. Additional activities may include temporary matting for access in wetlands and watercourses. An annotated site plan is not included. More detailed survey and planning activities are currently being conducted.



- Annotated Site Plan attached**

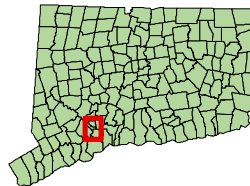


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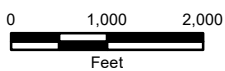
-  Project Location
-  Natural Diversity Area



MAP REFERENCES:

"State and Federal Listed Species and Significant Natural Communities Map" Prepared By: Connecticut Department of Energy and Environmental Protection Date: December 2021

USGS 7.5 Minute Topographic Map
Ansonia Quadrangle



1 inch = 2,000 feet



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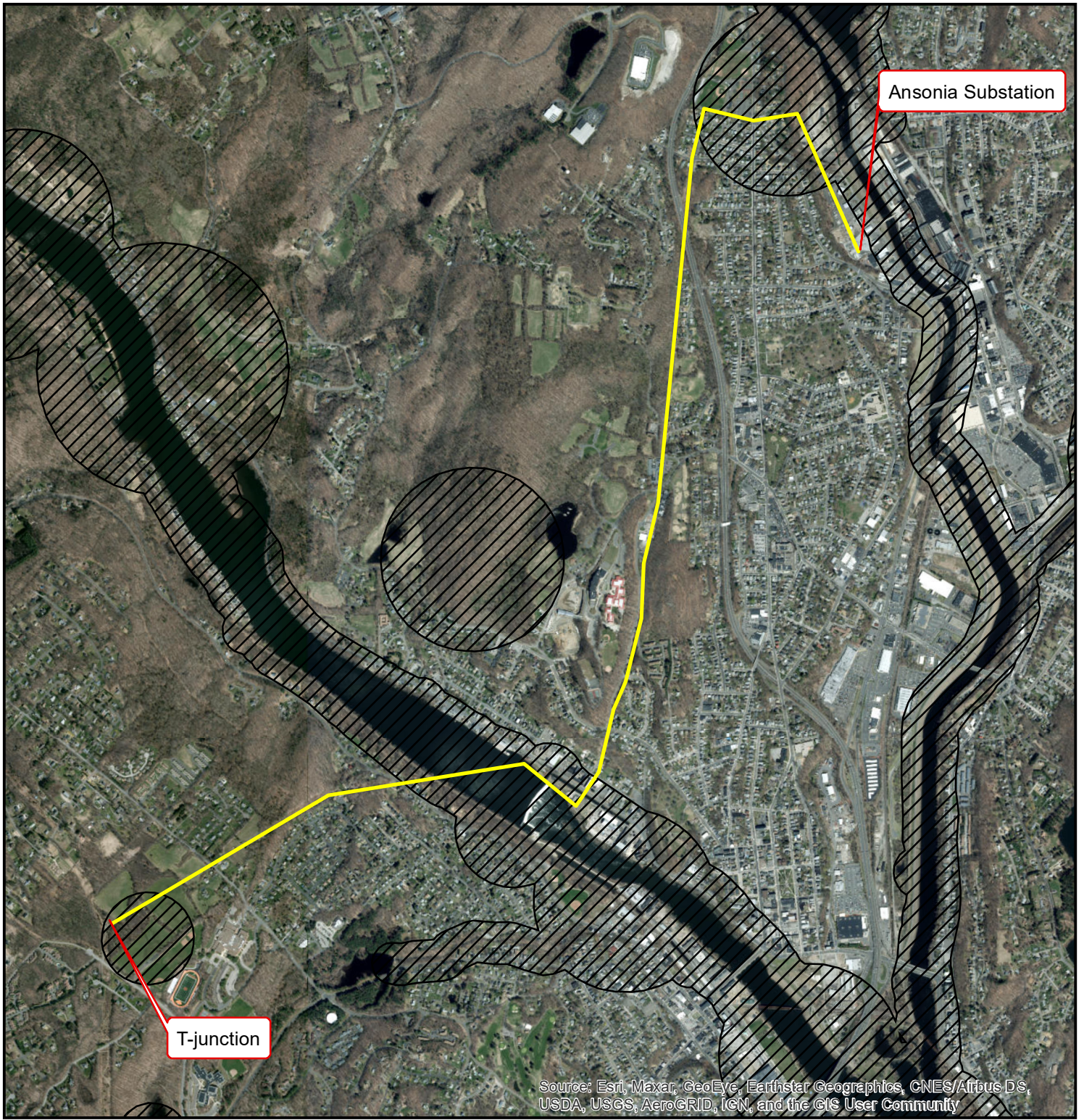
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Natural Diversity Database Areas
United Illuminating
Ansonia-Derby T-Line
Shelton, Derby, Ansonia Connecticut



Attachment A

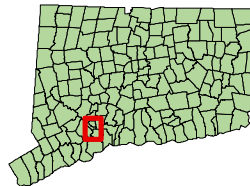
January 2022



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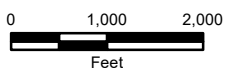
-  Project Location
-  Natural Diversity Area



MAP REFERENCES:

“State and Federal Listed Species and Significant Natural Communities Map” Prepared By: Connecticut Department of Energy and Environmental Protection
Date: December 2021

Orthophotography courtesy ArcGIS Online
World Imagery



1 inch = 2,000 feet



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Natural Diversity Database Areas

United Illuminating
Ansonia-Derby T-Line

Shelton, Derby Ansonia Connecticut

Attachment B

January 2022

United Illuminating Ansonia-Derby T-Line



Photo 1: Overview of Ansonia-Derby T-line.



Photo 2: Overview of Ansonia-Derby T-line crossing Housatonic River.



Photo 3: Overview of Ansonia-Derby T-line structure.



Photo 4: Overview of Ansonia-Derby T-line near Ansonia Substation.



Photo 5: Overview of Ansonia-Derby T-line.

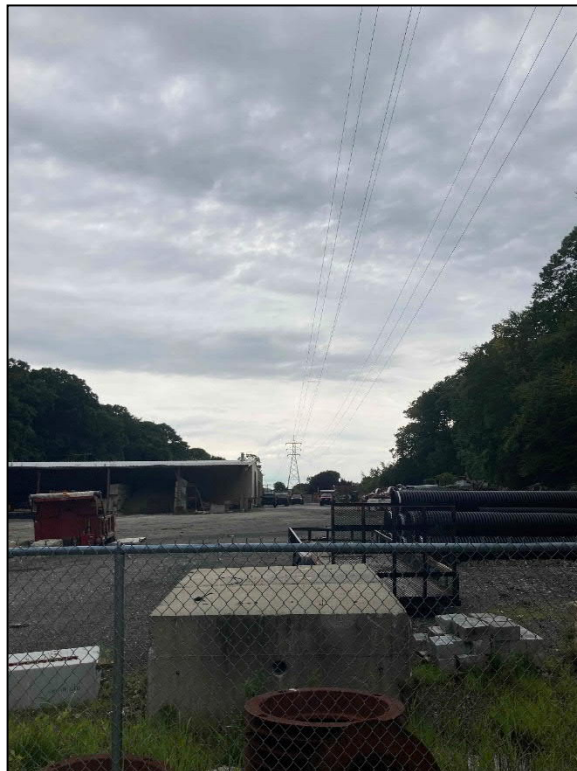


Photo 6: Overview of Ansonia-Derby T-line over Derby DPW yard.

Attachment B.5

Wetland and Watercourses Photo Log

Proposed Derby Junction-Ansonia 115-kV
Transmission Line Rebuild



Wetland W2



Wetland W3/Watercourse WC1



Wetland W4/Watercourse WC2



Wetland W5/Watercourse W2

Proposed Derby Junction-Ansonia 115-kV
Transmission Line Rebuild



Wetland W5/Watercourse WC3



Wetland W3/Watercourse WC3



Watercourse WC6



Watercourse WC6

Proposed Derby Junction-Ansonia 115-kV
Transmission Line Rebuild



Wetland W6/Watercourse WC7



Wetland W6/Watercourse WC7



Wetland W8/Watercourse WC7



Watercourse WC9



Watercourse WC9



Wetland W8



Wetlands W9, W10/Watercourse WC10



Wetlands W9, W10/Watercourse WC10