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September 5, 2024

Melanie Bachman, Esq.
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Towantic Substation to Beacon Falls Junction Rebuild Project

Dear Attorney Bachman:

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource") is requesting a Declaratory Ruling from the Connecticut Siting Council ("Council") that no Certificate of Environmental Compatibility and Public Need is required for the Towantic Substation to Beacon Falls Junction Rebuild Project ("Project"), which proposes modifications to the existing 1142, 1319, 1403, 1580, 1619, and 1808 transmission lines, in the Town of Oxford, Connecticut ("Petition").

Prior to submitting this Petition, Eversource representatives briefed municipal officials about the Project and provided written notice to all abutters of the proposed work and also of the filing of this Petition with the Council. Maps and line lists identifying the notified property owners are provided in the Petition in Attachment A – Towantic Substation to Beacon Falls Junction Rebuild Project – Map Sheets.

Eversource is submitting this filing electronically and will deliver an original and 15 copies along with check in the amount of $625 for the required filing fee.

Sincerely,

Deborah Denfeld

Deborah Denfeld
Team Lead – Transmission Siting
deborah.denfeld@eversource.com

Attachments

cc: George R. Temple, First Selectman, Town of Oxford

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THE CONNECTICUT LIGHT AND POWER COMPANY

doing business as

EVERSOURCE ENERGY

PETITION TO THE CONNECTICUT SITING COUNCIL
FOR A DECLARATORY RULING OF
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT
FOR THE PROPOSED MODIFICATIONS TO THE EXISTING
1142, 1319, 1403, 1580, 1619 AND 1808 LINES IN THE TOWN OF OXFORD CONNECTICUT

1. Introduction

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") hereby petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g et seq. of the Connecticut General Statutes for proposed modifications to sections of the 1142, 1319, 1403, 1580, 1619, and 1808 115-kilovolt ("kV") transmission lines that occupy approximately 4.6 miles of two Eversource transmission line rights-of-way ("ROW") that extend from Towantic Substation to just south of Christian Street Junction and from Christian Street Junction to Beacon Falls Junction in the Town of Oxford, Connecticut as described herein (the "Project"). Eversource submits that a Certificate is not required because the proposed modifications would not have a substantial adverse environmental effect.

2. Purpose of the Project

The purpose of the Project is to rebuild a total of approximately 4.6 corridor miles of the 1142, 1319, 1403, 1580, 1619 and 1808 115-kV transmission lines located within two existing and intersecting ROWs in Oxford. The first ROW, designated as Segment 1, carries the 1142/1403 1142/1319, 1580/1808, and 1619 lines. Segment 2 carries the 1142/1580 and 1319/1808 lines. Segment 1 and Segment 2 collectively comprise the "Project Area".

The Project is part of the continuing Eversource effort to address aging transmission line facilities in the Devon-Towantic-South Naugatuck corridor[1] and improve transmission system reliability through the replacement of damaged, degraded, or aging infrastructure that is determined to be at risk, including structures, conductors, and shield wire.

The Project proposes to replace aluminum conductor steel reinforced ("ACSR") and aluminum conductor steel support ("ACSS") conductor in Segments 1 and 2 with 1590-kcmil ACSS 54/19 "Falcon" conductor. The majority of the conductor on the 1142 and 1319 lines in Segment 1 is approximately 64 years old.[2] The 1403 Line in Segment 1 is a mix of seven-year-old and 16-year-old-conductor. The conductor for the 1580 and 1808 lines in Segment 1 is approximately 62 years old. In Segment 2, conductor on the 1142 and 1580 lines is approximately 55 years old, and conductor on the 1319 and 1808 lines is 14 years old. The installation of uniform large capacity conductor over the entire Project Area will reduce the propensity for insulator swing and conductor displacement under wind conditions.

The Project proposes to replace existing Alumoweld shield wire in both Segments 1 and 2 with optical ground wire ("OPGW") to provide improved communication and reliability as part of the Eversource fiber optic network build out.

Structure replacements are proposed on this Project for several reasons. Eversource has determined that some structures require replacement due to overstress associated with the increased loading of the proposed conductor and OPGW replacement installations or to facilitate meeting clearance requirements within the existing ROW. Other structures must be replaced due to asset conditions including structure corrosion and deterioration of foundations. At least one structure (Structure 317) needs to be converted to a dead-end structure configuration to accommodate pulling the new conductor. Two remaining pairs of structures (304, 305, 1574 and 1575), situated to either side of Larkey Road, are proposed to be replaced with the other structures in this segment as they are of a similar age and replacement of these limited remaining

[1] This Project is similar to scope of work presented in Petition No.s 1527, 1582 and 1614, which are also in the Devon-Towantic-South Naugatuck corridor.

[2] Short sections of conductor in the Segment 1 ROW have been replaced more recently. A short section of the 1142 line is four years old and a short section of the 1319 line is 16 years old.

aging structures now will result in cost efficiencies from avoidance of one or more future mobilizations and increased replacement cost.

Reinforcement of at least some of the existing lattice tower structures may be possible to address the strain and/or overstress, but it would still require inserting intermediate structures to comply with current NESC clearance requirements. However, this remedy would not address the aging[3] structures and would increase the number of proposed structures result in additional affecting the visual appearance in the ROW.

The 1142/1403 lines and the 1142/1319 lines in Segment 1 are supported on 13 double-circuit lattice tower ("DCLT") structures, five single-circuit steel poles ("SCSP") structures and five single-circuit H-frame ("SCHF") structure.[4] The 1580/1808 lines south of Christian Street Junction are supported by one DCLT. The 1142/1580 lines and the 1319/1808 lines in Segment 2 are supported on two quad-circuit lattice towers ("QCLT"), 31 DCLTs, and two SCSPs.

The Project proposes to remove a total of 51 structures and install a total of 74 structures.[5] One structure that will be removed will not be replaced. Of the additional 24 structures, 11 DCLT structures will be replaced with paired SCSPs. An additional two structures result from two QCLTs being replaced with two double circuit steel pole ("DCSP") structures each. And lastly, 11 new structures will be added to address various clearance or design needs including managing line crossovers with adequate clearance requirements at Christian Street Junction, meeting FAA height restriction requirements[6], and maintaining required road/distribution line crossing clearances. All replacement and new structures in Segment 1 will be galvanized steel to provide visual consistency with the existing structures on the neighboring 1619 Line. All replacement and new structures in Segment 2 are proposed to be weathering steel, a finish that

[3] The majority of the lattice tower structures in Segment 1 are approximately 60 to 64 years old. The majority of the lattice tower structures in Segment 2 are approximately 55 to 77 years old.

[4] Eight recently (2017 to 2022 time frame) replaced structures are proposed to remain, including four SCSP and four SCHF structures.

[5] One additional temporary structure will be installed at Christian Street Junction to support the 1142 line to accommodate the outage sequencing to rebuild the Junction.

[6] Proposed Structure 19440 is located near the runway of Waterbury-Oxford Airport and was added to shorten span length and limit structure and conductor heights in that area.

blends in with the natural vegetation along this less-developed ROW segment. Figure 1 illustrates the location of the proposed Project.

Figure 1: Project Overview Map

3. Existing Project Area Description

The Project Area[7] consists of portions of two ROWs over approximately a total of 4.6 miles in the Town of Oxford, and includes the 1142, 1319, 1403, 1580, 1619, and 1808 transmission lines as described below and as shown on *Attachment A – Map Sheets.*

Segment 1 extends roughly north to south 2.1 miles from Towantic Substation (located at Woodruff Hill Road in Oxford) to Christian Street Junction (located east of Christian Street in Oxford) and carries the 1142/1403 and 1142/1319 and 1619 lines. Segment 1 also includes a 0.2 mile section of the 1580/1808 lines south of Christian Street Junction. The width of the ROW is 110 feet but widens to 290 feet approximately 0.2 mile north of Oxford Substation (in Oxford). For the 0.2 mile segment of the 1580/1808 lines south of Christian Street Junction, the width of the ROW is also 110 feet.

Segment 2 extends roughly west to east 2.3 miles from Christian Street Junction to Beacon Falls Junction (located east of Chestnut Hill Road in Oxford) and carries the 1142/1580 and 1319/1808 lines. The width of the ROW from Christian Street Junction to Beacon Falls Junction is 150 feet.

Project work will occur on Eversource owned property or on property subject to Eversource easements. In general, the easements along the two existing ROWs grant Eversource the right to enter upon the land and erect, inspect, operate, replace, remove, repair, patrol, and permanently maintain on the ROW poles, towers, conductors, wires, cross arms, guys and other fixtures and appurtenances used or adapted for the transmission of electric current for light, heat, power or any other purpose, and used or adapted for telephone purposes.[8]

The Project segments intersect at Christian Street Junction and traverse through residential and commercial properties (including landscaped and driveway surfaces), wetlands, hiking trails, a state-owned bridle trail, and a public golf course. The ROWs also cross local town roads (East

[7] As referenced in the Petition, the "Project Area " is synonymous with the existing facility "Site" described in RCSA §16-50j-2a (29); “site" is typically used to refer to a portion of the Project Area, such as "work pads at structure and wire pulling sites”, “Project work sites", and the Project construction staging area.

[8] The easements also grant Eversource the right to trim, cut and remove trees, parts of trees, limbs, branches and underbrush within or projecting into the ROW/on adjoining land of Grantor, as in the judgment of the Grantee may interfere with or endanger poles, towers and wires, and their operation or with any of the appurtenances.

Commerce Drive, Prokop Road, Commerce Drive, Jacks Hill Road, Christian Street, Larkey Road, Charles Road, Greenbriar Road, Riggs Street, Country Club Drive and Kristalle Lane). The Project Area does not cross state highway or rail lines. The Waterbury-Oxford Airport is located along the west side of Segment 1.

The two transmission line segments and the transmission line features are described in further detail below.

3.1 Segment 1: Towantic Substation to Christian Street Junction

The Towantic Substation to Christian Street Junction ROW was originally established in 1918. This ROW segment also abuts Eversource's Oxford Substation.

The 1142[9], 1403[10], and 1319[11] 115-kV lines occupy this ROW over an approximate 2.1-mile length with Oxford Substation located approximately 0.8 mile north of Christian Street Junction. The 1142/1403 lines occupy the west side of the ROW and begin at Towantic Substation, extending south approximately 1.3 miles to Oxford Substation where the 1403 line ends. The 1142 line bypasses Oxford Substation and continues south with the 1319 line approximately 0.8 miles on the west side of the ROW to Christian Street Junction. The east side of the 2.1-mile ROW is shared with the 1619[12] line.

The majority of ROW in Segment 1 is 110 feet wide and vegetation is maintained edge to edge.

In the 290 feet wide ROW segment, between North Larkey Road and Oxford Substation, the east side of the ROW is maintained to the edge of ROW. On the west side of the ROW, the limits

[9] The 1142 Line was constructed around 1960 and spans approximately 7.50 miles between Towantic Substation and South Naugatuck Substation (Naugatuck) with previous upgrades (structure replacements or line reconfigurations) in 1969, 2017, and 2020.

[10] The 1403 Line was constructed around 1960 and spans approximately 1.30 miles between Towantic Substation and Oxford Substation with upgrades (structure replacements or line reconfigurations) in 2008, 2017, and 2022.

[11] The 1319 Line was constructed around 1947 and spans approximately 4.50 miles between Oxford Substation to Beacon Falls Substation (Beacon Falls, CT) with upgrades (structure replacements or line reconfigurations) in/around 1960, 1969, 2008, 2022 in the Project ROW.

[12] The 1619 Line, formerly known as the 1990 line, was rebuilt in 2014, with SCSPs, 1590 ACSS conductor, and fiber optic OPGW under CSC Petition No. 1058.

of vegetation maintenance are aligned with the 25 feet offset from the outside conductor on the 1403 line as it approaches the Oxford Substation at an angled alignment in the ROW.

Where the lines cross Eversource property, the vegetation is maintained to meet existing conductor clearance requirements.

Details of the transmission line structures, conductor and shield wire on the 1142, 1403 and 1319 lines in Segment 1 are described below.

Structures:

From Towantic Substation to Oxford Substation the 1142/1403 lines are supported on 16 structures which are a combination of eight painted steel DCLT structures, four galvanized steel SCSP structures, and four SCHF structures (two galvanized steel, one weathering steel and one wood) the majority of which were installed in 1964. Three SCSPs and three SCHFs structures were replaced between 2008 and 2022.

From Oxford Substation to Christian Street Junction the 1142/1319 lines are supported on a combination of five painted steel DCLT structures (with one DCLT structure that has been previously reconfigured to support a single circuit), one weathering steel SCSP structure, and one weathering steel SCHF structure. The lattice towers were installed around 1960. The SCSP and SCHF were installed in 2022.

Conductor / Shield Wire:

- The 1142 Line conductor is 556-kcmil ACSR, which is approximately 64 years old and 556-kcmil ACSS, which is four years old.[13] The shield wire is a combination of 0.457-inch OPGW and 19#10 Alumoweld, both four years old, and 7#9 Alumoweld, which is approximately 64 years old.

[13] The 556 kcmil ACSS conductor extends through approximately 15% of the 1142 line length between Towantic Substation to Christian Street Junction.

- The 1403 Line conductor is 556-kcmil ACSS which is seven years old and 795-kcmil ACSS, which is 16 years old. The shield wire is 0.457-inch OPGW, which is seven years old.

- The 1319 Line conductor is 556-kcmil ACSR which is approximately 60 years old and 795-kcmil ACSS which is 16 years old.[14] The shield wire is 7#9 Alumoweld, which is approximately 64 years old.

3.2 South of Christian Street Junction

The Segment 1 Project Area also includes a small section of the ROW from Christian Street Junction south approximately 0.2 mile. Within this section the 1580/1808 lines (on the west side of the ROW) are supported by one DCLT structure[15] installed in approximately 1962. The conductor for this span on both lines is 795-kcmil ACSR which is approximately 62 years old. The shield wire on the 1580 line is 7#9 Alumoweld. The shield wire on the 1808 line is 3/8-inch copperweld, and both are approximately 62 years old.

3.3 Segment 2: Christian Street Junction to Beacon Falls Junction

The Christian Street Junction to Beacon Falls Junction ROW was originally established between 1942 and 1958. Within this portion of the Project Area the 1580[16] Line shares the ROW corridor with the 1142, 1319, and 1808[17] lines. The 1319/1808 lines occupy the north side of the ROW, and the 1142/1580 lines occupy the south side of the ROW with all four lines continuing for approximately 2.36 miles to Beacon Falls Junction.

The width of the Segment 2 ROW is 150 feet and is maintained to approximately 145 feet with five feet of trees/vegetation along the southerly side of the Segment 2 ROW.

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[14] The 795-kcmil ACSS conductor is a majority of the 1319 line length between Oxford Substation and Christian Street Junction

[15] This structure replacement and associated conductor and shield wire replacement will complete the 1580/1808 rebuild at the end of the PE 1614 Project area into the Christian Street Junction area.

[16] The 1580 Line was constructed around 1923 and spans approximately 23.8 miles between Devon Substation (Milford, CT) and South Naugatuck Substation, with upgrades (structure replacements or line reconfigurations) in 1954, 1962, 1972 and 2014.

[17] The 1808 Line was constructed around 1947 and spans approximately 22.49 miles between United Illuminating's Pootatuck Substation (Shelton, CT) and Beacon Falls Substation, with upgrades (structure replacements or line reconfigurations) in 1954, 1962, 1972, 2008 and 2014.

Details of the transmission line structures, conductor and shield wire on the 1142, 1580, 1319, and 1808 lines are described as follows:

Structures:

The 1142/1580 lines are supported on a combination of 15 galvanized steel DCLT structures, one galvanized steel SCSP structure, and two galvanized steel QCLT structures. There is one galvanized steel DCLT structure at Christian Street Junction supporting the 1142/1808 lines built approximately in 1960. All other structures were installed in approximately 1969.

The 1319/1808 lines are supported on a combination of 15 galvanized steel DCLT structures installed in approximately 1947, one weathering steel SCSP structure installed around 1969, and the same two galvanized steel QCLT structures that also support the 1142/1580 lines. The two QCLT structures were installed in approximately 1969.

Conductor / Shield Wire:

- The conductor for the 1142 Line, 795-kcmil ACSR, and the shield wire, 7#8 Alumoweld, are both approximately 55 years old.
- The conductor for the 1580 Line, 795-kcmil ACSR, and the shield wire, 7#8 Alumoweld, are both approximately 55 years old.
- The conductor for the 1319 Line, 795-kcmil ACSS, and the shield wire, 0.457-inch OPGW, are both approximately 14 years old.
- The conductor for the 1808 Line, 795-kcmil ACSS, and the shield wire 19#10 Alumoweld, are both approximately 14 years old.

3.4 Land Use

Land use within the Project Area includes residential properties, transportation corridors (local roadways), a public golf course, state-owned open space (Naugatuck State Forest and the Larkin State Park Bridle Trail), and other undeveloped forested lands. Land use adjacent to the Project Area includes the Waterbury-Oxford Airport, and Naugatuck State Forest. Though the Project would traverse through these areas, the work will not impact them.

4. Proposed Project Modifications

The Project scope consists of structure, conductor, and shield wire replacements and structure additions in both Project segments for the 1142, 1319, 1403, 1580, 1619 and 1808 lines from Towantic Substation to Christian Street Junction to Beacon Falls Junction.[18]

The Project proposes to remove 51 existing structures and install a total of 74 structures, replace conductor and shield wire, and access the ROW corridor from Town roads, as described in more detail below for each Project segment.

4.1 Segment 1: Towantic Substation to Christian Street Junction

The Project scope in Segment 1 proposes to replace structures, conductor, and shield wire on the 1142/1403 and 1142/1319 lines in the ROW corridor between Towantic Substation and Christian Street Junction. The Project also proposes to replace a structure, conductor, and shield wire on the 1580/1808 lines just south of Christian Street Junction. No work is proposed at the Towantic Substation nor Oxford Substation.

Eighteen replacement structures and four new structures (including one new structure for the 1619 Line) will consist of galvanized steel to provide visual consistency with the remaining structures on the neighboring 1619 Line. Eight structures in this segment will remain.[19] One structure will be removed and will not be replaced. Proposed modifications are as follows:

[18] The Project was not identified by an ISO-New England Inc. needs and solution analysis. The Project is associated with the ISO-NE Asset Condition List. There are no generation facilities in the ISO-NE interconnection queue associated with the proposed Project.

[19] For the 1142/1403 Lines, six existing structures will remain including three SCHF structures (1444B (1142 Line), 1444 (1142 Line) 1444(1403 Line)) and three SCSP structures (1452B (1142 Line), 1452A (1403 Line), 1445N (1142 Line)). For the 1142/1319 Lines, two existing structures will remain including one SCSP structure (1443A (1319 Line)) and one SCHF structure (1444W (1319 Line)). Structures 1444 and 1444W consist of weathering steel; the other six structures to remain consist of galvanized steel. These eight existing structures to remain were replaced between 2017 and 2022 and will be re-numbered, consistent with the new structure numbering sequence for this Project (Refer to Attachment B.1 for new structure number assignments).

North of Oxford Substation – 1142/1403 Lines

Structure Modifications:

- Replacement of five existing DCLT structures with five DCSP structures
- Replacement of two existing DCLT structures with four SCSP structures
- Replacement of one existing SCSP structure with one SCSP structure
- Replacement of one existing SCHF with one SCHF structure
- Removal of one existing DCLT structure
- Installation of one new DCSP structure
- Installation of one new SCHF structure

Conductor and Shield Wire Modifications:

- Replacement of existing 556-kcmil ACSR, 795-kcmil ACSS and 556-kcmil ACSS conductors with 1590-kcmil ACSS 54/19 "Falcon" conductor
- Replacement of existing 19#10 Alumoweld and 7#9 Alumoweld shield wire, and 0.457-inch OPGW with 96F OPGW

South of Oxford Substation – 1142/1319 Lines

Structure Modifications:

- Replacement of three existing DCLT structures with three DCSP structures
- Replacement of one existing DCLT structure with two SCSP structures
- Replacement of one existing DCLT[20] structure with a one 2-pole SC structure
- Installation of one new DCSP structure
- Installation of one temporary SCSP[21]

Conductor and Shield Wire Modifications:

- Replacement of existing 556 kcmil ACSR, 795-kcmil ACSS and 556-kcmil ACSS conductors with 1590-kcmil ACSS 54/19 "Falcon" conductor.
- Replacement of existing 19#10 Alumoweld and 7#9 Alumoweld shield wire, and 0.457-inch OPGW with 96F OPGW

[20] Existing DCLT Structure 1443S was reconfigured to support one circuit, the 1142 line.

[21] Temporary structure will be installed at Christian Street Junction to support the 1142 line in order to accommodate the outage sequencing to rebuild the Junction.

Christian Street Junction – 1619 Line

Structure Modifications:

- Installation of one new SCSP structure[22]

South of Christian Street Junction – 1580/1808 Lines

Structure Modifications:

- Replacement of one existing DCLT structure with one DCSP structure

Conductor and Shield (Communication) Wire Modifications:

- Replacement of existing 795-kcmil ACSR conductor with 1590-kcmil ACSS 54/19 "Falcon" conductor
- Replacement of existing 7#9 Alumoweld and 3/8" Copperweld shield wires with 0.646-inch 96F OPGW

4.2 Segment 2: Christian Street Junction to Beacon Falls Junction

The Project scope in Segment 2 proposes to replace structures, conductor, and shield wire on the 1142/1580 and 1319/1808 lines in the ROW corridor between Christian Street Junction and Beacon Falls Junction. The 45 replacement structures and seven new structures will be weathering steel. Proposed modifications are as follows:

Christian Street Junction – 1142/1808 Lines

Structure Modifications:

- Replacement of one existing DCLT structure with one SCSP structure[23]

South Side of ROW – 1142/1580 Lines

Structure Modifications:

- Replacement of 11 existing DCLT structures with 11 DCSP structures
- Replacement of four existing DCLT structures with eight SCSP structures
- Replacement of one existing SCSP with one SCSP structure

[22] A new SCSP structure on the 1619 Line at Christian Street Junction is proposed to be installed to maintain appropriate clearance between the 1619 line and the cross over of the 1580 line conductor (Refer to *Attachment A – Map Sheets* – insert to Map Sheet 5 of 9)

[23] Proposed Structure 19344A will carry the 1142 line. Proposed Structure 19431A will carry the 1808 line.

- Replacement of two existing QCLT structures with two DCSP structures (The QCLT structures also support the 1319/1808 lines and the two DCSP structures to support these lines are counted below)
- Installation of one new DCSP structure
- Installation of two new SCSP structures

Conductor and Shield Wire Modifications:

- Replacement of existing 795-kcmil ACSR conductor with 1590-kcmil ACSS 54/19 "Falcon" conductor
- Replacement of existing 7#8 Alumoweld shield wire with 0.646-inch 96F OPGW

North Side of ROW – 1319/1808 Lines

Structure Modifications:

- Replacement of 11 existing DCLT structures with 11 DCSP structures
- Replacement of four existing DCLT structures with eight SCSP structures
- Replacement of two existing QCLT structures with two DCSP structures (The QCLT structures also support the 1142/1580 lines and the two DCSP structures to support these lines are counted above)
- Replacement of one SCSP with one SCSP
- Installation of one new DCSP structure
- Installation of three new SCSP structures

Conductor and Shield (Communication) Wire Modifications:

- Replacement of existing 795 kcmil-ACSS with 1590-kcmil ACSS 54/19 "Falcon" conductor
- Replacement of existing 0.457"-inch OPGW and 19#10 Alumoweld shield wire with 0.646-inch 96F OPGW

In addition to the work described above, lightning arrestors would be transferred or installed as needed, such that arrestors would be present on approximately every fifth replacement structure at the completion of the Project. In addition to new hardware, insulators will be installed on all replacement and new structures, along with counterpoise, as needed.

Details of the proposed Project modifications are included in attached reference documents, as follows:

- *Attachment A*: Map Sheets – Aerial view base maps, which depict the locations of existing and proposed structures, as well as the approximate location and configuration of work pads and pull pads, access roads, and other Project elements.

- *Attachment B*: Structure Tables – A list of specific structure information on the types and the heights of the existing and proposed structures.

- *Attachment C*: Typical Cross Sections – Drawings that depict typical views along the ROW of the existing and proposed structures.

4.3 Structure Heights

The height of the 51 structures to be removed in the Project Area ranges from 43 feet to 124 feet. The proposed 74 replacement/new structures will range in height from 42 feet to 146.5 feet. Additionally;

- Fourteen replacement structures will have proposed height decreases between 0.5 feet and 13.5 feet, below the corresponding existing structures.
- The remaining replacement structures will have proposed height increases from 0.5 foot to 53.5 feet above the corresponding existing structures.
- Eleven new structures will range in height from 55 feet to 146.5 feet.

The average increase in structure height is 18.4 feet. Eleven replacement structures will have height increases greater than 25 feet for the following reasons.

- At Christian Street Junction proposed Structure 19344A on the 1142 Line and proposed Structure 19343 on the 1580/1808 lines require a 26.5 feet height increase to meet crossing line clearance requirements and constructability needs including worker safety in the ROW.

- Replacement of existing Structure 301 on the 1319/1808 lines requires a height increase of 53.5 feet (at 53 feet in height, it is currently the shortest structure in the area whereas other adjacent structures are 80 feet in height or taller). The height increase will accommodate a proposed structure configuration change from its short horizontal tower to two SCSPs (proposed Structures 19430/19430A) and support conductor crossover clearances of five circuit lines changing angles at Christian Street Junction.

- North of Oxford Substation, replacement structure height increases of 30 feet, 36.5 feet and 27 feet are needed on the 1142/1403 lines for proposed Structures 19449A/19449, 19446, and 19443 respectively to meet current National Electrical Safety Code ("NESC") clearance requirements.

- At a location near Greenbriar Road, on either side of Jacks Brook, the replacement structures are being shifted down slope to gradually ascend and descend steep terrain to minimize suspension insulator swing and uplift during extreme weather. Several proposed structures located at the bottom of hills (at 18 feet to 25 feet lower elevations), will result in taller structures relative to the corresponding structure it is replacing. On the 1580/1142 lines, Structures 19352/19353 will have height increases of 22.5 and 32.5 feet respectively. Existing structure heights on the 1319/1808 lines are approximately 25 feet shorter than their corresponding 1580/1142 line structures in the shared ROW, resulting in Structures 19423/19422 with height increases of 44.5 and 49 feet respectively.

Added structures to the Project Area also support current NESC clearance requirements, minimize conductor and shield wire uplift, and assist in constructability of the line rebuilds and maintenance at Christian Street Junction.

4.4 Structure Access

Access to the Project ROW will be from public road crossings and/or off-ROW access routes located between the ROW and nearby public roads. Where approval to use off-ROW access routes has not been secured in-ROW access is depicted for Project access needs.

5. Environmental Effects and Mitigation

The Project would be constructed entirely within Eversource's ROW or on Eversource fee owned property. No expansion of the existing ROW is proposed for the Project. The Project would not have a substantial adverse environmental effect for the reasons explained more fully below.

5.1 Tree Clearing and Vegetation Removal

The majority of the Project would be located within the maintained ROWs, though some tree clearing is required. Vegetation removal/mowing would be required for access roads, work pads and pull pad areas, as well as selective removal of non-compatible tree species within the ROW and pruning of side vegetation and tree branches. Due to recent vegetation maintenance activities within the ROW, it is anticipated the removal of mature vegetation and pruning of side

vegetation would be limited in most areas of the ROW, except where the proposed structure and conductor placement will modify the alignment within the ROW.

Permanent loss of forested land is associated with approximately 1.25 acres of tree-clearing. Approximately 0.32-acres of clearing is associated with construction of a proposed work pad and access road at Christian Street Junction, within Eversource owned property. Approximately 0.44-acres of clearing is required in the ROW west of Riggs Street[24], a portion of which is located on Eversource owned property. Limited tree removal is required in some areas to provide additional conductor clearance, along the southern ROW edge as follows:

- Across an approximate 5-feet width between Structure 19348 (just east of wetland W24) and to the eastern edge of Larkey Road over an approximate 0.10-acre area, including limited tree removal in wetlands W25 and W26.

- Across an approximate 10-feet width between the east bank of Jack's Brook (S5) to Greenbriar Road, then east of Greenbriar road to the east end of wetland W30, over an approximate 0.21-acre area, including limited tree clearing in wetlands W29 and W30.

- Construction of two off-ROW work pads, west and east of Riggs Street, will require select tree removal in a 0.09-acre area. Off-ROW vegetation removal, such as mowing, branch pruning and removal of hazard trees[25] would be limited to overgrown access roads.

No adverse impacts are anticipated, as all vegetation work would be conducted in accordance with Eversource's 2022 Best Management Practices Manual for Massachusetts and Connecticut ("BMPs"). To minimize impacts, the contractor responsible for clearing would comply with relevant specifications for access, vegetation removal methods, listed species protection, and use of temporary matting in sensitive resource areas. Eversource would provide oversight of the work and monitor compliance with the above-referenced document and aid the contractor when planning work in environmentally sensitive resource areas and determining options for wood products disposal.

[24] Eversource recently acquired an additional parcel west of Riggs Street, which will allow a consistent alignment of structures and conductor in the ROW after tree clearing is completed.

[25] Hazard trees located in unmanaged areas outside of the limits of Project clearing would be removed after identification. Prior to the removal of any such trees located off ROW, Eversource would obtain approval from the affected landowner.

Given the limited extent of forest conversion to shrubland or emergent vegetation, there will be no significant adverse effect to forested habitat within the Project Area. Further, shrubland and early successional habitat (and the preservation of such existing habitat) along the ROW is beneficial for many species of wildlife because shrubland habitat is otherwise declining in New England.[26]

5.2 Scenic, Recreational and Cultural Resources

The Project will not have a substantial adverse impact to scenic, recreational, or cultural resources for the reasons explained below.

The Project will not cross or impact any designated scenic roadways.[27]

Recreational opportunities within and adjacent to the Project Area include hiking, biking, horseback riding and golfing. Designated open space parcels, recreational use areas, and hiking trails within the Project Area were identified through a desktop review of GIS ("Geographic Information System") data available from the Connecticut Department of Energy and Environmental Protection ("CT DEEP")[28], Connecticut Forest and Park Association ("CFPA")[29], the Town of Oxford's Parks website[30], and verified through field reconnaissance. Some Project work will occur in ROWs that traverse open space parcels designated by the Town of Oxford. However, disturbance will be temporary, these areas will be restored after Project construction and the ROW will continue to be maintained as it currently is.

One structure replacement is located within the ROW area that crosses the Larkin State Park Bridle Trail property. During design it was determined that horizontal clearance requirements and overall alignment, just to the south of Little River and the 500-Year Flood Zone, were best met by placing proposed Structure 19443 in this location; however, the proposed structure will not

[26] Connecticut's Wildlife Action Plan has identified 47 wildlife species of Greatest Conservation Need (GCN) that are associated with shrubland habitat and require active management.

[27] Connecticut Department of Transportation, December 31, 2020 Connecticut State Scenic Roads. Available URL: https://portal.ct.gov/DOT/Programs/Connecticut-Scenic-Roads.

[28] Connecticut Department of Energy and Environmental Protection, GIS Data URL: https://portal.ct.gov/DEEP/GIS-and-Maps/Data/GIS-DATA

[29] Connecticut Forest & Park Association URL: https://www.ctwoodlands.org/

[30] Town of Oxford, Parks and Recreation URL: https://oxfordct.myrec.com/info/facilities/default.aspx

infringe on the well-established walking/bridle trail itself.[31] A state land notification ("SLN") will be submitted to CT DEEP for work associated with proposed access to and structure placement within the Bridle Trail. Eversource will coordinate directly with CT DEEP prior to starting any construction activities through the SLN process. Eversource will comply with the terms and conditions of the SLN.

Eversource will continue to correspond with the managers of these public recreational areas regarding the Project and would develop and implement measures to maintain public safety during Project construction, while also avoiding or minimizing short-term impacts to recreational users.

A Phase 1A Cultural (archaeological and historical) Resource Assessment of the proposed Project Area was conducted by Heritage Consultants, LLC ("Heritage") in October 2023. The review consisted of an initial desktop resource review and pedestrian survey ("Phase 1A Cultural Resource Assessment" or "Phase 1A"). The Phase 1A assessment results are detailed in its revised report dated June 4, 2024.

The Phase 1A desktop evaluation determined that there are no previously identified archaeological sites, National/State Register of Historic Places, or inventoried historic structures identified within 500 feet of the Project Area.

However, based upon the presence of qualifying criteria (i.e., identification of areas that are likely to contain and/or retain archaeological deposits), the Phase 1A identified five locations within the ROW as having a moderate to high potential for archaeological sensitivity, thus prompting further investigation via the execution of a Phase 1B survey.

The Phase 1B survey consisted of shovel testing and was completed by Heritage in December 2023. Based on the results, Heritage has not recommended further archaeological investigations Results of the Phase 1B survey are detailed in Heritage's report dated June 2024. The report was provided to the State Historic Preservation Office ("SHPO") and the Tribal Historic Preservation Offices ("THPO") of the Connecticut Tribe of Mohegan Indians, the Mashantucket Pequot Tribal Nation, the Narragansett Indian Tribe, and the Wampanoag Tribe of Gay Head for

[31] Structure 11159, which carries the 1619 Line, is within the state Bridle Trail property but does not infringe on the walking/bridle trail path.

their review. A written response from the SHPO on August 23, 2024 (*Attachment D – SHPO Review Letter)* concluded that no historic properties will be affected by the Project and no additional archaeological examination of the Project Area is needed prior to start of construction. A written response from THPO will be provided to the Council by Eversource upon receipt.

5.3 Water Resource Areas

Water resources within the Project Area include inland wetlands, watercourses (perennial and intermittent streams), ponds, vernal pools, and Federal Emergency Management Agency ("FEMA") Flood Zones. Eversource conducted field delineations of wetlands and water resources in the Project Area in September of 2020 and December of 2021. Wetland boundaries were reinspected and modified on Project mapping as needed in 2024 (*Attachment E - Wetland and Watercourse Delineations – Technical Memorandum*).

Project work activities will result in both permanent and temporary impacts to water resource areas. All Project work in or near these water resource areas would be conducted in accordance with Eversource's BMPs and the Project specific 'Stormwater Pollution Control Plan' ("SWPCP") that Eversource would develop for the Project under the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit"). The Project is eligible for the Self Verification through the U.S. Army Corps of Engineering ("USACE"). Required forms and materials will be submitted to the USACE and the CT DEEP prior to start of construction. Work activities will meet all applicable terms and special conditions of the Department of the Army Regional General Permits for the State of Connecticut and State of Connecticut 401 Water Quality Certification. Additional details on each of these water resource areas are provided below.

5.3.1 Watercourses and Waterbodies

A total of 13 watercourses have been identified and delineated within or proximate to the Project Area. Named perennial watercourses include Jacks Brook, Little River, Riggs Street Brook, Towantic Brook, and Pines Brook. The Project will not create permanent impacts to the named perennial watercourses. A permanent stone ford crossing (approximately 200 square feet) of an intermittent stream (S4) will be installed as part of the in-ROW access road off East Commerce Drive in Oxford. Other watercourses within the Project Area would be spanned with temporary matting where needed.

Existing stormwater culverts and drainage swales will be crossed along access roads at various locations throughout the Project. Existing stormwater management features within the Project Area would be protected and/or stabilized in accordance with the Project's Stormwater Pollution Control Plan and Eversource's BMPs.

5.3.2 FEMA Flood Zones

The Project crosses FEMA-designated flood zones associated with the Little River, Jacks Brook, Riggs Street Brook, and Towantic Brook in Oxford as well as the regulatory floodway for Riggs Street Brook. Proposed Structures 19355 and 19420 will be placed within the floodplain of Riggs Street Brook but outside of the regulatory floodway. Due to design constraints, the proposed structures cannot be located out of the floodplain. Proposed temporary fill would be limited to the placement of a matted work pad within the 100-year flood zone of Riggs Street Brook; a matted access road within the 100-year flood zone of Towantic River; matted access roads and work pads within the 500-year flood zones of Jacks Brook; and a stone work pad, matted access road and matted work pad within the 500-year flood zone of Little River. The stone work pad will be removed and the work area re-graded during restoration.

Temporary mats, construction materials and equipment would be properly secured where placed within the flood zone and will be removed from the flood zone immediately upon completion of construction. The proposed activities, including the permanent installation of the two structures, would not adversely affect the flood storage capacity or hydraulic characteristics of the FEMA flood zones and are eligible for self-verification under the General Permit.

5.3.3 Wetlands

Wetlands located within the Project Area were identified and delineated in accordance with industry standard methodology. A total of 42 wetlands are located within or proximate to the Project Area.

Permanent wetland impacts are associated with the installation of five hard bottom (stone ford) wetland crossings (three within W4 and one each within W33 and W34) and from the installation of structures within wetlands (W4, W5, W6, W11, and W14). These installations would impact approximately 6,716.5 square feet (0.15 acre) of wetlands. Tree-clearing within wetlands that was previously described will permanently impact approximately 3,227 square feet (0.07 acre) of wetlands.

The Project will also temporarily impact approximately 171,519 square feet (3.94 acres) of wetlands, which are associated with the use of construction mats for access roads, pull pads and work pads and for access associated with necessary vegetation removal and construction. All mattings will be promptly removed upon Project completion and wetland areas will be restored in accordance with Eversource's BMPs. A summary of Project effects to wetlands and watercourses is provided in Table 1.

Table 1 Summary of Project Effects to Wetlands and Watercourses			
Wetland / Watercourse ID	**Attachment A - Map Sheet**	**Wetland/Watercourse Effects (square feet / acres)**	
		Temporary	**Permanent**
W1	1	10,724 / 0.25	
W4/S4	1	12,939 / 0.30	2,532 / 0.06
W5	1, 2	27,252 / 0.63	130 / 0.003
W6	2	11,975 / 0.27	65 / 0.001
W8	2	6,237 / 0.14	
W11	3	16,141 / 0.37	65 / 0.001
W13	3	1,166 / 0.03	
W14	3	3,975 / 0.09	32.5 / 0.001
W15	3	5,147 / 0.12	
W16/S8	4	959 / 0.02	
W17	4	7,947 / 0.18	
W18	4	725 / 0.02	
W19	4	126 / 0.003	
W20/S9	5	727 / 0.02	
W24	6	3,623 / 0.08	
W25/S11	6	540 / 0.01	69 / 0.001
W26	6		82 / 0.002
W27	6	360 / 0.01	
W28	6, 7	261 / 0.01	
W29	7		517 / 0.01
W30	7		2,559 / 0.06
W32	7, 8	24,066 / 0.55	
W33	8	14,400 / 0.33	330 / 0.01
W34	8		335 / 0.01
W35/S13	8, 9	10,184 / 0.23	
W36	9	1,322 / 0.03	
W39	9	10,723 / 0.25	
Total		***171,519 / 3.94***	***6,716.5 / 0.15***

5.3.4 Vernal Pools

The Project Area was initially surveyed for potential vernal pools in fall 2020. Potential vernal pools were identified based on the presence of suitable hydrology (i.e., evidence of seasonally to permanently flooded wetlands) and the presence of other indicators such as concave and unvegetated surfaces. The Project re-assessed potential vernal pool habitat during the spring of 2022 and again in the spring of 2024. The spring assessment methods included visual surveys to identify adults, larvae and egg masses, audial surveys of amphibian chorusing, and dip-net surveys to identify vernal pool species larvae.

One classic vernal pool was identified beyond the western edge of the ROW off Prokop Road (VP1) (Attachment A – Map Sheet 2). The classic vernal pool habitat was characterized by surrounding forest and scrub-shrub vegetation. Wood frog and spotted salamander egg masses were observed within the pool in multiple years. Additionally, adult wood frogs were observed in the classic vernal pool. One cryptic vernal pool (VP2) was identified within wetland W27 extending beyond the northern edge of the ROW south of Kristalle Lane (VP2) (Attachment A – Map Sheet 9). The cryptic vernal pool habitat was dominated by scattered scrub-shrub vegetation. Detailed results of the vernal pool surveys are found in *Attachment G – Vernal Pool Report*.

The Project will not result in any direct impacts to VP1 and VP2. Temporary work pads and access roads will be installed within the 100-foot Verbal Pool Envelope (“VPE”) for VP1 and VP2. The work pads and access roads within the VPEs for VP1 and VP2 will consist of temporary timber matting to minimize disturbances. Structures will be installed outside the VPEs. The Project will comply with the vernal pool avoidance and minimization measures recommended for the Project are further detailed in *Attachment G – Vernal Pool Report.*

5.3.5 Water Supply

Based on Aquifer Protection Area (“APA”) mapping maintained by the CT DEEP, no APAs extend into the Project Area. The Project Area is not within a public water supply watershed and does not cross any public water supply reservoirs or public water supply wells.

5.4 Habitat and Wildlife

The Project Area extends through a variety of habitats that support vegetation and wildlife common in maintained transmission line corridors. Habitats include upland and wetland shrubland and meadow, and riparian corridors. CT DEEP Natural Diversity Database ("NDDB") mapping depicts known or potential occurrences of state-listed endangered, threatened, or special concern species in the vicinity of the Project Area. Eversource submitted a NDDB State-listed Species Review Request to the CT DEEP for the Project on April 24, 2024. Eversource received a preliminary determination from CT DEEP on May 14, 2024, which requested biological surveys for additional listed species. Eversource completed the required surveys and submitted assessment results to CT DEEP. A final NDDB determination for the Project was received on August 19, 2024 as shown on *Attachment F – NDDB Determination Letter.* Eversource will comply with the NDDB supplemental protection measures required for any listed species.

In addition to coordinating with the NDDB for the protection of state-listed species, Eversource consulted with the U.S. Fish & Wildlife Service's ("USFWS") Information, Planning, and Consultation ("IPaC") service regarding federal-listed species that may be present within the Project area. The IPaC report indicated the following species may be found in proximity to the Project Area: one federally listed threatened species, Northern Long-eared Bat ("NLEB"); one proposed endangered species, the tricolored bat; and one candidate species, the monarch butterfly.

NLEB roosts in certain trees in the warmer months of the year and at other times hibernates in caves and mines (bat "hibernacula"). However, according to the NLEB Areas of Concern in Connecticut map (dated March 6, 2019), there are currently no known NLEB maternity roost trees in Connecticut and no known NLEB hibernacula in the Towns of Oxford. Further, there have been no observations of NLEB in Oxford as detailed on the Connecticut Northern Long-eared bat Observations by Town map, dated July 24, 2023.Therefore, no impacts to this species are anticipated.

Tricolored bats are similar to NLEB, in that they roost in trees in the warmer months and spend the colder months in hibernacula. Tricolored bats are state-listed endangered species in Connecticut. Tricolored bat was not listed in the preliminary determination received from CT DEEP and therefore, no impacts to tricolored bats are anticipated.

Utility corridors provide linear habitat for monarch butterflies and other pollinators. While the monarch butterfly is currently identified as a candidate species, it is not yet federally listed or proposed for listing. As detailed in the USFWS Environmental Conservation Online System[32], consultation with USFWS under section 7 of the Endangered Species Act is not required for a candidate species. Further, gravel work pad restoration in sensitive areas (e.g., NDDB areas) will be seeded with a CT DEEP approved seed mix that includes pollinator-friendly native vegetation, such as milkweed. As such, no impact to this species is anticipated.

Portions of the ROW are also located within known habitat for the New England Cottontail ("NEC"). During Project restoration, Eversource would incorporate additional habitat enhancements within sensitive areas (e.g., NEC Focus Areas). These enhancements would include reducing the size of gravel work pads where feasible and restoring gravel work pads (partially or entirely) with either stockpiled native topsoil or fine processed stone and seeding with a mix of native grasses and forbs to minimize potential effects in accordance with Eversource's 2021 New England Cottontail BMPs.

A qualified individual[33] will oversee implementation of listed species protection measures and conduct contractor training as required by the Project determination letter as received from NDDB.

Further, contractors will be responsible for conducting pre-construction and periodic construction sweeps for the presence of certain listed species. These sweeps will occur prior to the start of work each day and throughout the workday. Contractors will follow established protocol for the removal of listed species from construction areas, as directed. Eversource construction representatives will also be onsite daily to help ensure that these sweeps inspections are performed by contractors as required.

[32] USFWS, Environmental Conservation Online System URL: https://ecos.fws.gov/ecp/species/9743

[33] The qualified individual, who will provide environmental monitoring for implementation of NDDB required listed species protection measures during construction, will have a demonstrated proficiency as a wildlife biologist with applicable field experience for training and guiding the Contractor during the work.

5.5 Invasive Species

Invasive species within the Project Area were identified by Project environmental personnel during preconstruction survey work and constructability walkdowns. The Project would adhere to Eversource's BMPs to minimize the disturbance and spread of soil and/or plant matter, including the following to control the potential spread of invasive species:

Clean vehicles, equipment, materials (including matting), gear, footwear or clothing of all visible soil and plant material on site in the infested area, or as near as practical to the infested area, prior to leaving the Project site.

Cleaning may be accomplished using a brush, broom, or hand tools, by shaking or dropping mats in a controlled manner to dislodge attached soil and debris, or compressed air.

The contractor training would also include a review of measures to be implemented for control of potential spread of invasive species.

5.6 Visual Effects

The Project would result in some change to the visual character of the transmission lines, primarily because lattice structures will be replaced with monopoles. Though the height of the replacement structures will increase, the new structures will be more streamlined. All replacement/new structures from Towantic Substation to Christian Street Junction are proposed to have a galvanized finish consistent with the finish of the existing 1619 Line structures in the shared ROW. All replacement/new structures from Christian Street Junction to Beacon Falls Junction are proposed to be weathering steel with a finish that blends in with the natural vegetation along this less-developed ROW segment.

In Segment 1, the heights of the existing structures range from 43 feet to 97 feet and the heights of the proposed structures range from 42 feet to 121.5 feet. Proposed structure heights within Segment 1 for the 1142, 1319, and 1403 Lines are similar to structure heights of the 1619 Line structures, which range in height from 75 to 103 feet.

In Segment 2, the heights of the existing structures range from 53 feet to 124 feet and the heights of the proposed structures range from 81.5 feet to 146.5 feet.

5.7 Air Quality

The Project may have a short-term, localized effect on air quality associated primarily with fugitive dust and equipment emissions. To minimize the amount of dust generated by construction activities, the extent of exposed/disturbed areas at any one time would be minimized. Temporary gravel tracking pads would be installed at points of construction vehicle ingress/egress to minimize the potential for equipment to track dirt onto local roads. To further minimize dust, water may be used to wet down disturbed soils or work areas with heavy tracking, as needed.

Vehicle emissions will be limited by requiring contractors to properly maintain construction equipment and vehicles, and by minimizing the idling time of equipment and vehicles, including diesel construction equipment, in accordance with Connecticut regulatory requirements.[34]

5.8 Noise

Short-term and localized noise from construction activities, such as the operation of standard types of construction equipment (e.g., backhoe, bulldozer, drill rig, excavator mounted rock hammer, crane, trucks, etc.) would temporarily increase ambient sound levels immediately surrounding the work areas.[35] Upon completion of construction and during operation of the lines, the proposed Project would not increase ambient noise levels.

5.9 Electric and Magnetic Fields

Eversource prepared calculations of the existing and post-Project electric and magnetic fields ("EMF"). The calculations were based on average annual loading conditions, as these are most representative of typical operating conditions. The calculations are made relative to the centerline of the proposed, modified transmission lines.

[34] Regulations of Connecticut State Agencies (RCSA) Section 22a-174-18(b)(3)(C) prohibits the idling of motor vehicles for more than three consecutive minutes when not in motion.

[35] Construction noise is exempted under the Connecticut regulations for the control of noise, RCSA §22a-69-1.8(g).

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Table 2 and Table 3 summarize the modeled electric and magnetic fields at the ROW edges before and after the proposed Project modifications within the 110- feet wide and 150-feet wide ROW segments.[36]

Table 2 Summary of Calculated Magnetic Fields Average Annual Loads in milligauss (mG)				
Section:		West Edge of ROW	Max in ROW	East Edge of ROW
Christian Street Junction to Oxford Substation	Existing	26	69.7	31.2
	Proposed	18.9	68.6	28.4
Oxford Substation to Towantic Substation	Existing	30.4	71.2	31
	Proposed	22.3	70.7	28.0
Section:		North Edge of	Max in ROW	South Edge of ROW
Christian Street Junction to Beacon Falls Junction	Existing	14.6	24.1	3.6
	Proposed	11.6	25.9	3.8

[36] The 290 feet ROW would have more conservative results than the narrower ROW electric and magnetic field results and therefore is not included in the tables.

Table 3 Summary of Calculated Electric Fields Average Annual Loads kilovolt per meter (kV/m)				
Section:		West Edge of ROW	Max in ROW	East Edge of ROW
Christian Street Junction to Oxford Substation	Existing	0.6	1.71	0.34
	Proposed	0.34	1.91	0.34
Oxford Substation to Towantic Substation	Existing	0.6	1.71	0.34
	Proposed	0.34	1.91	0.34
Section:		North Edge of	Max in ROW	South Edge of ROW
Christian Street Junction to Beacon Falls Junction	Existing	0.18	1.91	0.11
	Proposed	0.11	2.05	0.26

The calculations provided in *Attachment H - EMF Graphs* indicate that the proposed modifications would not substantially increase electric and magnetic fields at the edge of the ROW. In some cases, slight decreases of electric and magnetic field strengths are expected at ROW edges, which can be attributed to shifting conductors away from ROW edges in these segments. The slight increase in electric field strength at the center line can be attributed to the characteristics of the proposed conductors.

The anticipated field strength for both electric and magnetic field from the proposed modifications are well below the internationally established exposure limits for 60-Hz electric and magnetic fields, specifically, those identified by the International Council on Electromagnetic Safety ("ICES") and the International Council on Non-Ionizing Radiation Protection ("ICNIRP"). These thresholds are summarized in Table 4 below:

Table 4 International Guidelines for EMF Exposure		
	EF (kV/m)	MF (mG)
ICES	5	9,040
ICNIRP	4.2	2,000

5.10 Federal Aviation Administration (FAA)

Eversource filed a Notice of Proposed Construction or Alteration with the Federal Aviation Administration ("FAA") in accordance with the recommendations of the FAA's online Notice Criteria Tool for all proposed structures. A response from FAA is pending. In addition, due to the proximity to the Waterbury-Oxford Airport, Eversource has received approval from the Connecticut Airport Authority for the proposed structure replacements.

6. Construction Traffic Management

Construction-related vehicular and equipment movements would utilize public roads to access the Project Area. However, Project-related traffic will be temporary and is generally expected to be highly localized in the vicinity of the ROW access points and at the staging area described in the following section.

To safely move construction vehicles and equipment onto and off the ROW while minimizing disruptions to vehicular traffic along public roads, Eversource or its Project contractor would work with the affected towns to develop and implement traffic management procedures, as needed. The construction contractor typically would be responsible for posting and maintaining construction warning signs along public roads near work sites and for coordinating the use of flaggers or police personnel to direct traffic, as required.

Due to the phasing of construction work, these Project-related traffic movements are not expected to significantly affect transportation patterns or levels of service on public roads.

Construction vehicles and equipment associated with the work would include, but would not be limited to, pickup trucks, bucket trucks, flat-bed trucks, excavator, concrete trucks, drill rigs, front

loaders, reel trailers, bulldozers, woodchippers, brush hogs/mower, forklifts, side booms, dump trucks and cranes. Pullers and tensioners would be used for the line work.

7. Construction Activities and Sequence

Project construction would include the following activities:

7.1 Establishing Staging Area/Laydown Yard

Eversource proposes to use a previously established staging area/laydown yard for the Project located at 12 Division Street in Derby. This staging area/laydown yard is approximately 3.45 acres and would be used to store construction equipment and materials, (including tools, and supplies) conductor, insulators, hardware, poles, and construction mats for the Project. Office trailers may also be located at the staging area/laydown area. Transmission line components removed during the work (structure steel, conductor, hardware, and insulators) also may be temporarily accumulated and stored prior to removal off-site for salvage and/or disposal. The staging area/laydown may also be used by construction crew members for parking personal vehicles and for construction vehicles, and for performing minor maintenance, when needed, on construction equipment.

Erosion and sedimentation ("E&S") controls would be installed and maintained until completion of the work in accordance with Project permits and Eversource's BMPs (Refer to Figure 2 below).

Figure 2: Staging Area/Laydown Yard

7.2 Tree Clearing and Vegetation Management Methods

Tree clearing and vegetation removal would be accomplished using mechanical methods or by hand.[37] Mechanical methods would typically require use of flat-bed trucks, mowers, brush hogs, or other types of mowing equipment, skidders, forwarders, bucket trucks for canopy trimming, and chippers.

Pruning and hazard tree removal will be primarily completed on foot by ground and climbing crews with chainsaws as needed. In some locations mechanical equipment may be used to complete the work safely.

Trees, where designated to be removed (refer to Section 5.2), shall be cut parallel to and close to the ground. Limited, if any, stump removal may be conducted in consultation with an affected property owner.

In sensitive resource areas, Eversource would require the contractor to use low-impact methods to remove brush vegetation to protect wetlands, watercourses and state-listed species and their habitats. Low-impact methods incorporate a variety of approaches, techniques, and equipment to minimize site disturbance. Eversource would require the contractor to use some or all of the following low impact methods, depending on work area specific considerations:

- Consider soil and weather conditions when scheduling vegetation removal activities such as during periods of heavy rainfall;
- Maximize the use of uplands for clearing access routes;
- Utilize hand clearing methods for vegetation removal work within sensitive wetland and vernal pool areas;

[37] The cyclical ROW vegetation management work, which is conducted to maintain the existing conductor clearance requirements began in July 2024 and will continue through October and November 2024. The work is scheduled to be completed prior to the start of the Project.

- Use appropriately sized equipment for site conditions, where possible, to minimize impacts; and

- Where practical, cut brush close to the ground, leaving root systems and stumps, to retain soil stability.

Temporary construction mats would also be used to provide a stable base for equipment to cross watercourses or wetlands where hand clearing vegetation removal work is not feasible and low impact methods for vegetation removal work is required. Such temporary mats would minimize disturbances to wetland soils, and the mats would be removed after the vegetation removal was completed.

Woody debris, including logs and branches will be removed from the ROW. If there are areas where debris removal is not possible because there is no equipment access, slash will not be piled greater than three feet in height or within 50 feet of any road, or within 25 feet of any property boundary, in upland areas. If chipping debris, then all wood chips will be removed from the ROW.

7.3 Soil Erosion and Sediment Control Installation, Inspection and Maintenance

Project construction activities would conform to Eversource BMPs for E&S control, including those provided in the *2023 Connecticut Guidelines for Soil Erosion and Sediment Control* ("Connecticut Guidelines") the *2024 Connecticut Stormwater Quality Manual* and the Project specific SWPCP. SWPCP inspections would be performed in accordance with the General Permit requirements by a qualified inspector as defined in the General Permit.

Typical E&S control measures include, but are not limited to, straw blankets, straw bales, silt fencing, rock construction entrances, soil and slope protection, water bars, check dams, berms, swales, and plunge pools (avoiding plastic netted controls).[38] Silt fence would be installed as needed to intercept and retain sediment and/or construction materials from disturbed areas and minimize the potential for sedimentation outside of the Project and staging areas.

[38] Eversource prohibits non-biodegradable plastic netting in erosion control products specifically to avoid wildlife entanglement. Eversource is not aware of wildlife entanglement instances with other forms of E&S controls, such as silt fencing, straw wattles, etc. that are commonly used. Eversource could consider using 100 percent natural fiber E&S controls; however, it is unclear whether this change in practice would provide an environmental benefit compared to current methods.

Temporary E&S control measures will be installed prior to any site work and would be maintained and inspected for the duration of the Project to ensure their integrity and effectiveness and for compliance with the General Permit. Temporary E&S control measures will be inspected at least once a week, as well as after every major storm event, until initial site stabilization has been achieved.

7.4 Protections of Wetlands, Watercourses and Vernal Pools

The limits of watercourses, wetlands and vernal pools are marked in the field prior to construction. Eversource conducts contractor pre-construction meetings where the environmental permit conditions are reviewed prior to the start of work in the field.

Project work will comply with the SWPCP, Eversource's BMPs, which focus on the protection of wetlands, watercourses, and vernal pools, and the U.S. Army Corps of Engineers Self-Verification Authorization Conditions for work in wetlands. Eversource will also conduct weekly inspections to ensure compliance with the General Permit, Eversource's BMPs, authorizations, and permit conditions.

Protection measures include but are not limited to contractor training and education, time of year best management practices, monitoring, and installation of exclusionary features as directed by qualified individuals. Following construction, seeding and/or mulching or hydroseeding would be completed to permanently stabilize the areas disturbed by construction activities.

7.5 Access Roads and Work Pads

The Project will utilize existing access roads to the extent possible; however, some new access roads would be required within the ROW. Five proposed permanent hard bottom fords would extend through portions of Stream 4/Wetland 4, Wetland 33, and Wetland 34, and maintenance would be completed on one existing ford at Wetland 11, to establish a permanent continuous access road.

Temporary construction matting would be utilized in wetlands for access road construction as well as in other sensitive areas, such as NDDB areas, residential lawns and golf course grounds, as needed to reach structure locations.

Existing access roads may need to be improved (graded, widened, and/or reinforced) with additional material (gravel or matting if in an NEC area) to accommodate the safe passage of construction vehicles and equipment. New permanent access roads within the Eversource ROW would be limited to upland areas, with the exception of stone ford improvements in the W4 wetland crossing (north of East Commerce Drive) and stone ford improvements in the W33/W34 wetland crossing (west of Country Club Drive). Typically, the maximum width of an access road is approximately 16 feet wide (additional width may be needed at turning or passing locations). E&S controls would be installed as necessary before the commencement of any improvements to or development of access roads.

Existing gates, pole barriers and signage are currently used to discourage all-terrain vehicles from accessing the ROW. It is Eversource's standard work practice for work crews to close and lock all gates at the end of the workday. For any new access points that do not have gates or pole barriers, Eversource will install these upon request by the property owner during and/or after construction.

At each transmission line structure location, a work pad is required to create a safe, level work base for construction and to stage material and equipment for final on-site structure assembly and/or removal, to install new conductor and OPGW. The approximate locations and configuration of the work pads are shown on Attachment A.

The proposed work pads have been minimized to the greatest extent practical but vary in size to support activities needed for installation of new structures and removal of existing structures. Pull pads would have dimensions of approximately 80 feet wide by 120 feet long but may vary due to terrain. Work pads would be graveled, though temporary matting would be utilized to protect sensitive areas (e.g., wetlands and watercourses, lawn areas, etc.).

The total acreage of the construction limits of disturbance for this Project is approximately 21.67 acres.

To facilitate transmission line maintenance, gravel access roads, work pads and pull pads would be left in place. Gravel work pads within NDDB and NEC areas would be revegetated with a CT DEEP approved native seed mixture. As part of the restoration of the ROW, all proposed gravel work pads located within New England Cottontail Focus and Connecticut New England Cottontail Key Habitat Areas would be restored with stockpiled soil and/or processed stone, native grass

seed (containing 20% annual Rye) and chopped straw mulch in accordance with Eversource's current New England Cottontail Best Management Practices. During restoration activities, work areas would be monitored weekly to ensure compliance and then monitored monthly after restoration until the sites are stabilized.

If an individual property owner requests restoration measures to underlying residential lawn following the removal of temporary construction matting, the Project representatives will work with the property owner on mitigation options.

Stone walls located in property owner-maintained areas that are within proposed access roads and work pad areas will be breached only enough to permit passage of heavy equipment with the remainder of the wall(s) be left intact. If the stone walls need to be dismantled, the stones will be placed within the ROW outside of active work zones, and later restored to original condition during restoration, unless otherwise directed by the property owner. Rubble stone walls located outside of property owner-maintained areas will be dismantled and stones will either be utilized as part of restoration or placed within the ROW that would not obstruct access unless otherwise directed by the property owner.

7.6 Foundation Installation

Structures would have either direct-embed or drilled caisson foundations. Installation of foundation would require the use of equipment such as mechanical excavators (drill rigs), pneumatic hammers, augers, drill rigs, dump trucks, concrete trucks, grapple trucks, cranes, and light duty trucks. If groundwater is encountered, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas. The water would then be discharged in accordance with applicable local, state, and federal requirements, the General Permit and Eversource's BMPs.

Excavated soils that are generated during construction activities would not be temporarily stored or stockpiled in wetlands, floodways, or watercourses. The removal of temporarily stored or stockpiled soils will be managed during restoration activities (Section 7.9).

7.7 Structure Installation

Structure sections, structure components and hardware would be delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane, bucket trucks and excavator.

Depending on site-specific soil conductivity, supplemental grounding (counterpoise, in uplands only) would be installed. A quad “ditch-witch” plow-cable trencher, or equivalent/similar type of equipment, would be used to install the counterpoise after the proposed structures are constructed.

7.8 Conductor / OPGW Installation and Conductor/Shield Wire Removal

New conductors and OPGW would be installed after the new structures have been erected. The equipment required for these activities would include wire reels, compressors, conductor pulling and tensioning rigs, guard trucks or structures and bucket trucks. The removal of the conductor and shield wire would take place during the active installation of the new conductor and OPGW as the existing conductor and static wire would be used as pulling lines, if possible.

Helicopters may also be used for the work. In the event helicopters are utilized, advanced notification to the affected municipality and property owners would be provided. Bat wing trucks and guard trucks would be used for protection of roads during the line work.

7.9 Structure Removal

The existing structures would be removed after the new conductor and OPGW have been installed is complete. The existing structures, conductor, shield wire and hardware would be removed from the ROW and reused, recycled, or otherwise disposed of properly.

7.10 Restoration

After construction is completed, Eversource would perform ROW restoration in accordance with the protocols specified in the Project permits, Eversource’s BMPs and in consultation with any property owners affected by the Project.

Post-construction restoration of the ROW would include the removal of construction debris, signage, flagging, and temporary fencing, and temporary construction mats. Disturbed areas

would be restored as practical and stabilized with vegetation or other measures before removing temporary E&S controls. Surface restoration of the Larkin Bridle Trail would be implemented, if necessary.

Excavated soils from the Project that cannot be used as backfill in the vicinity of the excavation would be used for the restoration of gravel work pads in the same area, as necessary to fulfill any commitments to landowners, or regraded into adjacent uplands within the ROW and stabilized in accordance with Eversource's BMPs and the SWPCP. Any excavated soils that cannot be reused in such a manner would be transported from the Project area and properly managed off-Site in accordance with Eversource's BMPs and applicable local, state, or federal laws.

For work within environmentally sensitive areas, such as NEC focus areas and NDDB areas, work pad restoration measures will be implemented to mitigate impacts, which includes the amendment of the work pad surface with stockpiled topsoil or fine processed gravel (whichever is applicable), application of a native seed mix, and installation of temporary erosion and sediment controls (e.g., straw mulch, and environmental controls with no plastic netting to limit wildlife entanglement, compost filters, biodegradable erosion control blankets), which will be regularly inspected and maintained until final stabilization has been achieved.

7.11 Waste Management

Waste materials, such as structure components (i.e., steel from the removed structures, conductor, shield wire, associated hardware, etc.) and any other construction debris would be reclaimed through the Eversource Investment Recovery System and/or disposed of in accordance with Eversource's BMPs, applicable regulations or recycled consistent with applicable rules and regulations and Eversource policies.

8. Project Permits / Notifications

The following permits and notifications required for this Project are listed by agency as follows:

- Connecticut Department of Energy and Environmental Protection:
    - General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

- Natural Diversity Data Base Determination
- State Land Notification
- State Historic Preservation Office Notification

- United States Army Corps of Engineering/CT DEEP Self Verification Notification
- The Public Utilities Regulatory Authority – Approval for Method and Manner of Construction

9. Construction Schedule and Work Hours

Construction work hours would typically be between 7:00 AM and 7:00 PM, six days per week (Monday through Saturday). However, E&S control and other inspections may occur outside these standard hours, as necessary, to comply with BMP and Permit requirements. At the staging/laydown area construction workers may arrive for and leave work outside of these times but will not perform noisy construction activities before or after the designated work hours. In addition, during winter, snow plowing and de-icing activities will typically commence, when necessary, prior to 7:00 AM to ensure a safe environment for construction personnel prior to the start of the workday.

During outage switching, to take a line reclosing (re-energize one line) and/or de-energize another line, access to substations may be required outside of typical work hours, specifically after 7:00 pm and before 7:00 am and often on weekends.[39] At this time, there are 12 identified switchovers during the Project's duration involving substations both within and outside[40] the Project Area.

On occasion, Sunday work hours might be required to meet non-switching scheduling Project needs. Eversource would provide advance notice to the Siting Council, the affected Town, and abutters.

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[39] The line switching work is not noise producing; however, truck access to substations will require gate openings and safety lights to be triggered at the substation during the short duration switchover effort.

[40] Substations ("SS") outside the Project Area which will be entered outside of typical construction work hours for outage switching include Beacon Falls Substation, Pootatuck Substation (UI owned), Towantic Substation, Devon Substation, South Naugatuck Substation, Ansonia Substation (UI owned), Indian Well Substation (UI owned), Stevenson Substation (First Light owned) and Sandy Hook Substation. Eversource will coordinate with United Illuminating (UI) and First Light as required to support switching activities.

10. Municipal and Property Owner Outreach

Eversource has a dedicated outreach department that communicates with affected and interested stakeholders throughout the phases of a Project, from planning and inception through completion. On this Project, Eversource completed a series of outreach activities to municipal officials and abutting property owners to inform them of the proposed Project, discuss impacts, restoration, and potential mitigation if necessary. Eversource will continue to engage with municipal officials, community groups, property owners and other interested stakeholders throughout the duration of the Project.

Eversource consulted with the Town of Oxford in April 2024 to provide an initial briefing of the proposed Project. Multiple in-person meetings and conference calls were held between April 2024 and June 2024 with local officials, including members of the Selectman's Office, Planning and Zoning Commission, Economic Development, Inland Wetlands Commission, and the Town Attorney. The Town of Oxford asked for accommodations related to replacement structure locations and wire clearance on town-owned property that has been modified from undeveloped pedestrian use space to future industrial lot development use south of Towantic Substation. Eversource worked with the Town to verify that the design of these proposed structures would address their concerns. This plan was memorialized through a Memorandum of Understanding executed on June 11, 2024. Eversource will continue to communicate with municipal officials throughout the duration of the Project.

Outreach to abutting property owners began in January 2024, when Eversource sent abutting property owners a notice to introduce the Project and explain the proposed scope and its schedule. These introduction letters included a Hotline for Connecticut Projects # 1-800-793-2202 and email address- ProjectInfo@eversource.com so that property owners can reach out to a Project representative at their convenience. Municipal officials were also provided with a copy of the letter.

Following the mailing of this introduction letter, Eversource connected with abutting property owners in person by executing "door-to-door" outreach. During this type of outreach, if no one is home, a door hanger is left containing Project information and contact information for follow up. As a part of door-to-door outreach, Eversource meets with property owners and answers any questions or concerns, oftentimes walking the property to review the limits of the easement area and site-specific impacts. Any follow-up topics or specific restoration requests are noted and

appropriate follow up is completed. To date, Eversource has not received any specific requests or received any concerns regarding the proposed work. Eversource is committed to continuing these conversations with property owners and will continue to conduct mailings as well as in-person door-to-door outreach throughout the Project.

11. Conclusion

Based on the foregoing, Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment, nor would they damage existing scenic, historical, or recreational values. Accordingly, Eversource requests that the Council issue a declaratory ruling that the proposed modifications would have no substantial adverse environmental effect.

Communications regarding this Petition for a Declaratory Ruling should be directed to:

Deborah Denfeld
Team Lead – Transmission Siting
Eversource Energy
PO Box 270
Hartford, CT 06141-0270
Telephone: (860) 728-4654

By: 

Deborah Denfeld
Team Lead – Transmission Siting
deborah.denfeld@eversource.com

List of Attachments

A: Map Sheets
B: Structure Tables
C: Typical Cross Sections
D: SHPO Review Letter
E: Wetland and Watercourse Delineations – Technical Memorandum
F. NDDB Determination Letter
G: Vernal Pool Report
H: EMF Graphs
I: Letter to Abutters and Affidavit

Attachment A

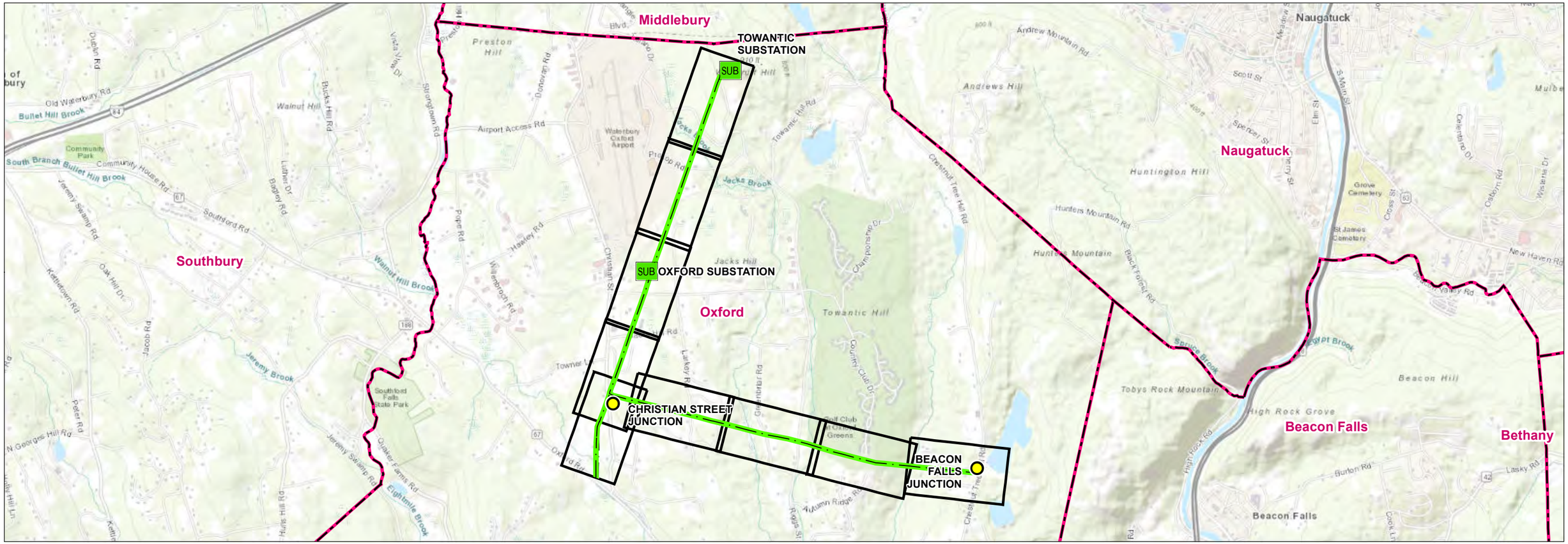
Map Sheets

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, CT

Petition Map Set

Date: August 27, 2024



Legend

Junction | SUB Substation | Project ROW | Map Sheet | Municipal Boundary

N

0 0.25 0.5 Miles

NO.	DATE	REVISIONS

PREPARED FOR:

EVERSOURCE

PREPARED BY:

Tighe&Bond

INDEX OF FIGURES

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Mapsheet 1 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Commercial
- Towantic Substation
- Transmission ROW
- 500-Year Flood Zone
- Eversource Owned Property

RIGHT-OF-WAY DESCRIPTION

- ± 110 Feet
- Gravel Access Roads
- Maintained Edge-to-Edge

Water Resources

- Wetland – W1, W2, W3, W4, W5
- Watercourses – S1, S2, S3, S4, S5 (Jack's Brook)

Wetland and Watercourse Crossings

- W1, W4, W5
- S1, S4, S5 (Jack's Brook)

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Emergent Wetland
- Maintained Upland Vegetation
- Scrub-Shrub Upland

Access

- From Woodruff Hill Road: Structure 1452, 1452A, 1452B, Proposed Structure 19449, 19449A
- From East Commerce Drive: Structures 1451, 1450, 1449 Proposed Structures 19448, 19447, 19446

Road Crossings

- East Commerce Drive

Line List	Parcel Address	Municipality	State	Owner Name
200B-428	9 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-429	104 PROKOP RD	OXFORD	CT	OXFORD TOWN OF
200B-430	17 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-431	13 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-432	12 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-433	3 WOODRUFF HILL RD	OXFORD	CT	OXFORD TOWN OF
200B-434	7 WOODRUFF HILL RD	OXFORD	CT	OXFORD TOWN OF
200B-435	11 WOODRUFF HILL RD	OXFORD	CT	OXFORD TOWN OF
200B-436	15 WOODRUFF HILL RD	OXFORD	CT	OXFORD TOWN OF
200B-438	16 WOODRUFF HILL RD	OXFORD	CT	THE CONNECTICUT LIGHT AND POWER CO
200B-439	PROKOP RD	OXFORD	CT	OXFORD TOWN OF

CPV TOWANTIC ENERGY CENTER

TOWANTIC SUBSTATION

WOODRUFF HILL ROAD

Oxford

NEC Focus Area (Entire Sheet)

LL200B-438

LL200B-433

LL200B-434

LL200B-435

LL200B-431

LL200B-436

LL200B-432

LL200B-430

LL200B-428

LL200B-429

W3, S2 AND S3 IMPACTED BY PRIVATE DEVELOPER (APRIL 2024). WETLAND BOUNDARY FIELD DELINEATED AS SHOWN

INSTALL STONE FORDS PERMANENT WETLAND IMPACT ± 2532 SF

SPAN FLOW AREAS

EAST COMMERCE DRIVE

Matchline Sheet 3

TEMPORARY WETLAND IMPACT ± 10,724 SF

PULL PAD

TEMPORARY WETLAND IMPACT ± 12,939 SF

TEMPORARY WETLAND IMPACT ± 9,136 SF

Jacks Brook S5

500-Year Flood Zone

1403 Line (Underground)

1142 Line (Underground)

1619 Line (Underground)

1619 Line

1142 Line

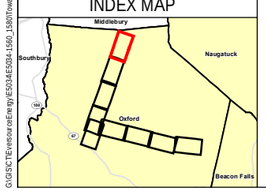
1403 Line

W1 W2 W3 W4 W5

S1 S2 S3 S4 S5

1453 1452D 1452B 1452A 1452 11166 11165A 11165 19449 19449A 11164 19448 1451 11163 19447 1450 11162 19446 1449

INDEX MAP



Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
- Stonewall
- Existing Right-of-Way (ROW)
- Proposed Overhead Eversource Line
- Existing Overhead/Underground Eversource Line
- 5' Contours
- Hiking Trail
- Watercourse (not field delineated)
- 100' Vernal Pool Envelope
- Delineated Watercourse
- Existing Access
- Proposed Access
- Off-ROW Access Pending Rights
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- Field Delineated Wetland
- Open Water
- Confirmed Vernal Pool Extent
- Existing Gravel
- Proposed Stone Work Pad
- Temporary Construction Matting
- Stone Ford
- Tree Clearing Area
- Natural Diversity Database Area
- CT NEC Focus Area
- FEMA Floodway
- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Date: August, 27, 2024

Map Sheet 1 of 9

Tighe&Bond

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Mapsheet 2 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Commercial
- Residential
- Eversource Owned Property
- Undeveloped Forest
- Transmission ROW
- 500-Year Flood Zone
- Larkin Bridle Trail
- Oxford Airport

RIGHT-OF-WAY DESCRIPTION

- ± 110 Feet and ± 290 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W5, W6, W7, W8, W9
- Vernal Pools – VP1

Wetland and Watercourse Crossings

- W5, W6, W8

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland
- Residential Landscaping

Access

- From Prokop Road: Structures 1449, 1448, Proposed Structures 19445, 19444
- From N Larkey Road: Structures 1447, 1446, 1445A, 1445-N Proposed Structures 19443, 19442, 19442A, 19451, 19440

Road Crossings

- Prokop Road

Line List	Parcel Address	Municipality	State	Owner Name
200B-123	NORTH LARKEY RD	OXFORD	CT	SIPPIN DAVID
200B-124	NORTH LARKEY RD	OXFORD	CT	CONNECTICUT LIGHT & POWER CO
200B-420	60 NORTH LARKEY RD	OXFORD	CT	ASMK ASSOCIATES INC
200B-421	288 CHRISTIAN ST	OXFORD	CT	CONNECTICUT AIRPORT AUTHORITY
200B-422	89 PROKOP RD	OXFORD	CT	PROKOP ROAD LLC
200B-423	83 PROKOP RD	OXFORD	CT	OXFORD REALTY & INVESTMT CO LLC
200B-424	79 PROKOP RD	OXFORD	CT	CT ROCK DEVELOPMENT LLC
200B-425	74 PROKOP RD	OXFORD	CT	JASULAVIC SANDRA
200B-426	84 PROKOP RD	OXFORD	CT	MAJOR ALICE EILEEN
200B-428	9 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-431	13 EAST COMMERCE DR	OXFORD	CT	OXFORD TOWN OF
200B-687	NORTH LARKEY RD	OXFORD	CT	STATE OF CONNECTICUT

Jacks Brook S5

500-Year Flood Zone

NEC Focus Area (Entire Sheet)

Oxford

LL200B-420

LL200B-424

LL200B-687

LL200B-423

Matchline Sheet 1

Matchline Sheet 3

N LARKEY ROAD

STRUCTURE TO BE INSTALLED OUTSIDE VERNAL POOL ENVELOPE

LL200B-425

11161

11160

11159

11158

11157

19444

19443

19442

19442A

19451

19440

1446

1445-N

1445A

1448

1447

1449

1619 Line

1142 Line

1403 Line

W5

W6

W7

W8

W9

VP1

PROKOP ROAD

LL200B-431

LL200B-426

LL200B-422

LL200B-123

LL200B-124

Little River

Larkin Bridle Trail

SPAN WATERCOURSE

TEMPORARY WETLAND IMPACT ± 18,116 SF

TEMPORARY WETLAND IMPACT ± 11,975 SF

TEMPORARY WETLAND IMPACT ± 6,237 SF

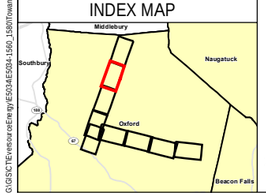
650'
640'
630'
660'
680'
670'

LL200B-428

LL200B-421

LL200B-429

INDEX MAP



Legend

- Proposed Structure
- Existing Structure
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- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 2 of 9

Date: August, 27, 2024

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Mapsheet 3 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Commercial
- Undeveloped Forest
- Agricultural
- Eversource Owned Property
- Oxford Substation
- Transmission ROW
- 500-Year Flood Zone
- Larkin Bridle Trail
- Oxford Airport

RIGHT-OF-WAY DESCRIPTION

- ± 290 Feet and ± 110 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W10, W11, W12, W13, W14, W15
- Watercourses – S6, S7

Wetland and Watercourse Crossings

- W11, W13, W14, W15

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland

Access

- From Commerce Drive: Structure 1444, 1444B, 1443, 1444, 1444W, 1443A, 1445-S, 1443-N, 1443-S, 1442, Proposed Structures 19453, 19437B, 19436, 19435
- From Jacks Hill Road: Structure 1442, Proposed Structures 19436, 19435

Road Crossings

- Commerce Drive

Line List	Parcel Address	Municipality	State	Owner Name
200B-115	1 JACKS HILL RD	OXFORD	CT	JACKS HILL ROAD LLC
200B-117	4 COMMERCE DR	OXFORD	CT	SIPPIN DAVID
200B-118	154 CHRISTIAN ST	OXFORD	CT	GUERRERA JOSEPH A JR
200B-119	2 COMMERCE DR	OXFORD	CT	SIPPIN DAVID
200B-120	3 COMMERCE DR	OXFORD	CT	CONNECTICUT LIGHT & POWER CO
200B-121	7 COMMERCE DR	OXFORD	CT	DLC SERVICES LLC
200B-123	NORTH LARKEY RD	OXFORD	CT	SIPPIN DAVID
200B-421	288 CHRISTIAN ST	OXFORD	CT	CONNECTICUT AIRPORT AUTHORITY

N LARKEY ROAD

NEC Focus Area
(Entire Sheet)

Oxford

Matchline Sheet 2

MAINTAIN EXISTING STONE FORD

LL200B-123

MOW/TOP DRESS EXISTING GRAVEL ROAD

PULL PAD

LL200B-121

TEMPORARY WETLAND IMPACT ± 1,166 SF

COMMERCE DRIVE

TEMPORARY WETLAND IMPACT ± 5,147 SF

LL200B-117

LL257-059

JACKS HILL ROAD

500-Year Flood Zone

Matchline Sheet 4

LL200B-115

11156 11155 11154 11153 11152 11151 11150

W11 W12 W13 W15

1619 Line 1142 Line 1319 Line 1403 Line

1445-S 1444B 1444 1444W 1443A 1443-S 1442

19453 19437B 19436 19435

W10 W11 W14

1443-N

S2 S1 S3

OXFORD SUBSTATION

LL200B-421

LL200B-120

LL200B-119

LL200B-118

TEMPORARY WETLAND IMPACT ± 16,141 SF

PULL PAD

TEMPORARY WETLAND IMPACT ± 3,975 SF

ACCESS FROM JACKS HILL ROAD

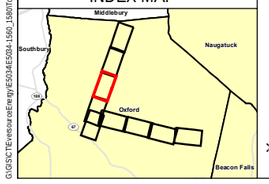
500-Year Flood Zone

Little River

Larkin Bridle Trail

CHRISTIAN STREET

INDEX MAP



Legend

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- Existing Structure
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- Temporary Pole
- Culvert
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- CT NEC Focus Area
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- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 3 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 4 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Commercial
- Agricultural
- Transmission ROW
- 500-Year Flood Zone
- Eversource Owned Property
- Christian Street Junction

RIGHT-OF-WAY DESCRIPTION

- ± 110 Feet and ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W16, W17, W18, W19
- Watercourses – S8

Wetland and Watercourse Crossings

- W16, W17, W18, W19
- S8

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland
- Residential Landscaping
- Pasture

Access

- From Jacks Hill Road: Structures 1441, 1440, Proposed Structures 19434, 19433
- From Christian Street: Structures 1439, 1439A, 1438, 1438A, 1437, 301, 1571, 302, 1572, Proposed Structures 19432, 19432A, 19431A, 19431, 19430A, 19430, 19429, 19428, 19347, 19346, 19345, 19345A, 19344, 19344A, 11145A, 19343

Road Crossings

- Jacks Hill Road
- Rowland Farm Road
- Christian Street

Line List	Parcel Address	Municipality	State	Owner Name
200B-108	69 CHRISTIAN ST	OXFORD	CT	PEREZ TOMAS R & CABRERA MILAGROS D
200B-109	73 CHRISTIAN ST	OXFORD	CT	BONAVENTURA CODY & SAMANTHA
200B-110	CHRISTIAN ST	OXFORD	CT	TOWN OF OXFORD
200B-111	81 CHRISTIAN ST	OXFORD	CT	ROTH SCOTT
200B-112	87 CHRISTIAN ST	OXFORD	CT	TULLEY MICHAEL S & JILL L
200B-115	1 JACKS HILL RD	OXFORD	CT	JACKS HILL ROAD LLC
257-001	CHRISTIAN ST	OXFORD	CT	CONN LIGHT & POWER CO
257-002	94 CHRISTIAN ST	OXFORD	CT	CENTRAL PARK ASSOCIATES LLC
257-003	CHRISTIAN ST	OXFORD	CT	CENTRAL PARK ASSOCIATES LLC
257-059	CHRISTIAN ST	OXFORD	CT	GLENDALE AT OXFORD LLC

500-Year Flood Zone

Matchline Sheet 6

NEC Focus Area (Entire Sheet)

LL257-059

Oxford

LL257-002

LL257-003

PULL PAD

ROWLAND FARM ROAD

JACKS HILL ROAD

Matchline Sheet 3

PROTECT DRIVEWAY WITH STEEL PLATES

CHRISTIAN STREET JUNCTION

LL257-001

LL200B-108

LL200B-10

11149 19434 1441 W16 11148 19433 1440 W17 1619 Line 1319 Line

11147 19432 19432A 1439 W18 1142 Line 1619 Line 1319 Line

19428 19347 302 1572 1319 Line 1580 Line

19429 19346 301 1571 19430 19430A 19345 11146 1438? 19344 19344A 1438A 1439A 19431 19431A 1580 Line 1808 Line 1619 Line

11145 19343 1437 W19 1619 Line

LL200B-109

LL200B-112

LL200B-111

LL200B-110

LL200B-115

LL257-059

TEMPORARY WETLAND IMPACT ± 959 SF

PROTECT CULVERT

TEMPORARY WETLAND IMPACT ± 7,947 SF

TEMPORARY WETLAND IMPACT ± 725 SF

PULL PAD

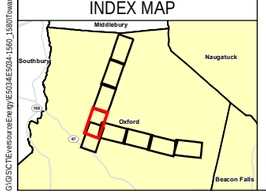
TEMPORARY WETLAND IMPACT ± 126 SF

CHRISTIAN STREET

TOWNER LANE

Matchline Sheet 5

INDEX MAP



Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
- Stonewall
- Existing Right-of-Way (ROW)
- Proposed Overhead Eversource Line
- Existing Overhead/Underground Eversource Line
- 5' Contours
- Hiking Trail
- Watercourse (not field delineated)
- 100' Vernal Pool Envelope
- Delineated Watercourse
- Existing Access
- Proposed Access
- Off-ROW Access Pending Rights
- Field Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Confirmed Vernal Pool Extent
- Existing Gravel
- Proposed Stone Work Pad
- Temporary Construction Matting
- Stone Ford
- Tree Clearing Area
- Natural Diversity Database Area
- CT NEC Focus Area
- FEMA Floodway
- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 4 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 5 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Commercial
- Agricultural
- Transmission ROW
- Eversource Owned Property
- Christian Street Junction
- 500-Year Flood Zone
- 100-Year Flood Zone
- Floodway

RIGHT-OF-WAY DESCRIPTION

- ± 110 Feet and ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W18, W19, W20, W21
- Watercourses –S9, S10

Wetland and Watercourse Crossings

- W18, W19, W20
- S9

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland
- Residential Landscaping
- Pasture

Access

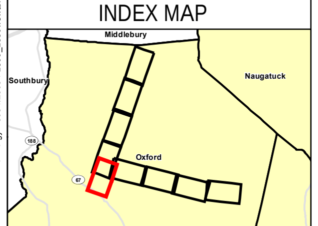
- From Christian Street: Structures 1439A, 1438, 1438A, 1437, 301, 1571, 302, 1572, 19342, 19342A Proposed Structures 19431A, 19431, 19430A, 19430, 19429, 19428, 19347, 19346, 19345, 19345A, 19344, 19344A, 11145A, 19343

Road Crossings

- Christian Street

Line List	Parcel Address	Municipality	State	Owner Name
200B-102	27 CHRISTIAN ST	OXFORD	CT	MARKHAM ROBERT H & CINDY
200B-103	45 CHRISTIAN ST	OXFORD	CT	SLATER LUKE
200B-104	47 CHRISTIAN ST	OXFORD	CT	FANOTTO ZACHARY R
200B-105	51 CHRISTIAN ST	OXFORD	CT	FORSTER SARAH
200B-106	OXFORD RD	OXFORD	CT	CORNERSTONE ASSEMBLY OF GOD INC
200B-107	67 CHRISTIAN ST	OXFORD	CT	BACHMAN JOHN J
200B-108	69 CHRISTIAN ST	OXFORD	CT	PEREZ TOMAS R & CABRERA MILAGROS D
200B-109	73 CHRISTIAN ST	OXFORD	CT	BONAVENTURA CODY & SAMANTHA
200B-110	CHRISTIAN ST	OXFORD	CT	TOWN OF OXFORD
200B-111	81 CHRISTIAN ST	OXFORD	CT	ROTH SCOTT
200B-112	87 CHRISTIAN ST	OXFORD	CT	TULLEY MICHAEL S & JILL L
257-001	CHRISTIAN ST	OXFORD	CT	CONN LIGHT & POWER CO
257-002	94 CHRISTIAN ST	OXFORD	CT	CENTRAL PARK ASSOCIATES LLC
257-003	CHRISTIAN ST	OXFORD	CT	CENTRAL PARK ASSOCIATES LLC
257-059	CHRISTIAN ST	OXFORD	CT	GLENDALE AT OXFORD LLC

INDEX MAP



Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
- Stonewall
- Existing Right-of-Way (ROW)
- Proposed Overhead Eversource Line
- Existing Overhead/Underground Eversource Line
- 5' Contours
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- 100' Vernal Pool Envelope
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- Proposed Access
- Off-ROW Access Pending Rights
- Field Delineated Wetland Boundary Outline
- Field Delineated Wetland
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- Confirmed Vernal Pool Extent
- Existing Gravel
- Proposed Stone Work Pad
- Temporary Construction Matting
- Stone Ford
- Tree Clearing Area
- Natural Diversity Database Area
- CT NEC Focus Area
- FEMA Floodway
- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

Feet: 0 50 100 200

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 5 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 6 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Transmission ROW
- NDDB Area
- 500-Year Flood Zone

RIGHT-OF-WAY DESCRIPTION

- ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W22, W23, W24, W25, W26, W27, W28
- Watercourses – S11

Wetland and Watercourse Crossings

- W24, W25, W27, W28
- S11

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Residential Landscaping

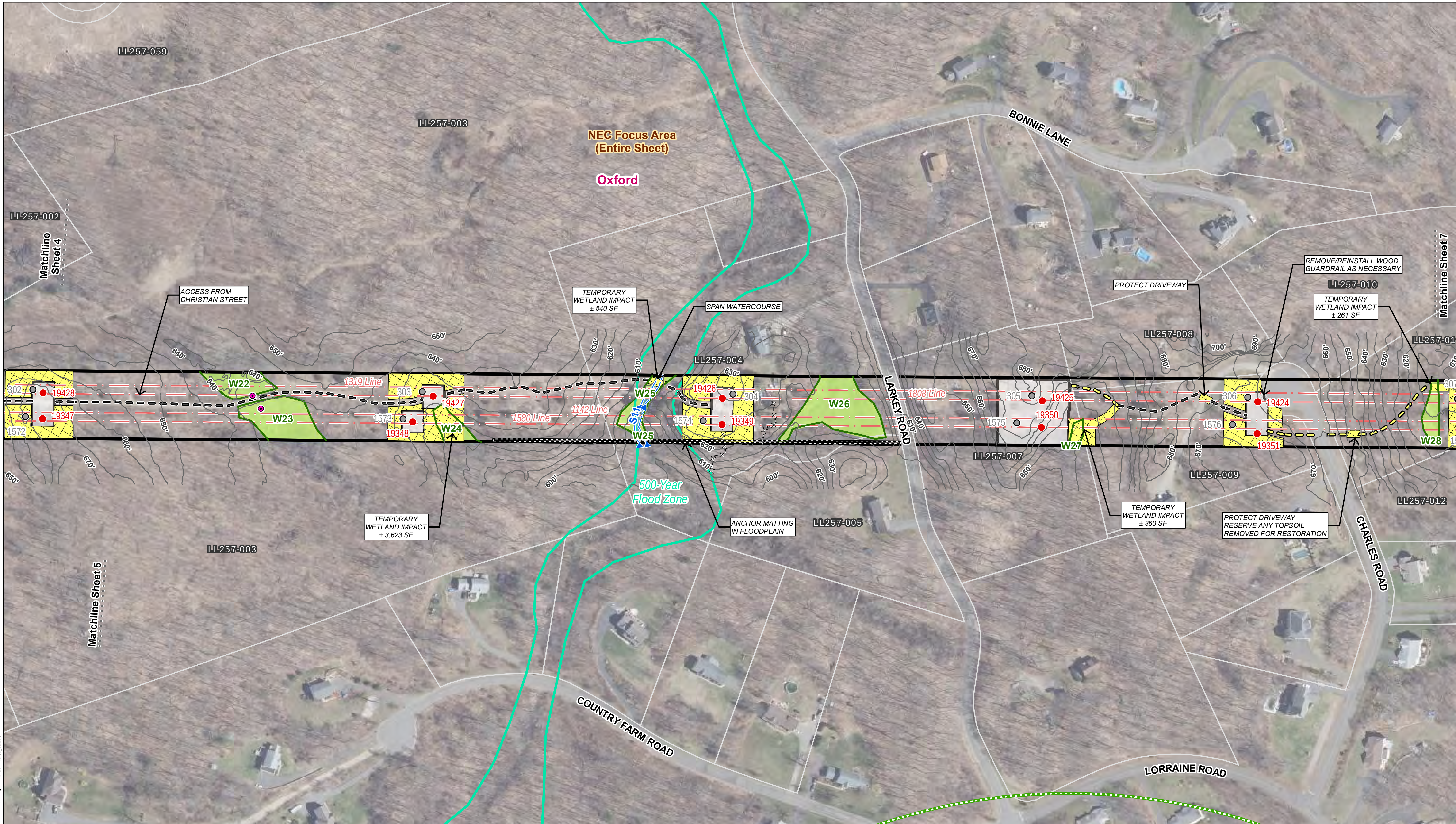
Access

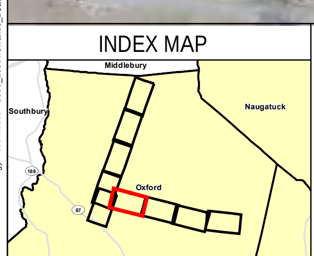
- From Christian Street: Structures 302, 1572, 303, 1573, 304, 1574, Proposed Structures 19428, 19347, 19427, 19348, 19426, 19349
- From Charles Road: Existing Structure 305, 1575, 306, 1576, 307, 1577, Proposed Structures 19425, 19350, 19424, 19351

Road Crossings

- Larkey Road
- Charles Road

Line List	Parcel Address	Municipality	State	Owner Name
257-003	CHRISTIAN ST	OXFORD	CT	CENTRAL PARK ASSOCIATES LLC
257-004	82 LARKEY RD	OXFORD	CT	FREDERICKS CHRISTOPHER
257-005	92 LARKEY RD	OXFORD	CT	CUNHA ALEX & ASHLEY
257-007	51 LARKEY RD	OXFORD	CT	LAMONT GEORGE A JR & HELENE
257-008	9 CHARLES RD	OXFORD	CT	SECOND STREET CONSTRUCTION LLC
257-009	7 CHARLES RD	OXFORD	CT	HARPER MICHAEL A & MICHELLE L
257-010	16 CHARLES RD	OXFORD	CT	CHARLES ROAD LLC
257-011	14 CHARLES RD	OXFORD	CT	PROFFITT DANIEL & LAUREN
257-012	12 CHARLES RD	OXFORD	CT	MESIDOR TONIA





Legend

- Proposed Structure
- Existing Structure
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- Culvert
- Gate
- Fence
- Stonewall
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- Existing Overhead/Underground Eversource Line
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- 100' Vernal Pool Envelope
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- Proposed Access
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- Temporary Construction Matting
- Stone Ford
- Tree Clearing Area
- Natural Diversity Database Area
- CT NEC Focus Area
- FEMA Floodway
- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 6 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 7 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Transmission ROW
- 500-Year Flood Zone
- 100-Year Flood Zone
- Floodway

RIGHT-OF-WAY DESCRIPTION

- ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W28, W29, W30, W31, W32
- Watercourses –S5 (Jack's Brook), S12 (Riggs Street Brook)

Wetland and Watercourse Crossings

- W28, W32
- S12 (Riggs Street Brook)

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Emergent Wetland
- Scrub-Shrub Upland
- Residential Landscaping

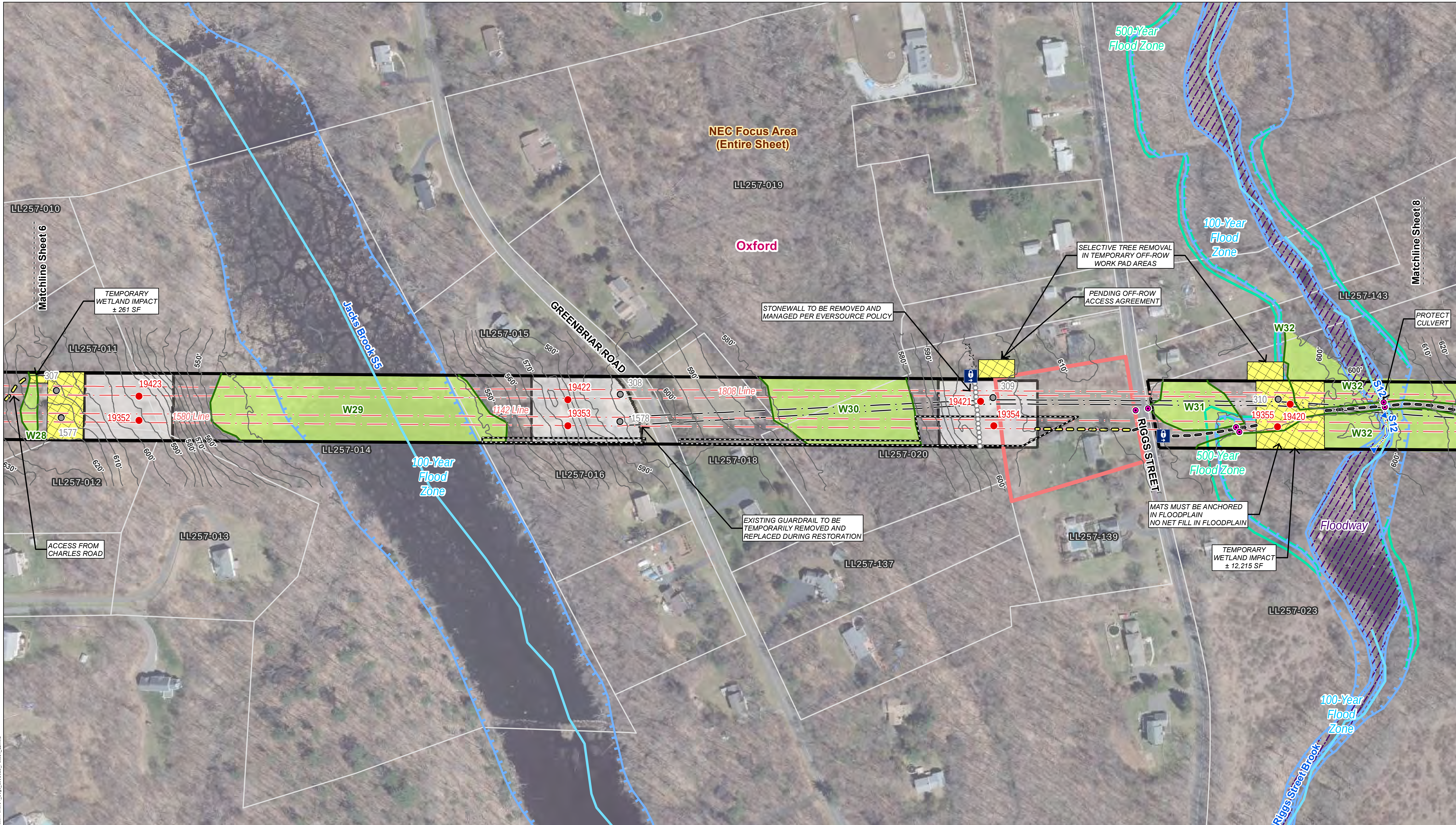
Access

- From Charles Road: Existing Structures 307, 1577, Proposed Structures 19423, 19352
- From Greenbriar Road: Existing Structures 308, 1578, Proposed Structures 19422, 19353
- From Riggs Street: Existing Structures 309, 310, Proposed Structures 19421, 19354, 19420, 19355

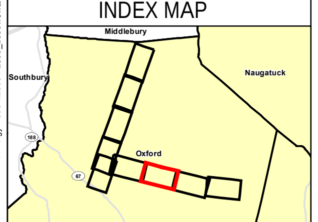
Road Crossings

- Greenbriar Road
- Riggs Street

Line List	Parcel Address	Municipality	State	Owner Name
257-011	14 CHARLES RD	OXFORD	CT	PROFFITT DANIEL & LAUREN
257-012	12 CHARLES RD	OXFORD	CT	MESIDOR TONIA
257-013	8 CHARLES RD	OXFORD	CT	BROWN ROZELL
257-014	LARKEY RD	OXFORD	CT	OXFORD TOWN OF
257-015	54 GREENBRIAR RD	OXFORD	CT	PINTO JOSEPH R & BARBARA J
257-016	56 GREENBRIAR RD	OXFORD	CT	GEORGE DEBORAH L & PHILLIP A
257-018	57 GREENBRIAR RD	OXFORD	CT	ZAJKOWSKI MAREK & MALGORZATA
257-019	209 RIGGS ST	OXFORD	CT	TOTH JAMES R & LYNN C
257-020	195 RIGGS ST	OXFORD	CT	PJURA MICHAEL J & PATRICIA L
257-023	RIGGS ST CHESTNUT TREE HILL RD	OXFORD	CT	PULTE HOMES OF NEW ENGLAND LLC
257-143	194 RIGGS ST	OXFORD	CT	MONDO JR BRUCE C
257-137	59 GREENBRIAR RD	OXFORD	CT	BREZINA TIFFANY LUGO & TRAVIS P
257-139	185 RIGGS ST	OXFORD	CT	LABRIOLA DAVID K & NAYLOR



INDEX MAP



Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
- Stonewall
- Existing Right-of-Way (ROW)
- Proposed Overhead Eversource Line
- Existing Overhead/Underground Eversource Line
- 5' Contours
- Hiking Trail
- Watercourse (not field delineated)
- 100' Vernal Pool Envelope
- Delineated Watercourse
- Existing Access
- Proposed Access
- Off-ROW Access Pending Rights
- Field Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Confirmed Vernal Pool Extent
- Existing Gravel
- Proposed Stone Work Pad
- Temporary Construction Matting
- Stone Ford
- Tree Clearing Area
- Natural Diversity Database Area
- CT NEC Focus Area
- FEMA Floodway
- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

N

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 7 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 8 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Golf Course
- Transmission ROW
- 500-Year Flood Zone
- 100-Year Flood Zone
- Floodway

RIGHT-OF-WAY DESCRIPTION

- ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W32, W33, W34, W35
- Watercourses – S12 (Riggs Street Brook), S13 Towantic Brook

Wetland and Watercourse Crossings

- W32, W33, W34, W35
- S12 (Riggs Street Brook)
- S13 (Towantic Brook)

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland
- Residential Landscaping
- Golf Course

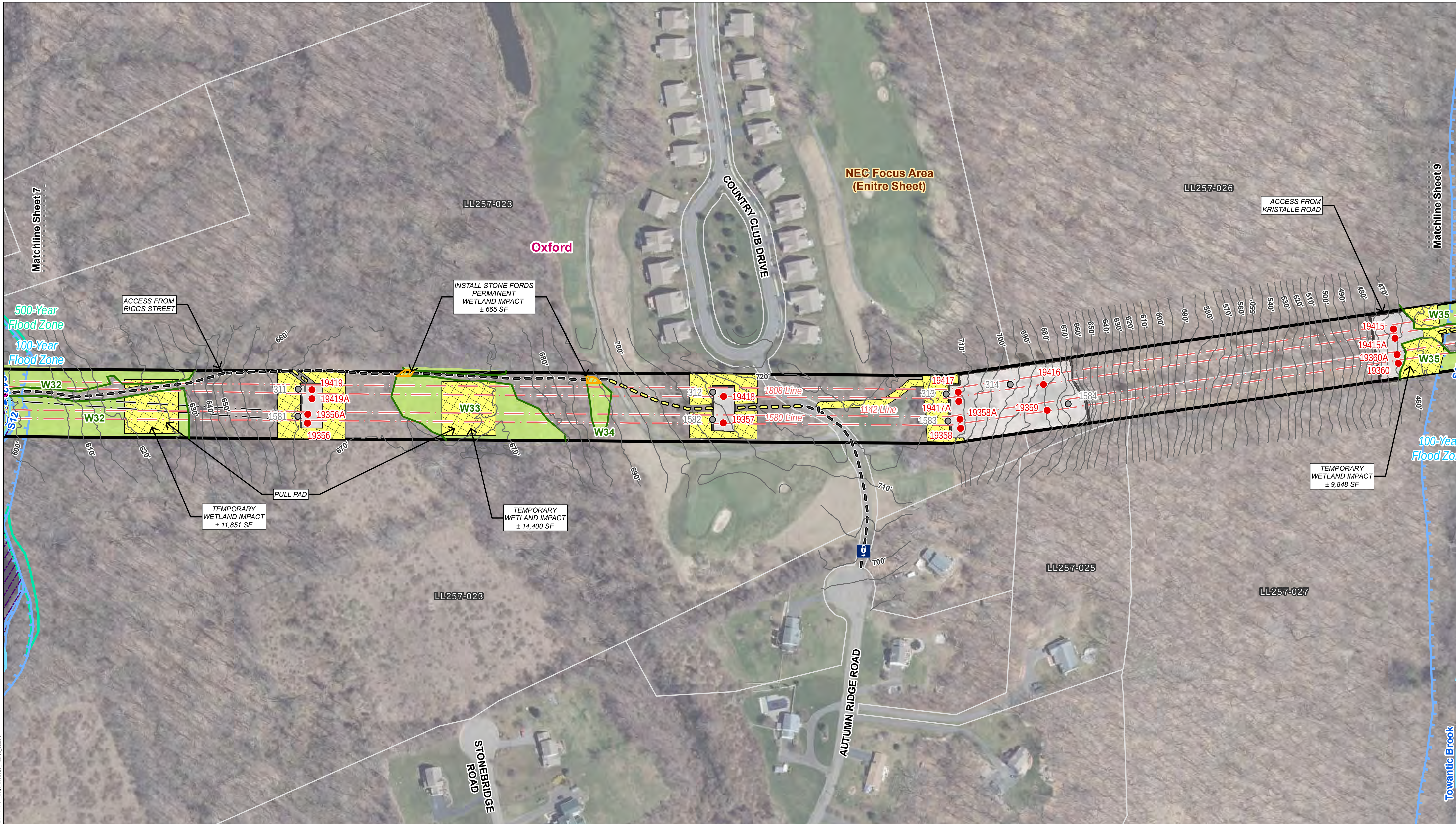
Access

- From Riggs Street and Autumn Ridge Road: Existing Structures 311, 1581, 312, 1582, 313, 1583, 314, 1584, Proposed Structures 19419, 19419A, 19356, 19356A, 19418, 19357, 19417, 19417A, 19358, 19358A, 19416, 19359
- From Kristalle Road: Proposed Structures 19415, 19415A, 19360, 19360A

Road Crossings

- Country Club Drive

Line List	Parcel Address	Municipality	State	Owner Name
257-023	RIGGS ST CHESTNUT TREE HILL RD	OXFORD	CT	PULTE HOMES OF NEW ENGLAND LLC
257-025	26 AUTUMN RIDGE RD	OXFORD	CT	THE PETER R ZBRAS SR & CUNTHIA A ZBRAS
257-026	CHESTNUT TREE HILL RD	OXFORD	CT	TIMBERLAKE INVESTMENT PARTNERS LLC
257-027	CHESTNUT TREE HILL RD	OXFORD	CT	OXFORD TOWN OF



INDEX MAP

Middlebury, Southbury, Naugatuck, Oxford, Beacon Falls

Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
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- Existing Right-of-Way (ROW)
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- FEMA 100-Year Flood Zone
- FEMA 500-Year Flood Zone
- Eversource Owned Property
- Parcel Boundary
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1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 8 of 9

Date: August, 27, 2024

Tighe&Bond

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Mapsheet 9 of 9
Towantic Substation to Beacon Falls Junction Rebuild Project
Town of Oxford, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- CT NEC Focus Area
- Undeveloped Forest
- Residential
- Transmission ROW
- 500-Year Flood Zone
- 100-Year Flood Zone
- NDDB Area
- Naugatuck State Forest
- Naugatuck State Forest Trail
- Seymour Reservoir Number 4

RIGHT-OF-WAY DESCRIPTION

- ± 150 Feet
- Gravel Access Roads
- Maintained to Meet Existing Clearance Requirements

Water Resources

- Wetland – W35, W36, W37, W38, W39, W40, W41, W42
- Watercourses – S13 (Towantic Brook), S14, S15, S16, S17
- Waterbodies – Seymour Reservoir Number 4
- Vernal Pools – VP2

Wetland and Watercourse Crossings

- W35, W36, W39
- S13 (Towantic Brook)

Right-of-Way Vegetation

- Scrub-Shrub Wetland
- Scrub-Shrub Upland
- Emergent Wetland
- Residential Landscaping

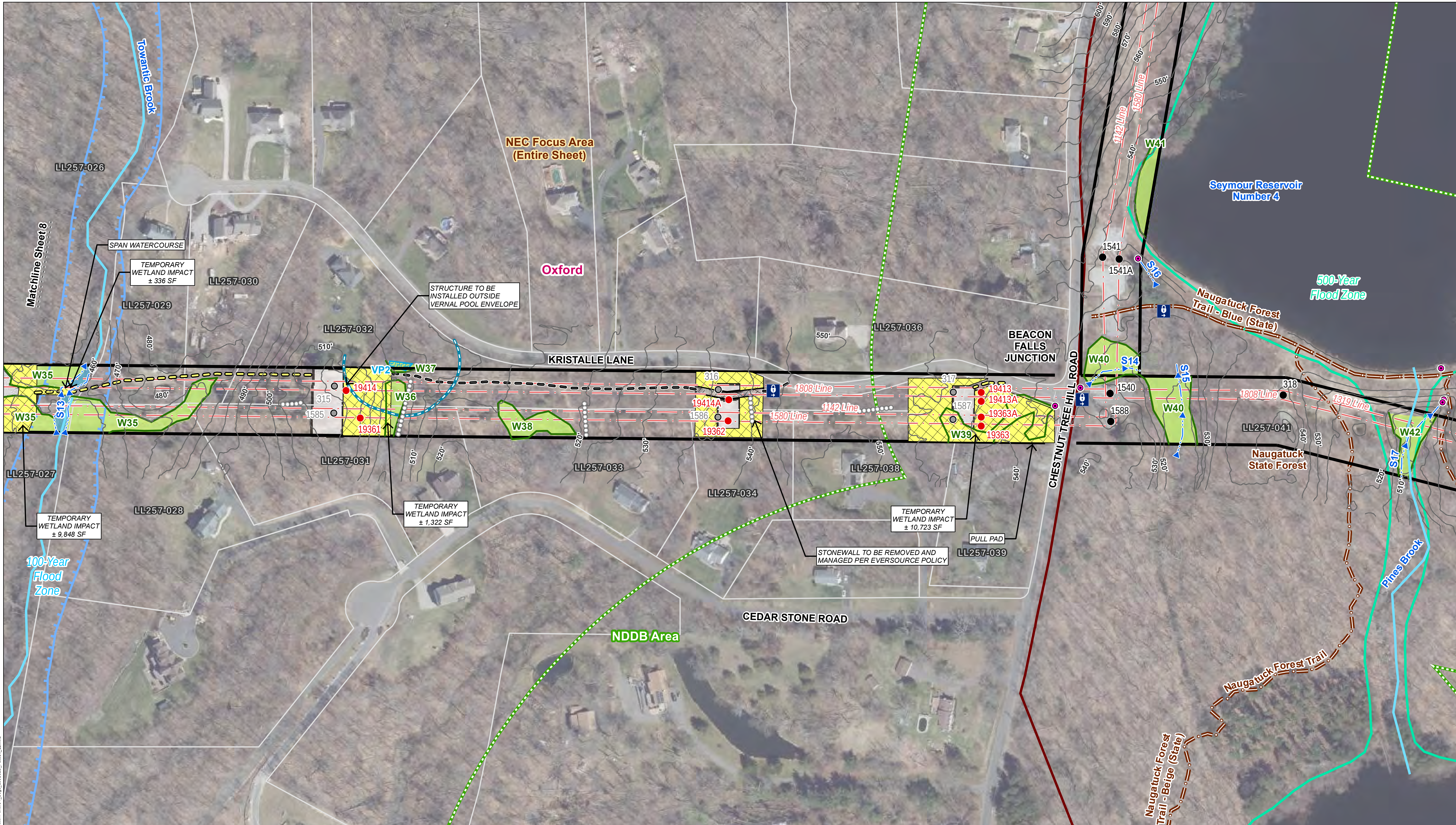
Access

- From Kristalle Lane: Existing Structures 315, 1585, 316, 1586, 317, 1587, Proposed Structures 19414, 19361, 19414A, 19362, 19413, 19413A, 19363A, 19363

Road Crossings

- Kristalle Lane
- Chestnut Tree Hill Road

Line List	Parcel Address	Municipality	State	Owner Name
257-026	CHESTNUT TREE HILL RD	OXFORD	CT	TIMBERLAKE INVESTMENT PARTNERS LLC
257-027	CHESTNUT TREE HILL RD	OXFORD	CT	OXFORD TOWN OF
257-028	10 CEDAR STONE RD	OXFORD	CT	SWENDSEN WILLIAM J & EGAN KELLY
257-029	5 KRYSTALLE LA	OXFORD	CT	MUCHERINO SCOTT J & KYM P
257-030	3 KRYSTALLE LA	OXFORD	CT	LAW PERRY & KIM
257-031	8 CEDAR STONE RD	OXFORD	CT	BUECHEL DEBORAH J
257-032	1 KRYSTALLE LA	OXFORD	CT	MCBRIEN ROSEMARY O
257-033	6 CEDAR STONE RD	OXFORD	CT	GIORDANO MICHAEL & GRETCHEN
257-034	4 CEDAR STONE RD	OXFORD	CT	SCIARRINO DENNIS J & KATHLEEN I
257-036	2 KRYSTALLE LA	OXFORD	CT	FREDDINO DANIEL LAWRENCE & JACLYN ANN
257-038	2 CEDAR STONE RD	OXFORD	CT	PAWLYK DAVID
257-039	339 CHESTNUT TREE HILL RD	OXFORD	CT	BURLINSON ARA M & AMANDA M
257-041	CHESTNUT TREE HILL RD	OXFORD	CT	STATE OF CONNECTICUT



INDEX MAP

Legend

- Proposed Structure
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NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 9 of 9

Date: August, 27, 2024

Tighe&Bond

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Attachment B

Structure Tables

Structure Table (B.1)
Towantic Substation to Oxford Substation to Beacon Falls Junction
1142-1403-1319-1619 Lines
July 2024

EXISTING STRUCTURES					PROPOSED STRUCTURES					
Circuit(s) on Existing Structures	Existing Structure No.	Existing Structure Type	Existing Structure Height		Circuit(s) on Proposed Structures	Proposed Structure No.	Proposed Structure Type	Proposed Structure Height		Replacement Structure Height Change
Towantic Substation										
1142	1452B	SCSP	97		1142	19450B	Structure to Remain			
1403	1452A	SCSP	95		1403	19450A	Structure to Remain			
1142/1403	1452	DCLT	81.5		1142	19449A	SCSP	111.5		30
					1403	19449	SCSP	111.5		30
1142/1403	1451	DCLT	82.5		1142/1403	19448	DCSP	103		20.5
1142/1403	1450	DCLT	80		1142/1403	19447	DCSP	102		22
1142/1403	1449	DCLT	85		1142/1403	19446	DCSP	121.5		36.5
				New	1142/1403	19445	DCSP	111.5		
1142/1403	1448	DCLT	83		1142/1403	19444	DCSP	87		4
1142/1403	1447	DCLT	85		1142/1403	19443	DCSP	112		27
1142/1403	1446	DCLT	81		1142	19442A	SCSP	92		11
					1403	19442	SCSP	92		11
1142	1445N	SCSP	80		1142	19441	Structure to Remain			
1142	1445S	DCLT	81			Structure to Be Removed				
				New	1142	19440	SCHF	55		
1142	1444B	SCHF	55		1142	19439	Structure to Remain			
1142	1444	SCHF	65		1142	19438	Structure to Remain			
1403	1445A	SCSP	73		1403	19451	SCSP	81.5		8.5
1403	1444	SCHF	51.5		1403	19452	Structure to Remain			
1403	1443N	SCHF	43		1403	19453	SCHF	42		-1
Oxford Substation										
1319	1444W	SCHF	68		1319	19454	Structure to Remain			
1142 (1)	1443S	DCLT	80		1142	19437B	2-Pole SC	66.5		-13.5
1319	1443A	SCSP	79		1319	19437A	Structure to Remain			
				New	1142/1319	19436	DCSP	75		
1142/1319	1442	DCLT	81		1142/1319	19435	DCSP	75		-6
1142/1319	1441	DCLT	82.5		1142/1319	19434	DCSP	88.5		6
1142/1319	1440	DCLT	80.5		1142/1319	19433	DCSP	98		17.5
1142/1319	1439	DCLT	90		1319	19432A	SCSP	106.5		16.5
					1142	19432	SCSP	106.5		16.5
Christian Street Junction										
				New	1619	11145A	SCSP	121.5		
(1) DCLT was reconfigured to support one circuit										

Structure Type Naming Conventions:	
Structure Type	**Definition**
DCLT	Double Circuit Lattice Tower
DCSP	Double Circuit Steel Pole
SCSP	Single Circuit Steel Pole
SCHF	Single Circuit H-Frame
2-Pole SC	2-Pole Single Circuit

Structure Table (B.2)
Christian Street Junction to Beacon Falls Junction
1142-1580 Lines
July 2024

EXISTING STRUCTURES					PROPOSED STRUCTURES					
Circuit(s) on Existing Structures	Existing Structure No.	Existing Structure Type	Existing Structure Height		Circuit(s) on Proposed Structures	Proposed Structure No.	Proposed Structure Type	Proposed Structure Height		Replacement Structure Height Change
Christian Street Junction										
1580/1808	1437	DCLT	80		1580/1808	19343	DCSP (1)	106.5		26.5
1142/1808	1438	DCLT	90		1142	19344A	SCSP	116.5		26.5
1580	1438A	SCSP	100		1580	19344	SCSP	116.5		16.5
1580/1142	1571	DCLT	81.5		1580	19345	SCSP	106.5		25
					1142	19345A	SCSP	106.5		25
				New	1580/1142	19346	DCSP	107.5		
1580/1142	1572	DCLT	119		1580/1142	19347	DCSP	116.5		-2.5
1580/1142	1573	DCLT	114		1580/1142	19348	DCSP	121.5		7.5
1580/1142	1574	DCLT	94		1580/1142	19349	DCSP	103		9
1580/1142	1575	DCLT	89		1580/1142	19350	DCSP	88.5		-0.5
1580/1142	1576	DCLT	99		1580/1142	19351	DCSP	106.5		7.5
1580/1142	1577	DCLT	114		1580/1142	19352	DCSP	136.5		22.5
1580/1142	1578	DCLT	109		1580/1142	19353	DCSP	141.5		32.5
1580/1142	**309**	QCLT (2)	124		1580/1142	19354	DCSP	116.5		-7.5
1580/1142	**310**	QCLT (2)	119		1580/1142	19355	DCSP	116.5		-2.5
1580/1142	1581	DCLT	109		1142	19356A	SCSP	111.5		2.5
					1580	19356	SCSP	111.5		2.5
1580/1142	1582	DCLT	109		1580/1142	19357	DCSP	106.5		-2.5
1580/1142	1583	DCLT	104.5		1142	19358A	SCSP	106.5		2
					1580	19358	SCSP	106.5		2
1580/1142	1584	DCLT	114		1580/1142	19359	DCSP	107.5		-6.5
				New	1142	19360A	SCSP	146.5		
				New	1580	19360	SCSP	146.5		
1580/1142	1585	DCLT	119		1580/1142	19361	DCSP	126.5		7.5
1580/1142	1586	DCLT	104		1580/1142	19362	DCSP	103		-1
1580/1142	1587	DCLT	94		1142	19363A	SCSP	107		13
					1580	19363	SCSP	107		13
Beacon Falls Junction										

(1) Replacement structure is part of Segment 1
(2) The Quad-Circuit Lattice Towers also support the 1319/1808 Lines.

Structure Type Naming Conventions:	
Structure Type	**Definition**
QCLT	Quad Circuit Lattice Tower
DCLT	Double Circuit Lattice Tower
DCSP	Double Circuit Steel Pole
SCSP	Single Circuit Steel Pole

Structure Table (B.3)
Beacon Falls Junction to Christian Street Junction
1319/1808 Lines
July 2024

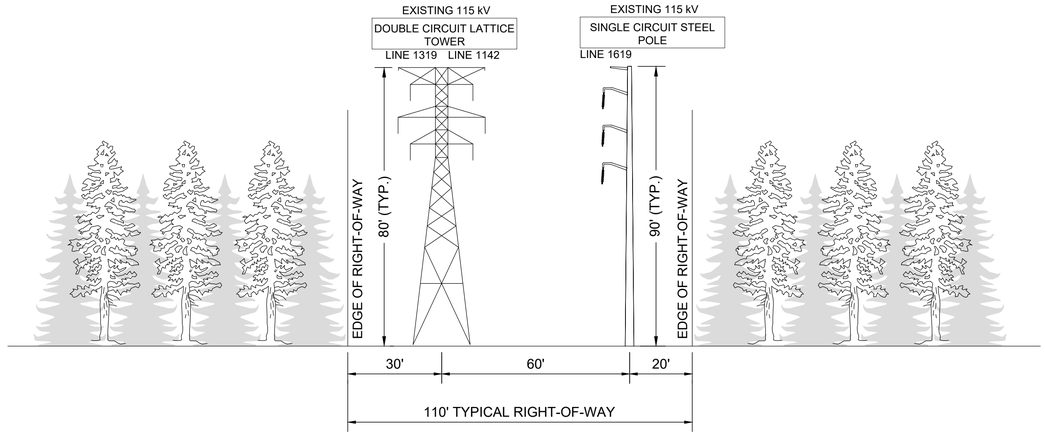
EXISTING STRUCTURES					PROPOSED STRUCTURES					
Circuit(s) on Existing Structures	**Existing Structure No.**	**Existing Structure Type**	**Existing Structure Height**		**Circuit(s) on Proposed Structures**	**Proposed Structure No.**	**Proposed Structure Type**	**Proposed Structure Height**		**Replacement Structure Height Change**
Christian Street Junction										
1319	1439A	SCSP	100		1319	19431	SCSP	116.5		16.5
				New	1808	19431A	SCSP	116.5		
1319/1808	301	DCLT	53		1319	19430	SCSP	106.5		53.5
					1808	19430A	SCSP	106.5		53.5
				New	1319/1808	19429	DCSP	107.5		
1319/1808	302	DCLT	82		1319/1808	19428	DCSP	81.5		-0.5
1319/1808	303	DCLT	92.5		1319/1808	19427	DCSP	101.5		9
1319/1808	304	DCLT	82.5		1319/1808	19426	DCSP	98		15.5
1319/1808	305	DCLT	89.5		1319/1808	19425	DCSP	84		-5.5
1319/1808	306	DCLT	85		1319/1808	19424	DCSP	103		18
1319/1808	307	DCLT	82		1319/1808	19423	DCSP	126.5		44.5
1319/1808	308	DCLT	82.5		1319/1808	19422	DCSP	131.5		49
1319/1808	**309**	QCLT**(1)**	124		1319/1808	19421	DCSP	116.5		-7.5
1319/1808	**310**	QCLT **(1)**	119		1319/1808	19420	DCSP	116.5		-2.5
1319/1808	311	DCLT	81		1319	19419	SCSP	81.5		0.5
					1808	19419A	SCSP	81.5		0.5
1319/1808	312	DCLT	80		1319/1808	19418	DCSP	101.5		21.5
1319/1808	313	DCLT	82		1319	19417	SCSP	106.5		24.5
					1808	19417A	SCSP	106.5		24.5
1319/1808	314	DCLT	82		1319/1808	19416	DCSP	93.5		11.5
				New	1319	19415	SCSP	146.5		
				New	1808	19415A	SCSP	146.5		
1319/1808	315	DCLT	82		1319/1808	19414	DCSP	101.5		19.5
1319/1808	316	DCLT	81		1319/1808	19414A	DCSP	92		11
1319/1808	317	DCLT	81		1319	19413	SCSP	97		16
					1808	19413A	SCSP	97		16
Beacon Falls Junction										

(1) The Quad-Circuit Lattice Tower also supports the 1142/1580 Lines.

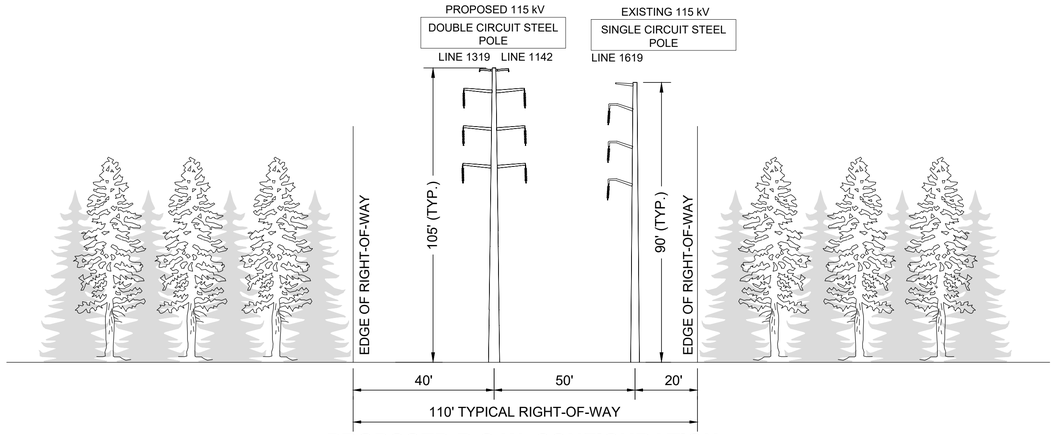
Structure Type Naming Conventions:	
Structure Type	**Definition**
QCLT	Quad Circuit Lattice Tower
DCLT	Double Circuit Lattice Tower
DCSP	Double Circuit Steel Pole
SCSP	Single Circuit Steel Pole

Attachment C

Typical Cross Sections



EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL LATTICE & MONOPOLE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO TOWANTIC S/S
IN THE TOWN OF OXFORD, CT
TYPICAL



PROPOSED R.O.W. CONFIGURATION
NO ADDITIONAL RIGHT-OF-WAY REQUIRED
DOUBLE & SINGLE CIRCUIT STEEL MONOPOLE
VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO TOWANTIC S/S
IN THE TOWN OF OXFORD, CT
TYPICAL

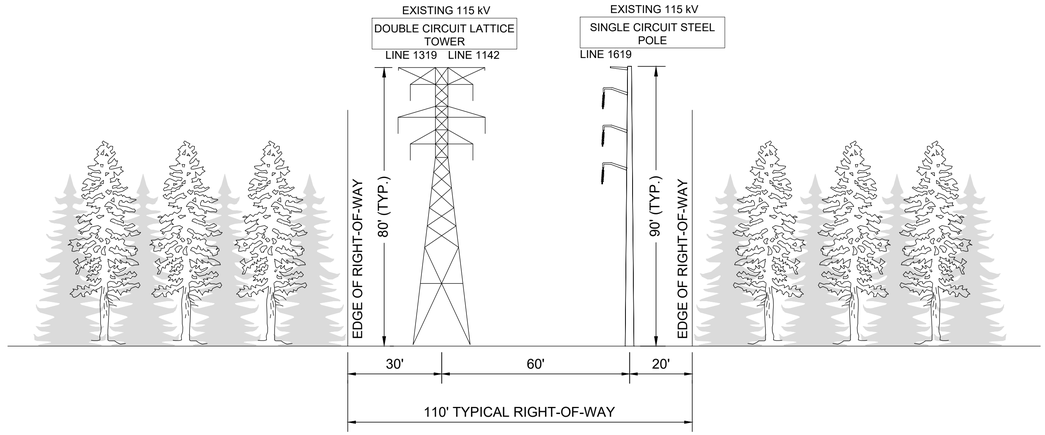
XS-01

REVISIONS DURING CONSTRUCTION					

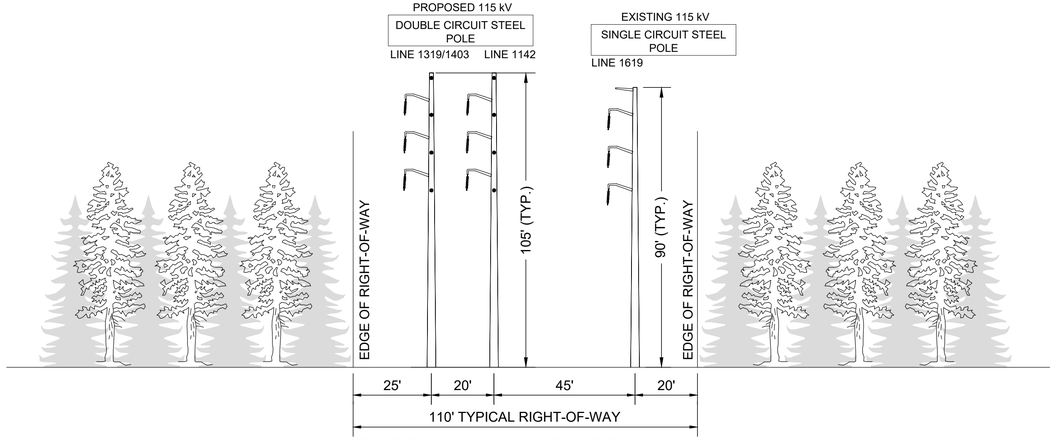
EVERSOURCE ENERGY

TITLE
TOWANTIC S/S - CHRISTIAN ST. JCT.
115–kV TRANSMISSION LINE
CROSS SECTION – DRAWING
OXFORD, CT

BY PJM/NV5	CHKD HKG/NV5	APP JS/ES	APP –
DATE 07/26/2024	DATE 07/26/2024	DATE –	DATE –
H-SCALE N.T.S.	SIZE D	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER –		DWG NO. 01253-85000p001	



EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL LATTICE & MONOPOLE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO TOWANTIC S/S
IN THE TOWN OF OXFORD, CT
TYPICAL



PROPOSED R.O.W. CONFIGURATION
NO ADDITIONAL RIGHT-OF-WAY REQUIRED
DOUBLE & SINGLE CIRCUIT STEEL MONOPOLE
VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO TOWANTIC S/S
IN THE TOWN OF OXFORD, CT
TYPICAL

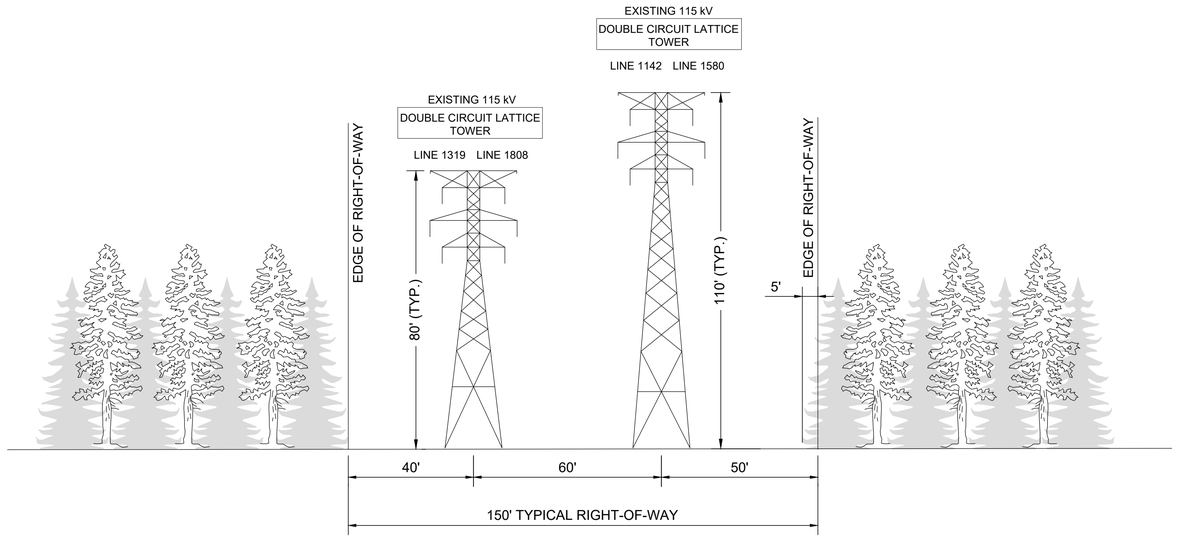
XS-02

REVISIONS DURING CONSTRUCTION					

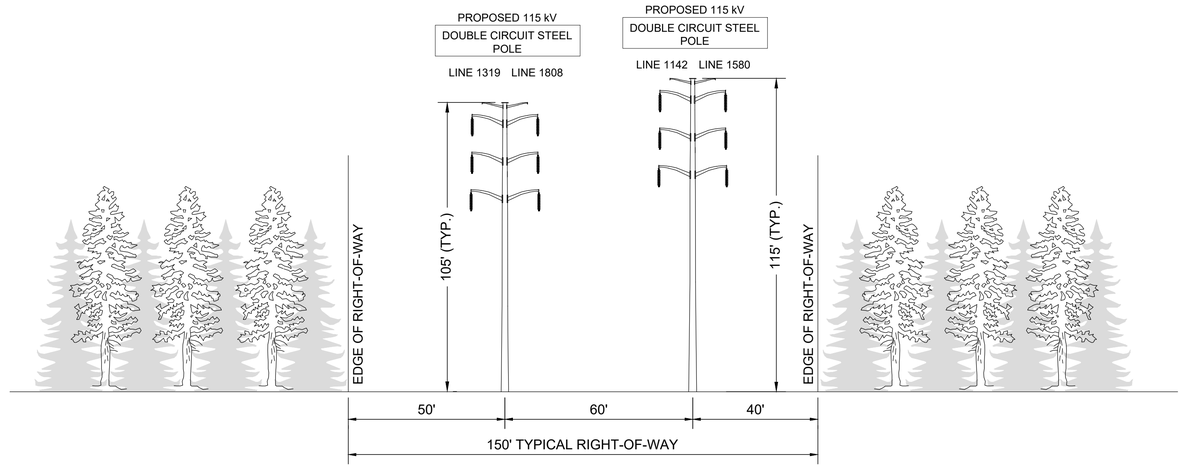
EVERSOURCE ENERGY

TITLE
TOWANTIC S/S - CHRISTIAN ST. JCT.
115–kV TRANSMISSION LINE
CROSS SECTION – DRAWING
OXFORD, CT

BY PJM/NV5	CHKD HKG/NV5	APP JS/ES	APP –
DATE 07/26/2024	DATE 07/26/2024	DATE –	DATE –
H-SCALE N.T.S.	SIZE D	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER –		DWG NO. 01253-85000p002	



EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL LATTICE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT
TYPICAL



PROPOSED R.O.W. CONFIGURATION
NO ADDITIONAL RIGHT-OF-WAY REQUIRED
DOUBLE CIRCUIT STEEL MONOPOLE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT
TYPICAL

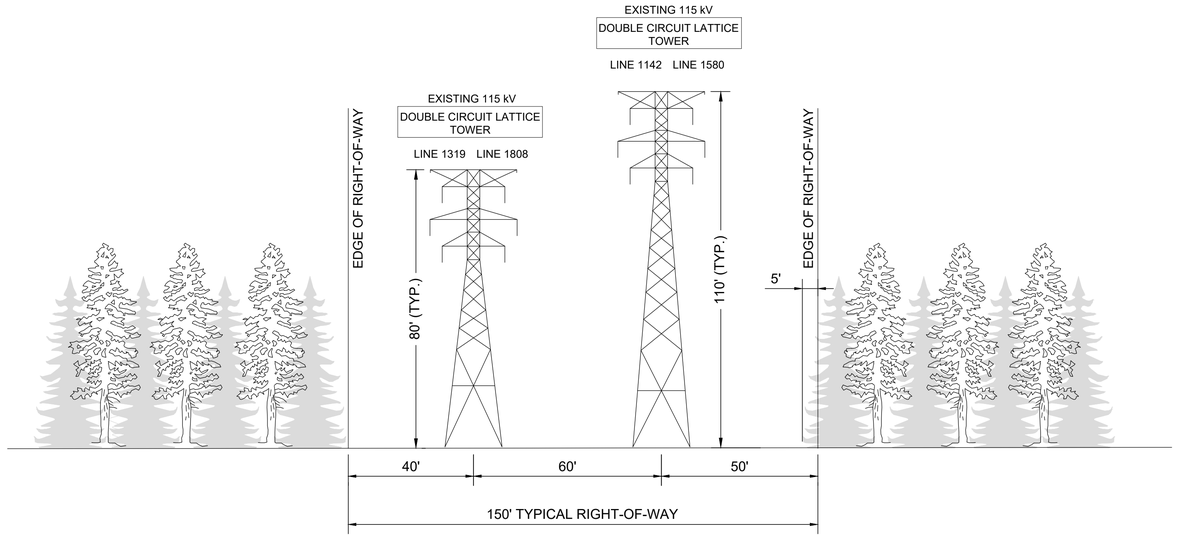
XS-03

REVISIONS DURING CONSTRUCTION

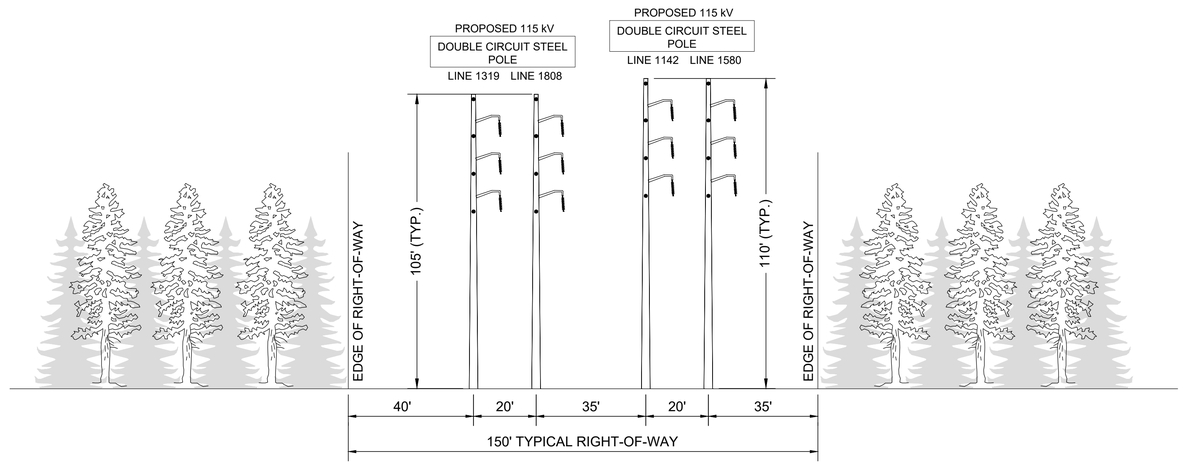
EVERSOURCE ENERGY

TITLE
CHRISTIAN ST. JCT. - BEACON FALLS S/S
115-kV TRANSMISSION LINE
CROSS SECTION – DRAWING
OXFORD, CT

BY PJM/NV5	CHKD HKG/NV5	APP JS/ES	APP –
DATE 07/26/2024	DATE 07/26/2024	DATE –	DATE –
H-SCALE N.T.S.	SIZE D	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER –		DWG NO. 01253-85001p001	



EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL LATTICE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT
TYPICAL



PROPOSED R.O.W. CONFIGURATION
NO ADDITIONAL RIGHT-OF-WAY REQUIRED
DOUBLE CIRCUIT STEEL MONOPOLE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT
TYPICAL

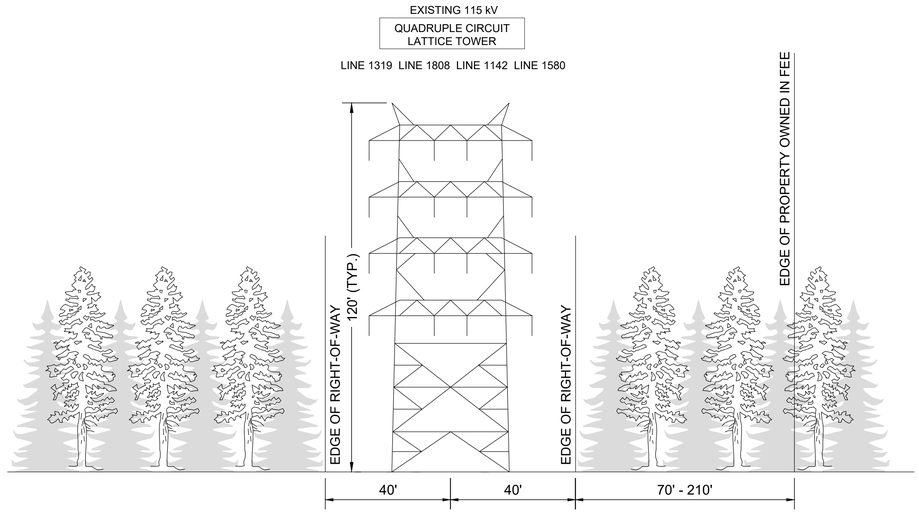
XS-04

REVISIONS DURING CONSTRUCTION

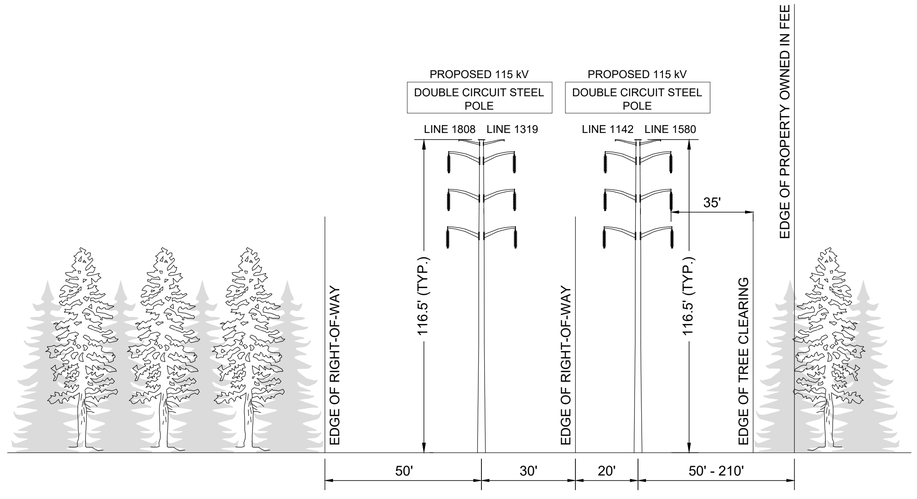
EVERSOURCE ENERGY

TITLE
CHRISTIAN ST. JCT. - BEACON FALLS S/S
115-kV TRANSMISSION LINE
CROSS SECTION – DRAWING
OXFORD, CT

BY PJM/NV5	CHKD HKG/NV5	APP JS/ES	APP –
DATE 07/26/2024	DATE 07/26/2024	DATE –	DATE –
H-SCALE N.T.S.	SIZE D	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER –		DWG NO. 01253-85001p002	



EXISTING R.O.W. CONFIGURATION
QUADRUPLE CIRCUIT STEEL LATTICE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT



PROPOSED R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL MONOPOLE VERTICAL DESIGN
LOOKING FROM CHRISTIAN ST. JCT. TO BEACON FALLS JCT.
IN THE TOWN OF OXFORD, CT

XS-05

REVISIONS DURING CONSTRUCTION					

EVERSOURCE ENERGY

TITLE
CHRISTIAN ST. JCT. - BEACON FALLS S/S
115-kV TRANSMISSION LINE
CROSS SECTION – DRAWING
OXFORD, CT

BY PJM/NV5	CHKD HKG/NV5	APP JS/ES	APP –
DATE 07/26/2024	DATE 07/26/2024	DATE –	DATE –
H-SCALE N.T.S.	SIZE D	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER –		DWG NO. 01253-85001p003	

Attachment D

SHPO Review Letter

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

August 23, 2024

David George
Heritage Consultants LLC
830 Berlin Turnpike
Berlin, CT 06057
(sent only via email to dgeorge@heritage-consultants.com)

Subject: Archaeological Reconnaissance Survey
Towantic Substation to Beacon Falls Junction Rebuild Project
Oxford, Connecticut

Dear David George,

The State Historic Preservation Office (SHPO) has received your request for our comments regarding the potential effects of the referenced project on historic properties. SHPO understands that Eversource Energy plans to replace structures and construct access roads Between the Towantic Substation and Beacon Falls Junction in Oxford. Because the project will require permitting from the United States Army Corps of Engineers (USACE), it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act, as amended. SHPO has reviewed the following technical reports prepared by Heritage Consultants (Heritage):

Phase IA Review of the Proposed Towantic Substation to Beacon Falls Junction Rebuild Project in Oxford, Connecticut (dated June 4, 2024)

Phase IB Cultural Resources Reconnaissance Survey of the Proposed Towantic Substation to Beacon Falls Junction Rebuild Project in Oxford, Connecticut (dated June 2024)

The submitted technical reports are comprehensive and meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources.* The archaeological assessment survey of the Areas of Potential Effect (APE) associated with the project was completed in June of 2024 and included a contextual overview of the project region, environmental characteristics, and a review of previously identified cultural resources. The literature review failed to identify any previously recorded archaeological sites or properties listed on the National Register of Historic Places (NRHP) within 500 feet of the project corridor. The results of the desktop review identified five segments of the project corridor encompassing 12 structure replacement locations, eight proposed access road segments, and a single pull pad that retained moderate/high archaeological sensitivity. Heritage recommended archaeological reconnaissance testing of these five areas prior to construction.

Examination of the five identified sensitivity areas during a Phase IB archaeological reconnaissance survey completed by Heritage indicated that these locations could be further refined into six distinct sensitivity areas. During survey, 131 of 186 planned shovel tests were

completed at 15-meter intervals along transects placed 15 meters apart throughout the six archaeological sensitivity areas. The planned but unexcavated shovel tests fell within areas of previous disturbance, wetlands, and steep slopes. The field effort resulted in the recovery of a quartz narrow stemmed projectile point, a single whiteware sherd, and four pieces of shell from three shovel tests. No additional evidence of cultural material or features was identified. Heritage determined that the identified archaeological deposits were not eligible for the National Register of Historic Places and recommended no further investigation. Finally, the report noted the identification of six stonewalls within the APE. SHPO recommends avoidance of impacts to these six stonewalls to the greatest extent possible. Based on the information provided to our office, it is the opinion of SHPO that no historic properties will be affected by the proposed project and no additional archaeological examination of the project corridor is warranted prior to construction.

This office appreciates the opportunity to review and comment upon this project. Do not hesitate to contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, for additional information at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Jonathan Kinney
State Historic Preservation Officer

Attachment E

Wetlands and Watercourse Delineations Technical Memorandum

Wetland Report:

Towantic to Beacon Falls Junction Rebuild Project

TO: Antonio Federici, PWS, CPESC, Eversource Energy

FROM: Matthew Regan, PWS, Tighe & Bond

DATE: June 24, 2024

Tighe & Bond performed wetland and watercourse delineations in support of the Towantic to Beacon Falls Junction Rebuild Project in September 2020 and December 2021. The wetland limits were reviewed in 2024 during the development of the plans for this project.

Wetland and Watercourse Delineation Methodology

Wetlands and watercourses were delineated in accordance with the requirements of the Connecticut Inland Wetlands and Watercourses Act (§22a-38 CGS), and the U. S. Army Corps of Engineers Wetlands Delineation Manual (1987) *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Northcentral and Northeast Region* (Version 2.0) (January 2012). The limits of the wetlands and watercourses were identified in the field by consecutively numbered flags. Pink "Wetland Delineation" flagging was used for delineating wetlands and blue flagging was used for delineating watercourses. Flag locations were surveyed at the time of the investigation using Global Positioning System (GPS) units capable of submeter accuracy. Wetlands were classified using the Cowardin System.

Delineated wetlands and watercourses within the Project Area are summarized in Table 1, and Army Corps of Engineers Wetland Determination Data Forms are attached.

TABLE 1
Delineated Wetlands and Watercourses within the Towantic to Beacon Falls Junction Rebuild Project

Map Sheet No.	Previous Wetland No. [1]	New Wetland No.[2]	Determination Data Sheet Wetland No. [3]	Dominant NWI Class [4]	Other NWI Classes	Dominant Water Regime	Associated Watercourse [5]
1	N/A	W1	W1	PEM		Seasonally Flooded/Saturated	S1
1	N/A	W2	W2	PEM	PSS	Seasonally Flooded/Saturated	
1	N/A	W3	No Data Form	N/A			S2, S3
1	N/A	W4	W4	PEM	PSS	Seasonally Flooded/Saturated	S4
1-2	N/A	W5	W5	PSS	PEM	Semipermanently Flooded	VP1, Jacks Brook
2	N/A	W6	W6	PEM	PSS	Semipermanently Flooded	Little River
2	N/A	W7	W7	PEM	PSS	Seasonally Flooded/Saturated	
2	N/A	W8	W8	PEM	PSS	Semipermanently Flooded	
2	N/A	W9	W9	PSS	PEM	Seasonally Flooded/Saturated	
3	N/A	W10	W10	PSS		Seasonally Flooded/Saturated	
3	N/A	W11	W11	PEM	PSS	Seasonally Flooded/Saturated	S6
3	N/A	W12	W12	PEM	PSS	Seasonally Flooded/Saturated	
3	N/A	W13	W13	PEM	PSS	Seasonally Flooded/Saturated	S7
3	N/A	W14	14	PEM		Seasonally Flooded/Saturated	S7
3	N/A	W15	15	PEM	PSS	Seasonally Flooded/Saturated	
4	N/A	W16	W16	PEM	PSS	Seasonally Flooded/Saturated	S8
4	N/A	W17	W17	PEM	PSS	Seasonally Flooded/Saturated	
4-5	N/A	W18	W18	PEM	PSS	Seasonally Flooded/Saturated	
4-5	W1 (seg 4)	W19	1436 1A	PSS	PEM	Seasonally Flooded/Saturated	
5	W2 (seg 4)	W20	1435-1A-1	PFO	PSS	Seasonally Flooded/Saturated	S9
5	W3 (seg 4)	W21	1434-1A	PSS	PEM	Seasonally Flooded/Saturated	S10, Little River
6	W18	W22	1572 1A	PEM	PSS	Seasonally Flooded/Saturated	
6	W19	W23	1572 2A	PFO		Seasonally Flooded/Saturated	
6	N/A	W24	W24	PSS		Seasonally Flooded/Saturated	
6	W20	W25	1573 1B	PSS	PEM	Permanently Flooded	S11
6	W21	W26	1574 1	PEM	PSS	Seasonally Flooded/Saturated	
6	W22	W26	1577 1A	PEM1Fh		Permanently Flooded	
6	N/A	W27	W27	PSS		Seasonally Flooded/Saturated	
6-7	N/A	W28	W28	PEM	PSS	Seasonally Flooded/Saturated	
7	N/A	W29	W29	PEM	POW	Permanently Flooded	Jacks Brook
7	W23	W30	308 1A 4	PSS	PEM	Seasonally Flooded/Saturated	
7	W24	W31	W31	PEM	PSS	Seasonally Flooded/Saturated	
7-8	W25	W32	1580 W15	PEM	PSS	Seasonally Flooded/Saturated	S12
8	W26	W33	1581 W14	PEM	PSS	Seasonally Flooded/Saturated	
8	N/A	W34	W34	PEM	PSS	Seasonally Flooded/Saturated	
8-9	W27	W35	1584 W13	PEM	PSS	Seasonally Flooded/Saturated	S13/Towantic Brook
9	W28	W36	1585 W12	PEM		Seasonally Flooded/Saturated	
9	W29	W37	1585 W11	PFO	PSS	Seasonally Flooded/Saturated	VP2
9	N/A	W38	W38	PEM	PSS	Seasonally Flooded/Saturated	
9	W30	W39	W39	PEM	PSS	Seasonally Flooded/Saturated	
9	W31 & W32	W40	W40	PSS	PEM	Seasonally Flooded/Saturated	S14 & S15
9	N/A	W41	N/A	POW		Permanently Flooded	Seymour Reservoir #4
9	N/A	W42	W42	PEM	PSS	Semipermanently Flooded	S17, Pines Brook

[1] Previous Wetland No. refers to the number on the Map Set for the Towantic to South Naugatuck to Beacon Falls Rebuild Project

[2] New Wetland No. refers to the number on the Map Set for the Towantic to Beacon Falls Junction Rebuild Project

[3] Determination Data Sheet Wetland No. refers to the code assigned during delineation and referenced on the delineation data form

[4] Wetlands classified according to Cowardin et al. 1979; PEM = Palustrine Emergent Wetland; PSS = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland; POW = Palustrine Open Water

[5] Associated Watercourse refers to the identification number in the project map set

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W1

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.48492636 Long: -73.12398129 Datum: WGS 84

Soil Map Unit Name: 47C - Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W1

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

W1 is a PEM wetland area, associated with Stream 1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants.

Sampling Point: W1

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Salix bebbiana	10	✔	FACW
2. Clethra alnifolia	5	✔	FAC
3. Rosa multiflora	5	✔	FACU
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Juncus effusus	90	✔	OBL
2. Carex lurida	15		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	105	x 1 =	105
FACW species	10	x 2 =	20
FAC species	5	x 3 =	15
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	125 (A)		160 (B)

Prevalence Index = B/A = 1.28

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/2	100					Silt Loam	
6 - 18	10YR 4/2	80	7.5YR 4/6	20	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W2

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.48426412 Long: -73.12380018 Datum: WGS 84

Soil Map Unit Name: 84D - Paxton and Montauk fine sandy loams, 15 to 25 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W2

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

W2 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants.

Sampling Point: W2

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Elaeagnus umbellata	20	✔	
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Eleocharis obtusa	60	✔	OBL
2. Lythrum salicaria	30	✔	OBL
3. Phragmites australis	10		FACW
4. Securigera varia	10		
5. Dichanthelium clandestinum	10		FACW
6. Juncus effusus	5		OBL
7. Solidago rugosa	5		FAC
8.			
9.			
10.			
11.			
12.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	20	x 2 =	40
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		150 (B)

Prevalence Index = B/A = 1.25

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Muck	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W4

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.48031491 Long: -73.1259864 Datum: WGS 84

Soil Map Unit Name: 47C - Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W4

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

W4 is a PEM/PSS wetland area, associated with Stream S4. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Hydric soil indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W4

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Viburnum dentatum	10	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Clethra alnifolia	15	✔	FAC
2. Viburnum dentatum	10	✔	FAC
3.			
4.			
5.			
6.			
7.			
	25 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Symphyotrichum puniceum	30	✔	OBL
2. Carex lurida	20	✔	OBL
3. Juncus effusus	20	✔	OBL
4. Carex spicata	10		FACU
5. Impatiens capensis	10		FACW
6. Poa pratensis	5		FACU
7.			
8.			
9.			
10.			
11.			
12.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	10	x 2 =	20
FAC species	35	x 3 =	105
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	130 (A)		255 (B)

Prevalence Index = B/A = 1.96

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Mucky Peat	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W5

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA): R 144A Lat: 41.47970891 Long: -73.1263213 Datum: WGS 84

Soil Map Unit Name: 47C - Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W5

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

W5 is a PSS/PEM wetland area, associated with VP1 and Jacks Brook. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1	
Water Table Present?	Yes ____	No ✔	Depth (inches): ____	
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0	**Wetland Hydrology Present?** **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants.

Sampling Point: W5

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Clethra alnifolia	20	✔	FAC
2. Cornus amomum	10	✔	FACW
3. Acer rubrum	5		FAC
4. Salix discolor	5		FACW
5.			
6.			
7.			
	40 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Glyceria striata	20	✔	OBL
2. Lythrum salicaria	20	✔	OBL
3. Typha latifolia	20	✔	OBL
4. Carex stricta	10		OBL
5. Solidago rugosa	10		FAC
6. Juncus effusus	5		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	10	✔	FACU
2.			
3.			
4.			
	10 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	15	x 2 =	30
FAC species	35	x 3 =	105
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	135 (A)		250 (B)

Prevalence Index = B/A = 1.85

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Muck	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W6

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): R 144A Lat: 41.47456247 Long: -73.12862116 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W6

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

W6 is a PEM/PSS wetland area, associated with Little River. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants.

Sampling Point: W6

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	60	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	60 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Symplocarpus foetidus	80	✔	OBL
2. Impatiens capensis	40	✔	FACW
3. Carex intumescens	10		FACW
4. Glyceria striata	10		OBL
5. Eupatorium perfoliatum	5		FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	145 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90
FACW species	115	x 2 =	230
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	205 (A)		320 (B)

Prevalence Index = B/A = 1.56

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Mucky Peat	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W7

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.47296958 Long: -73.12926684 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W7

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

W7 is a PEM/PSS wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 3	
Water Table Present?	Yes ____	No ✔	Depth (inches): ____	
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0	**Wetland Hydrology Present?** Yes ✔ No ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W7

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Acer rubrum	20	✔	FAC
2. Ilex verticillata	10	✔	FACW
3. Elaeagnus umbellata	10	✔	
4.			
5.			
6.			
7.			
	40 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	80	✔	FACW
2. Carex stricta	30	✔	OBL
3. Thelypteris palustris	20		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	10	✔	FACU
2.			
3.			
4.			
	10 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	110	x 2 =	220
FAC species	20	x 3 =	60
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	170 (A)		350 (B)

Prevalence Index = B/A = 2.05

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Muck	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W8

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.47287014 Long: -73.1295169 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W8

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

W8 is a PEM/PSS wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W8

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Vaccinium corymbosum	20	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Typha latifolia	80	✔	OBL
2. Onoclea sensibilis	30	✔	FACW
3. Thelypteris palustris	10		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	10	✔	FACU
2.			
3.			
4.			
	10 = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80
FACW species	60	x 2 =	120
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	150 (A)		240 (B)

Prevalence Index = B/A = 1.60

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Muck	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W9

Investigator(s): Hayley De Marchis Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.47075829 Long: -73.13024801 Datum: WGS 84

Soil Map Unit Name: 85B - Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 _____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: W9

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

W9 is a PSS/PEM wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 2

Wetland Hydrology Present? **Yes** ✔ **No** _____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W9

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	30	✔	FACW
2. Viburnum dentatum	20	✔	FAC
3. Acer rubrum	10		FAC
4. Amelanchier arborea	10		FACU
5. Vaccinium corymbosum	10		FACW
6.			
7.			
	80 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Solidago rugosa	50	✔	FAC
2. Dichanthelium clandestinum	20	✔	FACW
3. Potentilla simplex	5		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	80	x 3 =	240
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	155 (A)		420 (B)

Prevalence Index = B/A = 2.70

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Silt Loam	
4 - 6	10YR 4/2	90	7.5YR 4/6	10	C	M	Silt Loam	Rock restriction at 6 inches; Soil is disturbed.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W10

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.46965764 Long: -73.13107076 Datum: WGS 84

Soil Map Unit Name: 46B - Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W10

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

W10 is a PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 4

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants.

Sampling Point: W10

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	50	✔	FAC
2. Rosa multiflora	10		FACU
3.			
4.			
5.			
6.			
7.			
	60 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Solidago rugosa	90	✔	FAC
2. Impatiens capensis	10		FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	140	x 3 =	420
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	160 (A)		480 (B)

Prevalence Index = B/A = 3.00

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Silt Loam	
4 - 6	10YR 4/2	90	7.5YR 4/6	10	C	M	Silt Loam	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W11

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.46875798 Long: -73.1311558 Datum: WGS 84

Soil Map Unit Name: 85B - Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W11

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

W11 is a PEM/PSS wetland area, associated with Stream 6. Soil and hydrology are disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W11

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	50	✔	FAC
2. Acer rubrum	10		FAC
3. Vaccinium corymbosum	10		FACW
4.			
5.			
6.			
7.			
	70 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Syntrichia ruralis	70	✔	
2. Solidago rugosa	20		FAC
3. Juncus effusus	10		OBL
4. Osmundastrum cinnamomeum	10		FACW
5. Euthamia graminifolia	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	85	x 3 =	255
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		305 (B)

Prevalence Index = B/A = 2.65

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Muck	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W12

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.46777948 Long: -73.13152966 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W12

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

W12 is a PEM/PSS wetland area. Soil and hydrology are disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W12

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix bebbiana	30	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum lentago	10	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	40	✔	FACW
2. Symplocarpus foetidus	30	✔	OBL
3. Symphyotrichum puniceum	30	✔	OBL
4. Onoclea sensibilis	20		FACW
5. Carex stipata	10		OBL
6. Thelypteris palustris	5		FACW
7.			
8.			
9.			
10.			
11.			
12.			
	135	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	95	x 2 =	190
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	175 (A)		290 (B)

Prevalence Index = B/A = 1.65

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Muck	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W13

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.46626919 Long: -73.13240204 Datum: WGS 84

Soil Map Unit Name: 45B - Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W13

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

W13 is a PEM/PSS wetland area, associated with Stream 7. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W13

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix bebbiana	50	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Acer rubrum	10	✔	FAC
2. Clethra alnifolia	5	✔	FAC
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phalaris arundinacea	40	✔	FACW
2. Silene flos-cuculi	30	✔	FACU
3. Solidago altissima	10		FACU
4. Eleocharis obtusa	10		OBL
5. Potentilla simplex	5		FACU
6. Euthamia graminifolia	5		FAC
7. Galium mollugo	5		FACU
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	90	x 2 =	180
FAC species	20	x 3 =	60
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	170 (A)		450 (B)

Prevalence Index = B/A = 2.64

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Silt Loam	
4 - 6	10YR 4/2	90	7.5YR 4/6	10	C	M	Silt Loam	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-29

Applicant/Owner: Eversource State: Connecticut Sampling Point: W14

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.46536908 Long: -73.13277488 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W14

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

W14 is a PEM wetland area, associated with Stream 7. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W14

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Clethra alnifolia	10	✔	FAC
2. Cornus amomum	10	✔	FACW
3. Vaccinium corymbosum	10	✔	FACW
4. Viburnum dentatum	10	✔	FAC
5.			
6.			
7.			
	40 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	50	✔	FACW
2. Juncus effusus	20	✔	OBL
3. Solidago gigantea	20	✔	FACW
4. Impatiens capensis	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	100	x 2 =	200
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	140 (A)		280 (B)

Prevalence Index = B/A = 2.00

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W14

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/2	100					Silt Loam	
6 - 8	10YR 4/2	90	7.5YR 4/6	10	C	M	Silt Loam	Rock at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W15

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.46488163 Long: -73.13308056 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W15

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

W15 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1	
Water Table Present?	Yes ✔	No ____	Depth (inches): 6	
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0	**Wetland Hydrology Present?** **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W15

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	20	✔	FACU
2. Vaccinium corymbosum	10	✔	FACW
3. Viburnum dentatum	10	✔	FAC
4.			
5.			
6.			
7.			
	40 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Carex lurida	40	✔	OBL
2. Onoclea sensibilis	30	✔	FACW
3. Solidago rugosa	20	✔	FAC
4. Juncus effusus	10		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	20	✔	FACU
2.			
3.			
4.			
	20 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	40	x 2 =	80
FAC species	30	x 3 =	90
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	160 (A)		380 (B)

Prevalence Index = B/A = 2.37

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W15

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Silt Loam	
6 - 12	10YR 7/1	70	7.5YR 7/6	30	C	M	Silt Loam	Rock restriction at 12 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W16

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.46136932 Long: -73.13483741 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W16

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

W16 is a PEM/PSS wetland area, associated with Stream 8. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W16

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	20	✔	FACW
2. Viburnum dentatum	20	✔	FAC
3. Rosa multiflora	10		FACU
4. Rubus allegheniensis	10		FACU
5.			
6.			
7.			
	60 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Symplocarpus foetidus	60	✔	OBL
2. Onoclea sensibilis	30	✔	FACW
3. Solidago rugosa	10		FAC
4. Hieracium caespitosum	5		
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	10	✔	FACU
2.			
3.			
4.			
	10 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	50	x 2 =	100
FAC species	50	x 3 =	150
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	190 (A)		430 (B)

Prevalence Index = B/A = 2.26

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 2/1	100					Silt Loam	
6 - 12	10YR 4/1	90	10YR 5/6	10	C	M	Silt Loam	Rock restriction at 12 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W17

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.45981748 Long: -73.13551035 Datum: WGS 84

Soil Map Unit Name: 3 - Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W17

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

W17 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W17

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	10	✔	FACU
2. Elaeagnus umbellata	10	✔	
3. Fraxinus americana	5	✔	FACU
4.			
5.			
6.			
7.			
	25 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Juncus effusus	60	✔	OBL
2. Carex stricta	40	✔	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	115 (A)		160 (B)

Prevalence Index = B/A = 1.39

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Silt Loam	
4 - 6	10YR 4/1	90	10YR 5/6	10	C	M	Silt Loam	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W18

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.45787192 Long: -73.13637383 Datum: WGS 84

Soil Map Unit Name: 45B - Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W18

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

W18 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W18

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	10	✔	FACU
2. Salix bebbiana	10	✔	FACW
3. Lindera benzoin	5	✔	FACW
4.			
5.			
6.			
7.			
	25	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Carex stipata	30	✔	OBL
2. Impatiens capensis	20	✔	FACW
3. Phalaris arundinacea	15		FACW
4. Juncus effusus	10		OBL
5. Solidago rugosa	10		FAC
6. Glyceria striata	10		OBL
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis aestivalis	20	✔	FACU
2.			
3.			
4.			
	20	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species	30	x 3 =	90
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	160 (A)		360 (B)

Prevalence Index = B/A = 2.25

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W18

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Muck	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

W19

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: New Haven County Sampling Date: 2020-09-22

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1436 1A

Investigator(s): SME, JSC Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR or MLRA): R 144A Lat: 41.4544983 Long: -73.1379016 Datum: NAD 83

Soil Map Unit Name: 45B - Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No ____**
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID:

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

Drought

Adjacent to mowed lawn

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔ Depth (inches): ____

Water Table Present? Yes ____ No ✔ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✔ Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1436 1A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	20	✔	FACW
2. Lindera benzoin	20	✔	FACW
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Persicaria sagittata	40	✔	OBL
2. Symphyotrichum novae-angliae	20	✔	FACW
3. Eupatorium perfoliatum	10		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	70	x 2 =	140
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		240 (B)

Prevalence Index = B/A = 1.85

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.

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: 1436 1A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/2	95	7.5YR 5/8	5	C	PL	Sandy Loam	
2 - 10	10YR 6/2	75	7.5YR 4/6	25	C	M	Loamy Sand	
10 - 16	10YR 2/1	90	5YR 4/6	10	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 16

Hydric Soil Present? Yes ✔ No ___

Remarks:

W20

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-22

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1435-1A-1

Investigator(s): SME, JSC Section, Township, Range:

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

Subregion (LRR or MLRA): R 144A Lat: 41.4523315 Long: -73.1381157 Datum: NAD 83

Soil Map Unit Name: 13 Walpole sandy loam NWI classification: PFO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1435 1A
Wetland Hydrology Present?	Yes ✔	No ____	

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ____ High Water Table (A2)
- ✔ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ____ 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)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ____	Depth (inches): 2
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1435-1A-1

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	40	✔	FAC
2. Betula populifolia	20	✔	FAC
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Sambucus nigra ssp. canadensis	20	✔	
2. Lindera benzoin	10	✔	FACW
3. Sambucus nigra ssp. canadensis			
4.			
5.			
6.			
7.			
	30	= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Osmundastrum cinnamomeum	20	✔	FACW
2. Symphyotrichum novae-angliae	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	60	x 3 =	180
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		260 (B)

Prevalence Index = B/A = 2.60

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.

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: 1435-1A-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 2/1	100					Mucky Peat	
10 - 12	10YR 2/2	65	2.5Y 5/3	35	D	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

W21

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-22

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1434-1A

Investigator(s): SME, JSC Section, Township, Range:

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 10-20

Subregion (LRR or MLRA): R 144A Lat: 41.4500427 Long: -73.1385626 Datum: NAD 83

Soil Map Unit Name: 13 Walpole sandy loam NWI classification: PFO/EM1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No ____**
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1434 1A

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1434-1A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	20	✔	FAC
2. Cornus amomum	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	30% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Osmundastrum cinnamomeum	20	✔	FACW
2. Symphyotrichum puniceum	20	✔	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	30	x 2 =	60
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	70 (A)		140 (B)

Prevalence Index = B/A = 2.0

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.

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: 1434-1A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 3/1	95	7.5YR 4/6	5	C	PL	Sandy loam	Floodplain
5 - 15	10YR 5/2	90	7.5YR 4/3	10	D	M	Sandy loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

W22

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1572 1A

Investigator(s): SME, JSC Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR or MLRA): R 144A Lat: 41.4555359 Long: -73.1327365 Datum: NAD 83

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ 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 _____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No _____**
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: 1572 1A

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✔ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✔	Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No _____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1572 1A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Clethra alnifolia	20	✔	FAC
2. Vaccinium corymbosum	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	30% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Leersia oryzoides	60	✔	OBL
2. Osmunda spectabilis	10		OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	10	x 2 =	20
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		150 (B)

Prevalence Index = B/A = 1.5

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.

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: 1572 1A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 11	10YR 2/1	95	5YR 5/6	5	C	PL	Silt Loam	
11 - 14	10YR 2/1	95	7.5YR 4/6	5	C	M	Silt Loam	
14 - 18	10YR 5/2	65	7.5YR 5/8	35	C	M	Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

W23

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1572 2A

Investigator(s): SME, JSC Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR or MLRA): R 144A Lat: 41.4550476 Long: -73.1320944 Datum: NAD 83

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No ____**
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1572 2A

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔ Depth (inches): ____

Water Table Present? Yes ____ No ✔ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✔ Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1572 2A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	40	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	40%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	20	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Osmunda spectabilis	10	✔	OBL
2. Onoclea sensibilis	5	✔	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	15%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	25	x 2 =	50
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		180 (B)

Prevalence Index = B/A = 2.4

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.

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: 1572 2A

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Silt Loam	
8 - 10	10YR 5/1	100					Silt Loam	Rock restriction at 10 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W24

Investigator(s): Hayley De Marchis Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.45500352 Long: -73.13097249 Datum: WGS 84

Soil Map Unit Name: 73C - Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 _____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No _____**
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: W24

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

W24 is a PSS wetland area. Soils are disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes ✔** **No _____**

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants.

Sampling Point: W24

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rubus idaeus	20	✔	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Impatiens capensis	100	✔	FACW
2. Solidago rugosa	20		FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Celastrus orbiculatus	30	✔	FACU
2. Vitis labrusca	20	✔	FACU
3.			
4.			
	50 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	20	x 3 =	60
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	190 (A)		540 (B)

Prevalence Index = B/A = 2.84

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W24

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Silt Loam	
4 - 6	10YR 4/1	90	7.5YR 4/6	10	C	M	Silt Loam	Rock restriction at 6 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 6

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

W25

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1573-1B

Investigator(s): SME, JSC Section, Township, Range:

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

Subregion (LRR or MLRA): R 144A Lat: 41.4546204 Long: -73.1295453 Datum: NAD 83

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1573 1B
Wetland Hydrology Present?	Yes ✔	No ____	

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ____ High Water Table (A2)
- ✔ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ____ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ✔ 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)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ____	Depth (inches): 6
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1573-1B

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Eutrochium purpureum	20	✔	FAC
2. Lindera benzoin	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	30% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Persicaria sagittata	20	✔	OBL
2. Symphyotrichum novae-angliae	10	✔	FACW
3. Typha latifolia	10	✔	OBL
4. Chelone glabra	5		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	20	x 2 =	40
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		135 (B)

Prevalence Index = B/A = 1.8

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.

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: 1573-1B

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 7	10YR 2/1	100					Mucky Peat	Rock restriction at 7 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 7

Hydric Soil Present? Yes ✔ No ___

Remarks:

W26

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1574 1

Investigator(s): SME, JSC Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): R 144A Lat: 41.4547119 Long: -73.1278781 Datum: NAD 83

Soil Map Unit Name: 73E Charlton-Chatfield complex NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1574 W1

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1574 1

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	20	✔	FACW
2. Sambucus nigra ssp. canadensis	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	30% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Bidens laevis	40	✔	OBL
2. Spiraea alba	20	✔	FACW
3. Typha latifolia	20	✔	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	80% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		160 (B)

Prevalence Index = B/A = 1.5

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.

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: 1574 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/2	100					Silt Loam	
2 - 13	10YR 2/1	90	5YR 4/6	10	C	PL	Silt Loam	Rock restriction at 13 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 13

Hydric Soil Present? Yes ✔ No ___

Remarks:

W26

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1577 1A

Investigator(s): SME, JAC Section, Township, Range:

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

Subregion (LRR or MLRA): R 144A Lat: 41.4547119 Long: -73.1278282 Datum: NAD 83

Soil Map Unit Name: 17 Timakwa and Natchaug soil, 3 Ridgebury,Leicester,and Whitman soils NWI classification: PEM1Fh

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1577 1A
Wetland Hydrology Present?	Yes ✔	No ____	

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ✔ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ____	Depth (inches): 12
Water Table Present?	Yes ✔	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1577 1A

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Carex typhina	25	✔	OBL
2. Phragmites australis	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	35% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Eutrochium purpureum	25	✔	FAC
2. Eupatorium perfoliatum	15	✔	FACW
3. Onoclea sensibilis	10	✔	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	35	x 2 =	70
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	85 (A)		170 (B)

Prevalence Index = B/A = 2.0

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.

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: 1577 1A

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Mucky Peat	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 18

Hydric Soil Present? Yes ✔ No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W27

Investigator(s): Hayley De Marchis Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 10

Subregion (LRR or MLRA): R 144A Lat: 41.45392414 Long: -73.1260544 Datum: WGS 84

Soil Map Unit Name: 73C - Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 _____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: W27

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

W27 is a PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** _____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W27

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rubus idaeus	30	✔	FACU
2. Lindera benzoin	20	✔	FACW
3. Hamamelis virginiana	20	✔	FACU
4.			
5.			
6.			
7.			
	70 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Osmundastrum cinnamomeum	90	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	30	✔	FACU
2.			
3.			
4.			
	30 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	190 (A)		540 (B)

Prevalence Index = B/A = 2.84

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.

Definitions of Vegetation Strata:

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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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W27

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Mucky Peat	Rock restriction at 4 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 4

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W28

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.45352447 Long: -73.12320948 Datum: WGS 84

Soil Map Unit Name: 73C - Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W28

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

W28 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Hydric soil indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W28

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rosa multiflora	20	✔	FACU
2. Rubus allegheniensis	20	✔	FACU
3. Viburnum dentatum	10	✔	FAC
4.			
5.			
6.			
7.			
	50 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phragmites australis	80	✔	FACW
2. Impatiens capensis	50	✔	FACW
3. Toxicodendron radicans	20		FAC
4. Toxicodendron pubescens	20		
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	170 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Celastrus orbiculatus	30	✔	FACU
2.			
3.			
4.			
	30 = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	130	x 2 =	260
FAC species	30	x 3 =	90
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	230 (A)		630 (B)

Prevalence Index = B/A = 2.73

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W28

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Muck	Rock restriction at 4 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 4

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W29

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.45312742 Long: -73.12203143 Datum: WGS 84

Soil Map Unit Name: 73E - Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W29

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

W29 is a PEM/POW wetland area, associated with Jacks Brook.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 4
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W29

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	30	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Phragmites australis	100	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		290 (B)

Prevalence Index = B/A = 2.23

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W29

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Muck	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

Hydric soil indicator is present.

W30

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580: 2020 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 308 1A 4

Investigator(s): SME,JSC Section, Township, Range:

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

Subregion (LRR or MLRA): R 144A Lat: 41.4525146 Long: -73.1162688 Datum: NAD 83

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PSS1/FO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 308 1A
Wetland Hydrology Present?	Yes ✔	No ____	

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ✔ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 6
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 308 1A 4

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	10	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lindera benzoin	60	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	60%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Symplocarpus foetidus	20	✔	OBL
2. Osmundastrum cinnamomeum	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	70	x 2 =	140
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		190 (B)

Prevalence Index = B/A = 1.9

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.

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: 308 1A 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Mucky Peat	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W31

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.44934408 Long: -73.10641612 Datum: WGS 84

Soil Map Unit Name: 84B - Paxton and Montauk fine sandy loams, 3 to 8 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W31

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

W31 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Hydric soil indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W31

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lonicera morrowii	20	✔	FACU
2. Clethra alnifolia	10	✔	FAC
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	50	✔	FACW
2. Solidago rugosa	40	✔	FAC
3. Juncus effusus	20		OBL
4. Phragmites australis	10		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis labrusca	20	✔	FACU
2.			
3.			
4.			
	20 = 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: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	60	x 2 =	120
FAC species	50	x 3 =	150
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	170 (A)		450 (B)

Prevalence Index = B/A = 2.64

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W31

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 3/1	100					Loamy Sand	
6 - 10	10YR 4/1	90	7.5YR 4/6	10	C	M	Loamy Sand	Rock restriction at 10 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

W32

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 City/County: Oxford Sampling Date: 2020-09-22

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1580 W15

Investigator(s): MHZ, RKV Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): _____ Slope (%): 0-5

Subregion (LRR or MLRA): R 144A Lat: 41.4517517 Long: -73.1143724 Datum: WGS 84

Soil Map Unit Name: 3 Ridgebury, Leicester, Whitman soils NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1580 W15

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

Drought
Bouldery

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Drought

VEGETATION – Use scientific names of plants. Sampling Point: 1580 W15

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus incana	5	✔	FACW
2. Sambucus nigra ssp. canadensis	2	✔	NI
3.			
4.			
5.			
6.			
7.			
	7%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Cornus amomum	5	✔	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5%	= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Carex scoparia	15	✔	FACW
2. Onoclea sensibilis	5		FACW
3. Solidago gigantea	5		FACW
4. Verbena hastata	5		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
1. Vitis riparia	10	✔	FAC
2.			
3.			
4.			
	10%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		110 (B)

Prevalence Index = B/A = 2.2

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.

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: 1580 W15

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/1	88	10YR 6/1	10	D	M	Loamy sand	Bouldery
0 - 8			7.5YR 4/6	2	C	PL	Loamy sand	Bouldery
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Boulder

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Bouldery

W33

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 City/County: Oxford Sampling Date: 2020-09-22

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1581 W14

Investigator(s): MHZ, RKV Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR or MLRA): R 144A Lat: 41.4510498 Long: -73.1091544 Datum: WGS 84

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1581 W14

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1581 W14

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	2		FAC
2. Ulmus americana	2		FACW
3.			
4.			
5.			
6.			
7.			
	4%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	25	✔	FACW
2. Spiraea alba	25	✔	FACW
3.			
4.			
5.			
6.			
7.			
	50%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Glyceria canadensis	20	✔	OBL
2. Carex scoparia	5		FACW
3. Carex stricta	5		OBL
4. Persicaria sagittata	5		OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	57	x 2 =	114
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	89 (A)		150 (B)

Prevalence Index = B/A = 1.7

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.

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: 1581 W14

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 5	10YR 4/2	75	7.5YR 4/6	15	C	M	Silt Loam	
5 - 12	10YR 3/1	75	7.5YR 4/6	15	C	M	Sandy loam	Rock restriction at 12 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes ✔ No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W34

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.45057352 Long: -73.10794731 Datum: WGS 84

Soil Map Unit Name: 85C - Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W34

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

W34 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ✔	No ____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W34

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Rubus allegheniensis	15	✔	FACU
2. Viburnum dentatum	10	✔	FAC
3.			
4.			
5.			
6.			
7.			
	25 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	100	✔	FACW
2. Impatiens capensis	30	✔	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	130 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	130	x 2 =	260
FAC species	10	x 3 =	30
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	155 (A)		350 (B)

Prevalence Index = B/A = 2.25

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W34

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 2/1	100					Loamy Sand	
4 - 10	10YR 4/1	90	10YR 5/6	10	C	M	Loamy Sand	Rock restriction at 10 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

W35

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1584 W13

Investigator(s): MHZ, RKV Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 5-10

Subregion (LRR or MLRA): R 144A Lat: 41.4507446 Long: -73.0996202 Datum: WGS 84

Soil Map Unit Name: 3 Ridgebury, Leicester, and Whitman soils NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1584 W13
Wetland Hydrology Present?	Yes ✔	No ____	

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

Drought

Historic fill through center of wetland to create access

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: 1584 W13

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Lindera benzoin	10	✔	FACW
2. Viburnum dentatum	5	✔	FAC
3.			
4.			
5.			
6.			
7.			
	15% = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Juncus effusus	15	✔	OBL
2. Persicaria sagittata	10	✔	OBL
3. Onoclea sensibilis	5		FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	15	x 2 =	30
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	45 (A)		70 (B)

Prevalence Index = B/A = 1.6

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.

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: 1584 W13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 3/1	88	10YR 5/1	2	D	M	Peat	Sandy peat
0 - 6			5YR 4/6	10	C	M		
6 - 9	10YR 3/1	70	10YR 5/1	20	D	M	Mucky Sand	
6 - 9			2.5YR 4/8	10	C	M		Rock restriction at 9 inches
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 9

Hydric Soil Present? Yes ✔ No ___

Remarks:

W36

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1585 W12

Investigator(s): MHZ, RKV Section, Township, Range:

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA): R 144A Lat: 41.4487915 Long: -73.0979360 Datum: WGS 84

Soil Map Unit Name: 62C Canton and Charlton fine sandy loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1585 W12

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

Vegetation management
Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ✔ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 1585 W12

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	5	✔	FAC
2. Betula nigra	5	✔	FACW
3.			
4.			
5.			
6.			
7.			
	10%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Persicaria sagittata	55	✔	OBL
2. Carex scoparia	30	✔	FACW
3. Juncus effusus	10		OBL
4. Osmundastrum cinnamomeum	5		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	65	x 1 =	65
FACW species	40	x 2 =	80
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		160 (B)

Prevalence Index = B/A = 1.5

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.

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: 1585 W12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 2/1	100	/				Peat	Rock restriction at 10 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

W37

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 City/County: Oxford Sampling Date: 2020-09-21

Applicant/Owner: Eversource State: Connecticut Sampling Point: 1585 W11

Investigator(s): MHZ, RKV Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): _____ Slope (%): 5

Subregion (LRR or MLRA): R 144A Lat: 41.4502869 Long: -73.0979319 Datum: WGS 84

Soil Map Unit Name: 62C Canton and Charlton fine sandy loams NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No ____**
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: 1585 W11

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

Drought

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✔ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ✔ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✔	Depth (inches): ____

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: 1585 W11

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	50	✔	FAC
2. Fraxinus pennsylvanica	5		FACW
3.			
4.			
5.			
6.			
7.			
	55%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Ilex verticillata	30	✔	FACW
2. Vaccinium corymbosum	10	✔	FACW
3.			
4.			
5.			
6.			
7.			
	40%	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
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 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	95 (A)		240 (B)

Prevalence Index = B/A = 2.5

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.

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: 1585 W11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 2/1	100					Mucky Peat	Restriction at 10 inches
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W38

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.44959672 Long: -73.09747834 Datum: WGS 84

Soil Map Unit Name: 52C - Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W38

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

W38 is a PEM/PSS wetland area. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ____	Depth (inches): 1
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicators are present.

VEGETATION – Use scientific names of plants. Sampling Point: W38

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Solidago rugosa	60	✔	FAC
2. Solidago gigantea	30	✔	FACW
3. Sisyrinchium angustifolium	20		FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
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: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	130 (A)		360 (B)

Prevalence Index = B/A = 2.76

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W38

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 3/1	100					Silt Loam	
4 - 10	10YR 4/1	90	10YR 4/6	10	C	M	Silt Loam	Rock restriction at 10 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 10

Hydric Soil Present? Yes ✔ No ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W39

Investigator(s): Hayley De Marchis Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): R 144A Lat: 41.44952456 Long: -73.09321973 Datum: WGS 84

Soil Map Unit Name: 52C - Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ 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 _____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: W39

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

W39 is a PEM/PSS wetland area. Soil and vegetation are disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** _____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W39

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Carya cordiformis	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	80	✔	FACW
2. Impatiens capensis	20		FACW
3. Thelypteris palustris	5		FACW
4. Phalaris arundinacea	5		FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft r)			
1. Smilax rotundifolia	20	✔	FAC
2. Vitis labrusca	10	✔	FACU
3.			
4.			
	30	= 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	160 (A)		380 (B)

Prevalence Index = B/A = 2.37

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W39

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Muck	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W40

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): R 144A Lat: 41.44968408 Long: -73.09234929 Datum: WGS 84

Soil Map Unit Name: 52C - Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** **Yes** ✔ **No** ____
Hydric Soil Present?	Yes ✔	No ____	
Wetland Hydrology Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W40

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

W40 is a PSS/PEM wetland area, associated with Streams 14 and 15. Soil is disturbed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** ✔ **No** ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W40

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Onoclea sensibilis	90	✔	FACW
2. Impatiens capensis	20		FACW
3. Typha latifolia	10		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	120 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	110	x 2 =	220
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	140 (A)		290 (B)

Prevalence Index = B/A = 2.07

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W40

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Muck	Rock restriction at 8 inches.
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

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

Restrictive Layer (if observed):

Type: Rock

Depth (inches): 8

Hydric Soil Present? **Yes** ✔ **No** ___

Remarks:

Hydric soil indicator is present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Line 1580 Segment 5 P1 Wetland Plots City/County: Oxford Sampling Date: 2024-05-30

Applicant/Owner: Eversource State: Connecticut Sampling Point: W42

Investigator(s): Hayley De Marchis Section, Township, Range:

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): R 144A Lat: 41.44898558 Long: -73.08998451 Datum: WGS 84

Soil Map Unit Name: 73C - Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✔ No ____
Hydric Soil Present?	Yes ✔	No ____	If yes, optional Wetland Site ID: W42
Wetland Hydrology Present?	Yes ✔	No ____	

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

W42 is a PEM/PSS wetland area, associated with Stream 17 and Pines Brook.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ 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)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble 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 ✔	Depth (inches): ____
Water Table Present?	Yes ____	No ✔	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✔	No ____	Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ____

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

Remarks:

Wetland hydrologic indicator is present.

VEGETATION – Use scientific names of plants. Sampling Point: W42

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Viburnum dentatum	20	✔	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft r)			
1. Symplocarpus foetidus	50	✔	OBL
2. Impatiens capensis	30	✔	FACW
3. Solidago rugosa	20	✔	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	30	x 2 =	60
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		230 (B)

Prevalence Index = B/A = 1.91

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.

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.)

Hydrophytic vegetation is present.

SOIL

Sampling Point: W42

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	100					Muck	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: 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) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 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**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ 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)

[3]Indicators 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:

Hydric soil indicator is present.

Attachment F

NDDB Determination Letter

Connecticut
Department of Energy &
Environmental Protection

portal.ct.gov/DEEP

8/19/2024

Robert Deptula
EVERSOURCE ENERGY SERVICE COMPANY
107 SELDEN ST.
BERLIN, CT 06037
eversource.nddb@eversource.com

Subject: Towantic to Beacon Falls Junction Rebuild Project
Filing #: 109662
NDDB - New Determination Number: 202404706

Expiration Date: 8/19/2026

Location Description:

Eversource Energy Company, LLC , Towantic to Beacon Falls Rebuild Project for the 1808 and 1319 Transmission Line in Oxford, Connecticut

I have reviewed NDDB maps and files regarding the proposed Eversource Energy Company, LLC, Towantic to Beacon Falls Rebuild Project for the 1808 and 1319 Transmission Line in Oxford , Connecticut. According to our information there are known extant populations of State Endangered Barrens buck moth (*Hemileuca maia maia*) and State Special Concern A*splenium montanum* (Mountain spleenwort) Red Bat (Lasiurus borealis), Hoary Bat (Lasiurus cinereus), Whip-poor-will (*Caprimulgus vociferous*), Eastern Box Turtle (*Terrapene c. carolina*) and Hognose snake (*Heterodon platirhinos*) in this project area.

Protection for State Listed Animals

Eastern Box Turtle (*Terrapene c. carolina*): Eastern box turtles inhabit old fields and deciduous forests, which can include power lines and logged woodlands. They are often found near small streams and ponds. The adults are completely terrestrial, but the young may be semiaquatic and hibernate on land by digging down in the soil from October to April. They have an extremely small home range and can usually be found in the same area year after year. Eastern box turtles have been negatively impacted by the loss of suitable habitat. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated. Reducing the frequency that motorized vehicles enter box turtle habitat is beneficial in minimizing direct mortality of adults.

Hognose snake (*Heterodon platirhinos*): In Connecticut, these snakes are found in well-drained forest bottomlands and a matrix of open deciduous forests and early successional habitat, including powerlines. Within the early successional habitat, they preferentially use habitat that consists of sandy soils with medium to high vegetation cover and coarse woody debris. They tend to avoid dense forest, wetlands and developed areas. Paved roads may present a barrier to dispersal and connectivity within populations. Snakes are dormant between November 1 and April 1. They will overwinter in a variety of habitats, preferably at the edges of forest and within open habitats if available. They have been observed to overwinter under areas of tree roots, rodent burrows, rock crevices, or excavate their own dens in sandy soils.

Best management practices to protect turtles and snakes should be implemented throughout the entire work area.

The following protections measures will help avoid negative impacts to these two reptile species:

- You must hire a qualified herpetologist to be on site, educate workers about protection strategies and to oversee this project.
- All personnel working within the eastern box turtle or hognose snake habitat must be apprised of the species description and the possible presence of a listed species and instructed to relocate turtles or snakes found in work areas or notify the appropriate authorities to relocate individuals.

Protection during Active Period (March 1st through November 30th):

- The Contractor must search the work area each morning prior to any work being done. If a turtle or snake is discovered later in the day after the initial search work should stop until the animal can be relocated by educated construction worker.
- Any box turtle, or hognose snake encountered within the immediate work area shall be carefully moved to an adjacent area outside of the work area. The goal is to keep these reptiles from being unintentionally killed during this project.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- No heavy machinery or vehicles may be parked in any turtle smooth green or hognose snake habitat.

Protection During Inactive Period (October 1st through March 30th):

- Keeping heavy equipment in the open ROW to the greatest extent will minimize the potential for heavy machinery to crush hibernating turtles or snakes located in the forested edges along the ROW.
- No heavy machinery or vehicles may be parked in any turtle or snake habitat.

Any confirmed sightings of these species should be reported and documented with the NDDB (nddbrequestdep@ct.gov) on the appropriate special animal form found at (http://www.ct.gov/deep/cwp/view.asp?a=2702&q=323460&depNav_GID=1641)

-

Red Bat (*Lasiurus borealis*): State Special Concern Red bats are found in Connecticut during the spring and summer seasons and migrate south to overwinter. They are tree roosting bats. Their diet primarily consists of moths and beetles. These bats will roost high in large coniferous and deciduous trees. They typically do not roost on buildings. Female tree-roosting bats are solitary and give birth mid-May to late June. If work occurs outside this time frame, direct negative impacts to this species will be minimized. Long-term impacts can be minimized by retaining large diameter coniferous and deciduous trees whenever possible. Establishing a sort of wooded buffer adjacent to the wetland areas will help maintain potential roosting habitat.

Hoary Bat (*Lasiurus cinereus*): State Special Concern Hoary bats are found in Connecticut during the spring and summer seasons and migrate south to overwinter. They prefer to roost in large diameter coniferous and deciduous trees. They forage in openings and around water.

Tree Roosting Bat Protection Recommendations:

Typically, larger diameter trees (12-inch DBH and larger) are more valuable to these bats. Additionally, trees with loose, rough bark such as maples, hickories, and oaks are more desirable than other tree species due to the increased cover that the loose bark provides. Large trees with cavities are also utilized by this species.

To reduce impacts to these tree roosting bats:

- Retain the above-mentioned trees, wherever possible.
- Do not remove trees between April 15th and October 31st.

Whip-poor-will (*Caprimulgus vociferous*): The whip-poor-will is a bird that nests in forest habitat with an open understory, often adjacent to areas of shrubby or herbaceous habitat. They are ground-nesting birds that breed between April 20th and July 30th. They consume aerial invertebrates, especially Lepidoptera and Coleoptera. Whip-poor-will will benefit from protection of un-fragmented forested blocks, which serve as insulation to development subsidized predators, invasive plants, and forest disturbance. This species is found at all of the work sites listed above and the following avoidance measures should be applied at all of the locations.

Recommended Protection Strategies for Whip-poor-Will

- Do not cut, clear, remove trees or shrubs, or disturb ground or forest floor between May 1st and July 30th.

State-listed Invertebrate Species

- Barrens buck moth (*Hemileuca maia maia*)- State Endangered

Host plant: Buck moth caterpillars feed primarily on oaks including scrub oak, live oak, blackjack oak, and

dwarf chestnut oak.

- Columbine borer (*Papaipema leucostigma*) – State Special Concern

Host plant: Larva on Columbine

State-listed Plant Species

- *Hydrophyllum virginianum* (Virginia waterleaf)
  State Status: Special Concern
  Habitat: Rich, moist, deciduous woods and/or alluvial floodplains.
  Blooms: June

- *Asplenium montanum* (Mountain spleenwort)

State Status: Special Concern

Habitat: Acidic rocky cliffs in deep shade

Blooms: Mature sporangia in July. Identifiable throughout growing season

Protection for State-listed Plants and State Listed Invertebrate Species

We received a report State-Listed Plant and Invertebrate Host Plant Survey for Eastern Red Columbine (Aquilegia canadensis, Barrens Bickmoth Habitat Towantic to Beacon Falls Junction Rebuild Project Phase 1, Oxford, Connecticut developed by Eric Davison of Davison Environmental and dated July 31, 2024. The survey occurred in the maintained right-of-way from Chestnut Hill Road to east of Structure 315 on the 1808 line in May and June of 2024. No target species or habitats were identified for any of the state listed plant species or invertebrate host plants were observed. We concur with this report and do not anticipate adverse impacts to state listed plant or invertebrate host pants and therefore and no further conservation action is needed for these species.

This determination is good for two years. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by August 19, 2026.

Natural Diversity Data Base 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 Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes 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 into the Data Base as it becomes available.

Please contact me if you have further questions at deep.nddbrequest@ct.gov . Thank you for consulting the Natural Diversity Data Base. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEEP for the proposed site.

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDB - New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:

Natural Diversity Database information includes all information regarding listed species 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 Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. 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 into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the appropriate survey form and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required. Any additional review may result in specific restrictions or conditions relating to listed species that may be found at or in the vicinity of the site.
- If your project involves preparing an Environmental Impact Assessment, this NDDB consultation and determination should not be substituted for biological field surveys assessing on-site habitat and species presence.
- The NDDB - New determination for the Towantic to Beacon Falls Junction Rebuild Project as described in the submitted information and summarized at the end of this document is valid until 8/19/2026. This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 8/19/2026.

If you have further questions, please contact me at the following:

Dawn McKay
CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database
79 Elm Street
Hartford, CT 06106-5127

(860) 424-3592
Dawn.McKay@ct.gov

Please reference the Determination Number 202404706 when you e-mail or write. Thank you for consulting the Natural Diversity Data Base.

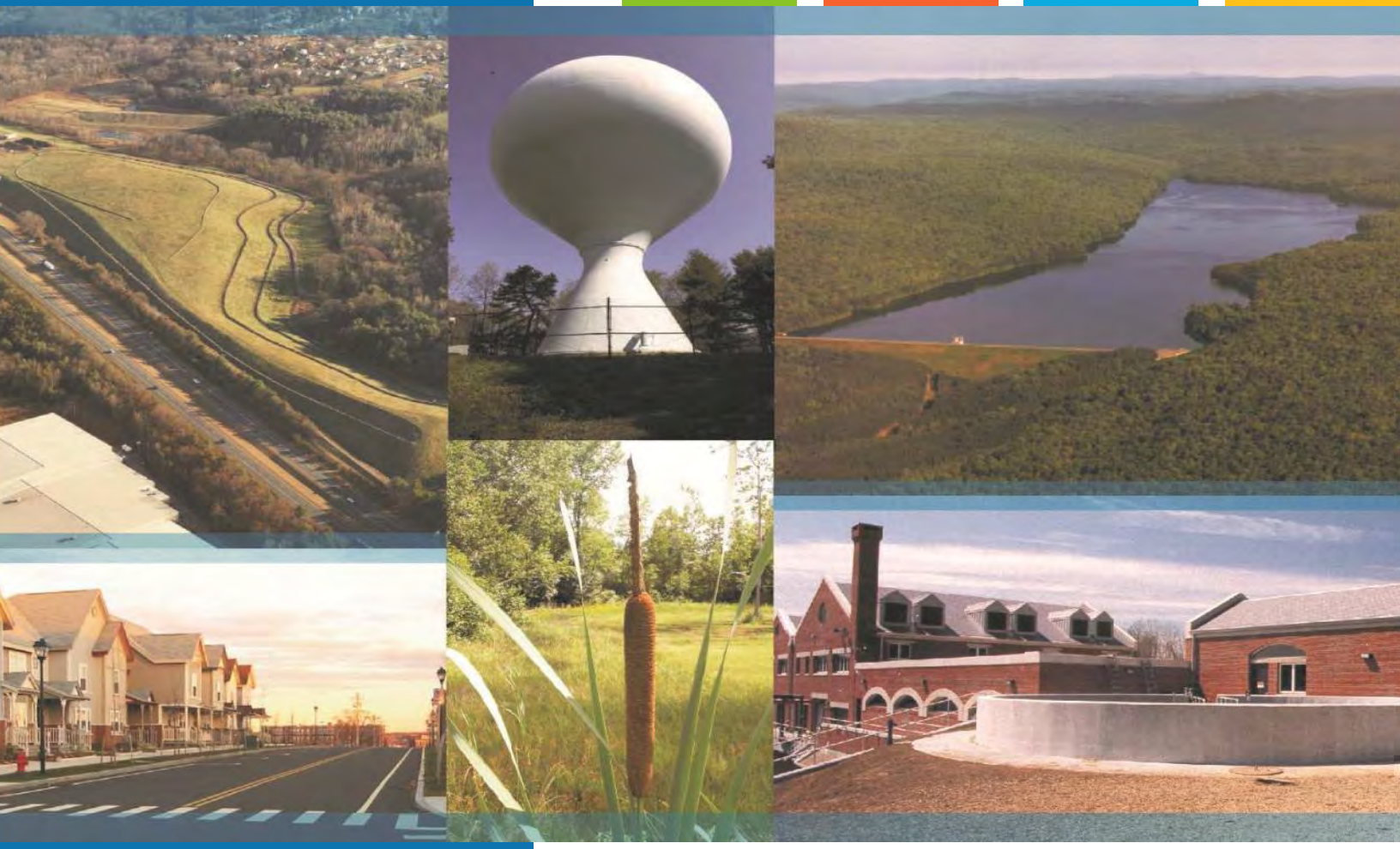
Dawn McKay
Wildlife Division- Natural Diversity Data Base
79 Elm Street
Hartford, CT 06106-5127
(860) 424-3592
Dawn.McKay@ct.gov

Application Details:

Project involves federal funds or federal permit:	Yes
Project involves state funds, state agency action, or relates to CEPA request:	No
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	
Project Sub-type:	Repairs to Transmission lines, cables, pipelines
Project Name:	Towantic to Beacon Falls Junction Rebuild Project
Project Description:	The project entails a full rebuild of transmission line structures and overhead components between Towantic Substation to Beacon Falls Junction. The Project wil

Attachment G

Vernal Pool Report



Towantic to Beacon Falls Junction Rebuild Project
Oxford, Connecticut

Vernal Pool Report

Eversource Energy

June 2024

Tighe&Bond

Tighe&Bond

SECTION 1

Section 1 **Introduction**

The following report details the vernal pool habitat assessment conducted by Tighe & Bond in support of Eversource Energy Service Company's ("Eversource") Petition to the Connecticut Siting Council for the Towantic Substation to Beacon Falls Junction Rebuild Project ("Project"). The Project is planned within an approximate 5.12-mile section of an existing transmission line right-of-way ("ROW") in the town of Oxford, Connecticut. The Project will require the construction of temporary and permanent access roads and work pads to facilitate rebuild activities, including removal and installation of new transmission structures and associated overhead transmission components. The Project will not require widening of the ROW or tree clearing that would result in a conversion of cover type. The Project will not result in any direct impacts to vernal pool depressions. Impacts to 100-foot vernal pool envelopes will be minimized to the greatest extent practicable through avoidance, minimization, and the use of Best Management Practices ("BMPs") as detailed within this report.

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SECTION 2

Section 2 **Vernal Pool Determination and Regulations**

The Connecticut Siting Council ("Council") published the *Electric and Fuel Transmission Line Facility* application guide ("Guidelines") in April 2010. Section VIII of the Guidelines provides an outline of the contents for an application to the Council. Specifically, Section VI.I.D requires the applicant to depict vernal pools in the existing conditions plans, along with a 100-foot buffer around each pool.

Projects subject to the Council's jurisdiction are not subject to local inland wetland commission regulations in Connecticut. Connecticut's Inland Wetlands and Watercourse Act ("Act"), enacted in 1972, did not originally address vernal pools. The regulation of vernal pools is provided through a later amendment, P.A. 95-313. This 1995 amendment expanded the definition of "watercourse" to include "*all other bodies of water, natural or artificial, vernal or intermittent*." Neither the Act nor its amendment provide a definition for vernal pool.

Under authority granted by Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers ("Corps") - New England District issued the *Department of the Army Regional General Permits for the State of Connecticut* ("GP", effective date December 15, 2021). Within the GP, vernal pools are included as one of six wetland habitats defined as "Special Wetlands" by the Connecticut Department of Energy and Environmental Protection's ("CTDEEP") associated Water Quality Certification program.

Several vernal pool definitions have been developed by regulatory authorities and conservation organizations. The Corps GP defines vernal pools ("VPs") as:

> *Depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In most years, VPs support one or more of the following obligate indicator species: wood frog, spotted salamander, blue spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.*

Calhoun and Klemens (2002) *Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* ("BDP Manual") provides the following operational definition of vernal pools:

> *Vernal pools are seasonal bodies of water that attain maximum depths in the spring or fall and lack permanent surface water connections with other wetlands or water bodies. Pools fill with snowmelt or runoff in the spring, although some may be fed primarily by groundwater sources. The duration of surface flooding, known as hydroperiod, varies depending upon the pool and the year; vernal pool hydroperiods range along a continuum from less than 30 days to more than one year. Pools are generally small in size (<2 acres), with the extent of vegetation varying widely. They lack established fish populations, usually as a result of periodic drying, and support communities dominated by animals adapted to living in temporary, fishless pools. In the region, they provide essential breeding habitat for one or more wildlife species*

including Ambystomid salamanders (Ambystoma spp., called "mole salamanders" because they live in burrows), wood frogs (Rana sylvatica), and fairy shrimp (Eubranchipus spp.).

2.1 Vernal Pool Identification Methods

Vernal pool physical characteristics can vary widely while still providing habitat for indicator species. "Classic" vernal pools are natural depressions in a wooded upland with no hydrologic connection to other wetland systems. Anthropogenic depressions such as quarry holes, old farm ponds and borrow pits can also provide similar habitat. Often, vernal pools are depressions or impoundments embedded within larger wetland systems. These vernal pool habitats are commonly referred to as "cryptic" vernal pools.

Several species of amphibians depend on vernal pools for reproduction and development. These species are referred to as "indicator"[1] vernal pool species, and their presence in a temporary wetland during the breeding season helps to identify that area as a vernal pool. Indicator species present in Connecticut include the following:

- Blue-spotted salamander (*Ambystoma laterale*)
- Wood frog (*Rana sylvatica*)
- Spotted salamander (*Ambystoma maculatum*)
- Jefferson salamander (*Ambystoma jeffersonianum*)
- Eastern spadefoot toad (*Scaphiopus holbrookii*)
- Marbled salamander (*Ambystoma opacum*)
- Fairy shrimp (*Branchiopoda anostraca*)

Facultative vernal pool species are fauna that utilize but do not necessarily require vernal pools for reproductive success. Examples of facultative species include spotted turtle (*Clemmys guttata*), spring peeper (*Pseudacris crucifer*), and four-toed salamander (*Hemidactylium scutatum*). These species may breed or feed in vernal pools but are also capable of carrying out all phases of their lifecycle in other types of wetlands or water bodies. Evidence of breeding by facultative species alone is not sufficient for a vernal pool classification.

For this report, a vernal pool is defined as an area that meets the physical characteristics described above and contains evidence of breeding activity of any of the indicator species listed above, including the presence of egg masses and larvae. This vernal pool assessment also makes an important distinction between wetlands in which indicator species may breed and those wetlands where they breed and successfully develop.

Vernal pool species breeding can also occur in bodies of water such as road ruts or man-made basins where the development and metamorphosis of larvae is unsuccessful. These

[1] Calhoun and Klemens (2002) argue that "indicator" species is a better word than the commonly used "obligate" species, as they will occasionally breed in roadside ditches and small ponds that are not vernal pools.

are referred to as "decoy vernal pools". In the BDP Manual, Calhoun and Klemens note the negative impact associated with ruts:

> *Site clearing can cause water-filled ruts. These ruts intercept amphibians moving toward the vernal pool and may induce egg deposition. Often these ruts do not hold water long enough to allow development of amphibians and therefore acts as "sinks" that result in populations declines.*

Decoy vernal pools often lack vegetation for egg mass attachment and dry more rapidly than classic or cryptic vernal pools, limiting larval survivorship.

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SECTION 3

Section 3 **Means and Methods**

Potential vernal pools (PVPs) were identified during the wetland delineation in the fall of 2020. A Tighe & Bond Certified Wildlife Biologist (CWB) and Professional Wetland Scientist (PWS) conducted field surveys of the PVPs identified during the delineation on April 8, April 25, and May 13 of 2022. Previous field survey work by environmental scientists (including CWB and PWS certified staff) occurred on March 25 and 26, April 2, 8, and 9, May 27, and June 18 of 2021. Any observed areas of surface water in the Project ROW observed during Spring field work were assessed for vernal pool habitat conditions. Field surveys were conducted to observe and monitor each PVP habitat area. Survey methods included a visual search for adults, larvae and egg masses, audial surveys to listen for chorusing, and dip-net surveys to identify amphibian larvae. The follow-up field surveys were conducted to confirm that hydrology and hydroperiod remained adequate to support breeding and development. Field surveys for the 2024 season were conducted on May 9th, 2024. Photographs of each location are provided in Appendix A.

The methodology described in the BDP Manual was used to assess each pool qualitatively. This assessment methodology utilizes a three-tiered rating system, with the tier designation determined by examining the biological value of the pool in conjunction with the condition of the habitat surrounding the pool, which is the area used by vernal pool amphibians during the non-breeding season. The higher the species diversity and abundance, coupled with an undeveloped and forested landscape surrounding the pool, the higher the tier rating. Tier I pools are considered the highest quality pools, while Tier III are the lowest. Analysis of the landscape condition within 750 feet of the pools is required to complete the full BDP analysis; this was conducted as the sites permitted due to constraints related to property rights and boundaries. For areas outside of the ROW and access roads, land use assessment was based on aerial photograph assessment. The BDP Manual defines Tier I and II pools are those pools that meet at least one of the following *biological* criteria:

1. The presence of a breeding state-listed species (such as blue-spotted salamander, Jefferson salamander, spadefoot toad, wood turtle, or eastern box turtle); or
2. Two or more indicator species breeding; or
3. 25 or more total egg masses of any vernal pool indicator species.

The tier rating of a pool is based on which of the above *biological* criteria are met coupled with an analysis of the level of development within two landscape management zones surrounding the pools, the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier I pool must meet one of the above *biological* criteria *and* have at least 75% undeveloped land within the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and at least 50% undeveloped land within the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier II pool must meet one of the above *biological* criteria along with one of the landscape criteria, either 75% undeveloped land within the VPE *or* 50% undeveloped land within the CTH.

A Tier III pool is a pool that either has high *biological* value coupled with a high percentage of developed land within the VPE and CTH *or* low biological value coupled with one of the landscape criteria being met (either 75% undeveloped land within the VPE *or* 50% undeveloped land within the CTH). Typical, Tier III pools exhibit low species diversity and abundance.

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SECTION 4

Section 4 **Results**

A total of two (2) PVPs were identified during the initial wetland delineation and were confirmed to be VPs during the field assessment. Both VPs are isolated depressions that are seasonally inundated. These areas include scrub-shrub and forested wetlands within and outside of the ROW. The adjacent land use includes forested upland and wetland and residential areas.

No additional VPs or decoy vernal pools were found in the project area during the survey.

The 2024 study period was wetter than previous survey seasons. The 2021 and 2022 study period was drier than typical, and the duration of standing water affected development of the tadpoles in the Spring of 2021 and, as detailed below.

Table 4-1 provides a summary of the biological findings and Tier Rating for each pool using the BDP Methodology.

TABLE 4-1
Summary Vernal Pool Findings

Vernal Pool Number	Maximum Egg Mass Totals		Facultative Species Observed	Cowardin Code(s)*	Tier Rating	Pool Type **	Petition Map Sheet No.
	Wood Frog	Spotted Salamander					
		2024					
1	0	2	Spring Peeper, Green Frog	PFO1C	II	CL	2
2	0	12	Green Frog	PFO1C	II	CR	9
		2022	None				
1	1	2	Green Frog	PFO1C	II	CL	2
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Cowardin code(s)*
PFO1 – Palustrine forested wetland broad leaved deciduous
PSS1 – Palustrine scrub-shrub
**Water Regime*
C - Seasonally flooded

***Pool Type*
CL - Classic
CR - Cryptic

4.1 Vernal Pool 1

Vernal Pool 1 (VP1) is located north of Prokop Road, directly west of the paved driveway to the residence located at 84 Prokop Road in Oxford. The limit of the pool of VP1 is beyond the western edge of the ROW adjacent to existing Structure 19445 (Photographs 1 through 5 in Appendix A). This classic vernal pool depression is largely forested with some scattered scrub-shrub vegetation within. Dominant vegetation observed during the site visits included red maple (*Acer rubrum*) and a variety of sedge species (*Carex* spp.).

During the May 9, 2024 survey, wood frog tadpoles and 2 spotted salamander egg masses were observed. Additionally, adult spring peepers and more than 50 adult green frogs were observed. During the April 8, 2022 survey, 3 adult wood frogs and 2 spotted

salamander egg masses were observed. On April 25, 2022, a total of 1 wood frog and 2 spotted salamander egg masses were counted and 2 adult wood frogs were observed. During the final May 13, 2022 monitoring event, all egg masses of each species were found to be fully hatched and hundreds of wood frog tadpoles were observed within the pool. Additionally, 2 adult green frogs were observed. These results are similar to those observed in 2021, where a maximum of 12 wood frog and four spotted salamander egg masses were observed in the month of April, and hundreds of wood frog tadpoles were observed in May and June.

In 2024, the water depth was recorded at 24 inches during the May 9 survey. The surface water area and depth varied over the course of the 2021 and 2022 survey seasons. In 2022, the water depth was recorded at an average of approximately 11 inches during the first survey on April 8. This average pool depth dropped to 8.5 inches during the April 24 monitoring event and remained at the same average depth during the final 2022 site visit on May 13.

VP1 is assigned a Tier II rating for the 2021, 2022 and 2024 monitoring seasons due to the presence of two indicator species, as well as the percentage of undeveloped land in the VPE and CTH.

4.2 Vernal Pool 2

Vernal Pool 2 (VP2) is located on the northern edge of the ROW, within Wetland 37 and east of STRs 315 and 1585 (Photographs No. 6 and 7, Attachment A). The cryptic vernal pool depression is largely dominated with scattered scrub-shrub vegetation, with forested land and residential properties surrounding the pool outside of the ROW. Dominant vegetation observed during the site visits included sweet pepperbush (*Clethra alnifolia*) and Morrow's honeysuckle (*Lonicera morrowii*).

During the May 9th 2024 survey, over 75 wood frog tadpoles and 12 spotted salamander egg masses were observed. Additionally, 6 adult green frogs were observed.

The water depth was recorded at 18 inches during the May 9th 2024 survey.

VP2 is assigned a Tier II rating for the 2024 monitoring season due to the presence of two indicator species, as well as the percentage of undeveloped land in the VPE and CTH.

4.3 Study Period Weather

The rainfall conditions in the spring of 2023 were wetter than typical, and this trend continued into the 2024 study period. Reported monthly rainfall for the period from March through May 2024 was above normal, with New Haven County at 152% of normal precipitation for that three-month period. In contrast, VP1 appeared to be potentially limited in its ability to provide amphibian breeding habitat during the 2021 and 2022 survey seasons due to the loss of water volume in the spring, as rainfall conditions during the study period were drier than typical. Reported monthly rainfall for the period from March through May 2021 was below normal with New Haven County at 92% of normal precipitation for that three-month period. This trend continued in 2022, with reported monthly rainfall for the period from March through July being below normal for New Haven

County at 77% of normal precipitation for that similar five-month period (ct.gov/water/drought/drought-home).

As such, conditions at the pools studied for this report are expected to vary from year to year in response to variable and changing weather conditions.

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SECTION 5

Section 5 **Discussion**

This section discusses potential impacts to vernal pools due to the Project construction and discusses avoidance and minimization measures incorporated into the Project design.

5.1 Potential Impacts to Vernal Pools

A total of two (2) vernal pools were identified within the Project Area. These vernal pools were found to support two vernal pool indicator species, wood frog and spotted salamander. These pools were classified as Tier II. Both pools were observed to have multiple indicator species; however, the pools were classified as Tier II due to the amount of existing development within the VPE and CTH.

The Project does not propose any activities within vernal pool depressions and avoids direct impacts to vernal pools. The principal construction activities that could affect vernal pools include:

- The construction of new or improved access roads within VPEs (i.e., within 100 feet of the vernal pool)
- The construction of work pads within VPEs
- The demolition and construction of electric transmission structures in VPEs
- The movement of vehicles and equipment through amphibian migratory routes
- The potential for erosion and sedimentation into vernal pools
- The destruction of fossorial habitat through soil compaction and grading

5.1.1 Vernal Pool 1

An existing access road is located within the VPE of VP1. The Project includes the installation of a temporary work pad and access road within the VPE of VP1. The work pad and access road within the VPE will be installed with temporary timber matting to minimize disturbance of the VPE. No proposed structures are located within the VPE of VP1.

5.1.2 Vernal Pool 2

An existing access road is located within the VPE of VP2. The Project includes the installation of a temporary work pad and access road within the VPE of VP2. The work pad and access road within the VPE will be installed with temporary timber matting to minimize disturbance of the VPE. No proposed structures are located within the VPE of VP2.

5.2 Avoidance and Minimization Measures

The potential for adverse impacts on vernal pools may be minimized by implementing a variety of BMPs aimed at minimizing the effects of both permanent and temporary construction-related activities. The following types of measures may be considered to minimize potential impacts on vernal pools:

<u>Construction Activities during Migration, Breeding & Larval Development Periods</u>

Where feasible in areas proximate to vernal pools, avoid or minimize construction activities during periods of peak migration, breeding and larval development as described below for each indicator species:

Wood frog:

- Breeding and larval development period: from March through July.
- Migration period: migration into pools occurs predominantly between mid-March and mid-April.

Spotted salamander:

- Breeding and larval development period: from March through June.
- Migration period: migration from pools occurs predominantly between late summer and early fall.

For Project activities that must occur adjacent to vernal pools during amphibian migration periods, implement measures on a site-specific basis as necessary to facilitate unencumbered amphibian access to and from vernal pools, such as elevated construction matting. Mitigation measures will be identified after considering site-specific conditions, including the type of construction activity in proximity to a vernal pool, the amphibian species known to occur in the vernal pool, and seasonal conditions.

Vegetation Clearing:

- Minimize the removal of low-growing vegetation surrounding vernal pools. If low growing woody vegetation (shrubs) will be removed, the cut vegetation (slash) should be left in place to provide cover and promote the development of coarse woody debris and detritus.
- Where possible, the stumps of cut woody debris should be left in place to minimize soil disturbance.
- Woody shrub cover should remain intact to the maximum extent practicable.

Erosion and Sedimentation Controls

- Erosion control measures should be designed in a manner that allows unencumbered amphibian access to vernal pools and migratory pathways. Such measures may include (but are not limited to) syncopated silt fencing and/or straw wattles in the immediate vicinity of vernal pools as well as aligning erosion and sedimentation controls to avoid bisecting vernal pool habitat.
- Install appropriate erosion and sediment controls around distinct work sites and access roads to minimize the potential for sediment deposition into vernal pools and remove such controls promptly after final site stabilization.
- Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including amphibians. No permanent erosion control products or reinforced silt fence should be used. Temporary erosion control products should be composed of processed fibers mechanically bound together to form a continuous matrix (netless) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.

Access Roads and Work Pads

- Evaluate the use of temporary timber mat access roads in lieu of constructing gravel access roads to minimize the loss of vegetated areas within the VPE.
- Use bridging when installing timber mats to provide for access under timber mat roads.
- Minimize the removal of shrub cover associated with work pad and access road construction within 25 feet of vernal pools.
- Where feasible, remove new gravel fill associated with construction work pads and pull pads.

Prevention of Decoy Vernal Pools

- Permanent access road crossings should be constructed in a manner that wetland hydrology is maintained, and surface water impoundment does not occur.
- Access road grading or improvements necessary to accommodate project construction vehicles should eliminate any existing depressions or ruts that may be functioning as decoy vernal pools.
- Avoid siting temporary sediment traps near vernal pools as they may function as decoy pools.

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SECTION 6

Section 6 **References**

Calhoun, A.J.K. and M.W. Klemens. 2002. *Best Development Practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States.* MCA Technical Paper No. 5 Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York. 57 p.

Colburn, Elizabeth A. 2004. *Vernal Pools: Natural History and Conservation*. McDonald and Woodward Publishing Company, Blacksburg, VA., 426 p.

Connecticut Siting Council (CSC). 2007. *Application Guidelines for Terrestrial Electric Transmission Line Facilities.* 13 p.

Klemens, M.W. 1993. *Amphibians and Reptiles of Connecticut and Adjacent Regions*. State Geological and Natural History Survey of Connecticut, Bulletin No. 112, Connecticut Department of Environmental Protection, Hartford, CT.

Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, D.C. 103 p.

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APPENDIX A

Photographic Log

Client: Eversource Energy **Job Number:** E5034-127

Site: South Naugatuck to Devon Rebuild Project, Oxford to Naugatuck, Connecticut

Photograph No.: 1	**Date:** 05/09/2024	**Direction Taken:** North
Description: Overview of Vernal Pool 1 (PFO1C), taken during the site visit on May 9, 2024.		

Photograph No.: 2	**Date:** 05/09/2024	**Direction Taken:** Southwest
Description: Overview of Vernal Pool 1, taken during the site visit on May 9, 2024.		

Photograph No.: 3	**Date:** 04/08/2022	**Direction Taken:** West
Description: Overview of Vernal Pool 1 (PFO1C), taken during the site visit on April 8, 2022.		

Photograph No.: 4	**Date:** 04/25/2022	**Direction Taken:** Northwest
Description: Overview of Vernal Pool 1, taken during the site visit on April 25, 2022.		

Photograph No.: 5	**Date:** 05/13/2022	**Direction Taken:** North
Description: Overview of Vernal Pool 1, taken during the site visit on May 13, 2022.		

Photograph No.: 6	**Date:** 05/09/2024	**Direction Taken:** West
Description: Overview of Vernal Pool 2 (PFO1C), taken during the site visit on May 9, 2024.		

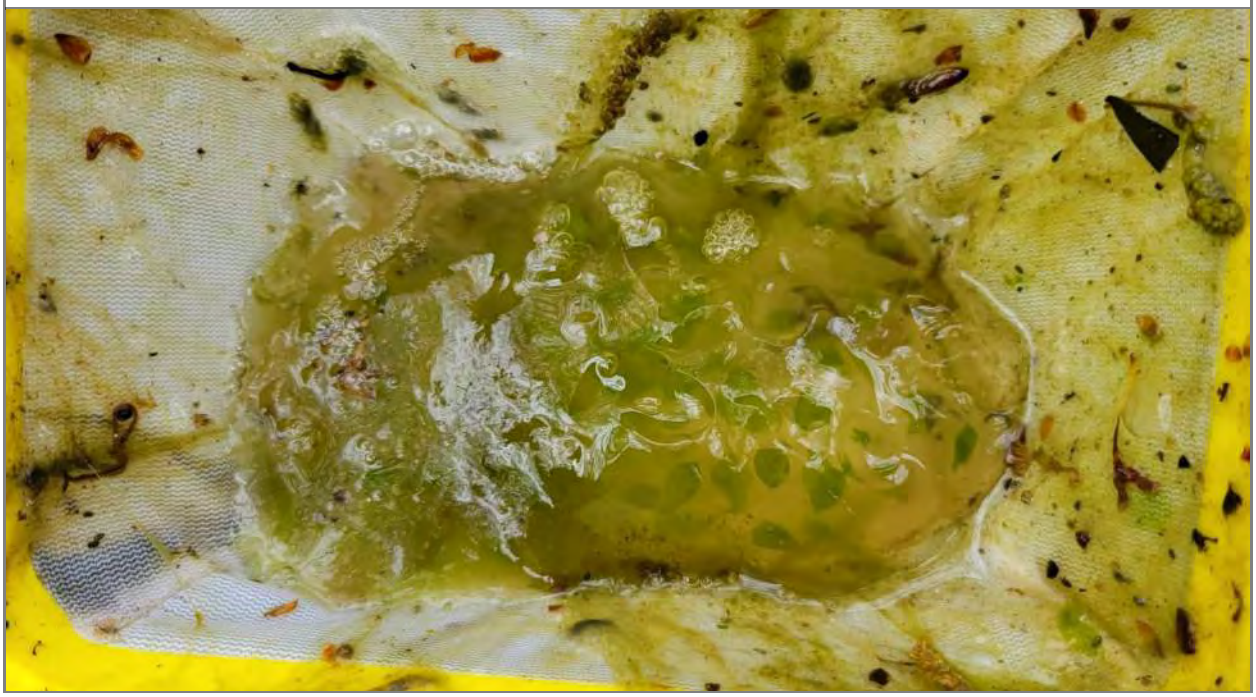
Photograph No.: 7	**Date:** 05/09/2024	**Direction Taken:** South

Description: Overview of Vernal Pool 2, taken during the site visit on May 9, 2024.

Photograph No.: 8	**Date:** 05/09/2024	**Direction Taken:** N/A

Description: Spotted salamander (*Ambystoma maculatum*) egg masses were observed within VP1 in 2024, in varying stages of maturity.

Photograph No.: 9	**Date:** 05/13/2022	**Direction Taken:** N/A
Description: Spotted salamander (*Ambystoma maculatum*) egg masses were observed within Vernal Pool 1 in 2022, in varying stages of maturity over the study period.		



Photograph No.: 10	**Date:** 04/08/2022	**Direction Taken:** N/A
Description: Wood frog (*Lithobates sylvaticus*) egg masses and tadpoles were observed within Vernal Pool 1 in 2022, in varying stages of maturity over the study period.		

Photograph No.: 11	**Date:** 05/09/2024	**Direction Taken:** N/A
Description: Spotted salamander (*Ambystoma maculatum*) egg masses were observed within Vernal Pool 2 in 2024.		

Photograph No.: 12	**Date:** 04/08/2022	**Direction Taken:** N/A
Description: Wood frog (*Lithobates sylvaticus*) tadpoles were observed within Vernal Pool 2 in 2024.		

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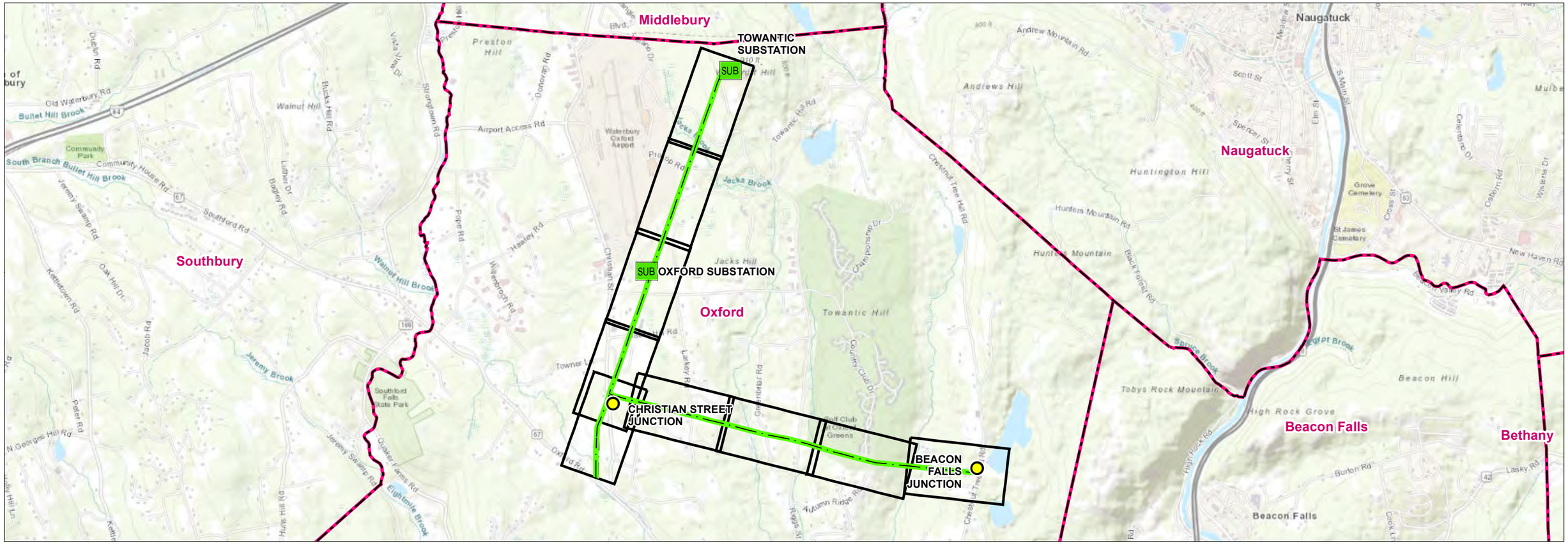
APPENDIX B

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, CT

Petition Map Set

Date: August 27, 2024



Legend

Junction | SUB Substation | Project ROW | Map Sheet | Municipal Boundary

N

0 0.25 0.5 Miles

NO.	DATE	REVISIONS

PREPARED FOR:

EVERSOURCE

PREPARED BY:

Tighe&Bond

INDEX OF FIGURES

G:\GIS\CT\EversourceEnergy\E5034\E5034-1560_1580\Towantic_BeaconFallsJCT_Seg5_200Scale_UpdatedIndex.mxd

CPV TOWANTIC ENERGY CENTER

TOWANTIC SUBSTATION

WOODRUFF HILL ROAD

Oxford

NEC Focus Area (Entire Sheet)

LL200B-438

LL200B-433

LL200B-434

LL200B-435

LL200B-431

LL200B-436

LL200B-432

LL200B-430

LL200B-428

LL200B-429

W3, S2 AND S3 IMPACTED BY PRIVATE DEVELOPER (APRIL 2024). WETLAND BOUNDARY FIELD DELINEATED AS SHOWN

INSTALL STONE FORDS PERMANENT WETLAND IMPACT ± 2532 SF

SPAN FLOW AREAS

EAST COMMERCE DRIVE

Matchline Sheet 3

TEMPORARY WETLAND IMPACT ± 10,724 SF

PULL PAD

TEMPORARY WETLAND IMPACT ± 12,939 SF

TEMPORARY WETLAND IMPACT ± 9,136 SF

Jacks Brook S5

500-Year Flood Zone

1403 Line (Underground)

1142 Line (Underground)

1619 Line (Underground)

1619 Line

1142 Line

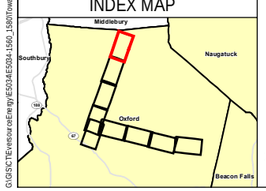
1403 Line

W1 W2 W3 W4 W5

S1 S2 S3 S4 S5

1453 1452D 1452B 1452A 1452 11166 11165A 11165 19449 19449A 11164 19448 1451 11163 19447 1450 11162 19446 1449

INDEX MAP



Legend

- Proposed Structure
- Existing Structure
- Existing Structure to be Removed
- Temporary Pole
- Culvert
- Gate
- Fence
- Stonewall
- Existing Right-of-Way (ROW)
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- Parcel Boundary
- State-Owned Property (CTDEEP)
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Date: August, 27, 2024

Map Sheet 1 of 9

Tighe&Bond

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Jacks Brook S5

500-Year Flood Zone

NEC Focus Area (Entire Sheet)

Oxford

LL200B-420

LL200B-424

LL200B-687

LL200B-423

Matchline Sheet 1

Matchline Sheet 3

N LARKEY ROAD

STRUCTURE TO BE INSTALLED OUTSIDE VERNAL POOL ENVELOPE

LL200B-425

11161

11160

11159

11158

11157

19444

19443

19442

19442A

19451

19440

1446

1445-N

1445A

1448

1447

1449

1619 Line

1142 Line

1403 Line

W5

W6

W7

W8

W9

VP1

PROKOP ROAD

LL200B-431

LL200B-426

LL200B-422

LL200B-123

LL200B-124

Little River

Larkin Bridle Trail

SPAN WATERCOURSE

TEMPORARY WETLAND IMPACT ± 18,116 SF

TEMPORARY WETLAND IMPACT ± 11,975 SF

TEMPORARY WETLAND IMPACT ± 6,237 SF

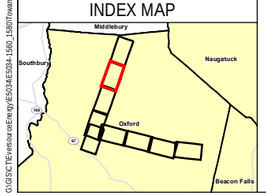
650'
640'
630'
660'
680'
670'

LL200B-428

LL200B-421

LL200B-429

INDEX MAP



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0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 2 of 9

Date: August, 27, 2024

Tighe&Bond

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N LARKEY ROAD

NEC Focus Area
(Entire Sheet)

Oxford

Matchline Sheet 2

MAINTAIN EXISTING STONE FORD

LL200B-123

MOW/TOP DRESS EXISTING GRAVEL ROAD

PULL PAD

LL200B-121

TEMPORARY WETLAND IMPACT ± 1,166 SF

COMMERCE DRIVE

TEMPORARY WETLAND IMPACT ± 5,147 SF

LL200B-117

LL257-059

JACKS HILL ROAD

500-Year Flood Zone

Matchline Sheet 4

LL200B-115

11156 11155 11154 11153 11152 11151 11150

W11 W12 W13 W15

1619 Line 1142 Line 1319 Line 1403 Line

1445-S 1444B 1444 1444W 1443A 1443-S 1442

19453 19437B 19436 19435

W10 W11 W14

1443-N

S2 S1 S3

OXFORD SUBSTATION

LL200B-421

LL200B-120

LL200B-119

LL200B-118

TEMPORARY WETLAND IMPACT ± 16,141 SF

PULL PAD

TEMPORARY WETLAND IMPACT ± 3,975 SF

ACCESS FROM JACKS HILL ROAD

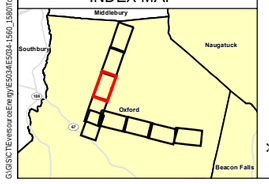
500-Year Flood Zone

Little River

Larkin Bridle Trail

CHRISTIAN STREET

INDEX MAP



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1 inch = 200 feet
0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 3 of 9

Date: August, 27, 2024

Tighe&Bond

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500-Year Flood Zone

Matchline Sheet 6

NEC Focus Area (Entire Sheet)

LL257-059

Oxford

LL257-002

LL257-003

PULL PAD

ROWLAND FARM ROAD

JACKS HILL ROAD

Matchline Sheet 3

PROTECT DRIVEWAY WITH STEEL PLATES

CHRISTIAN STREET JUNCTION

LL257-001

LL200B-108

LL200B-10

11149 19434 1441 W16 11148 19433 1440 W17 1619 Line 1319 Line

11147 19432 19432A 1439 W18 1142 Line 1619 Line 1319 Line

19428 19347 302 1572 1319 Line 1580 Line

19429 19346 301 1571 19430 19430A 19345 11146 1438? 19344 19344A 1438A 1439A 19431 19431A 1580 Line 1808 Line 1619 Line

11145 19343 1437 W19 1619 Line

LL200B-109

LL200B-112

LL200B-111

LL200B-110

LL200B-115

LL257-059

TEMPORARY WETLAND IMPACT ± 959 SF

PROTECT CULVERT

TEMPORARY WETLAND IMPACT ± 7,947 SF

TEMPORARY WETLAND IMPACT ± 725 SF

PULL PAD

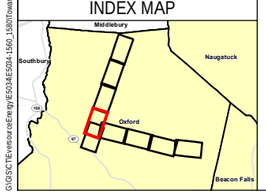
TEMPORARY WETLAND IMPACT ± 126 SF

CHRISTIAN STREET

TOWNER LANE

Matchline Sheet 5

INDEX MAP



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1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 4 of 9

Date: August, 27, 2024

Tighe&Bond

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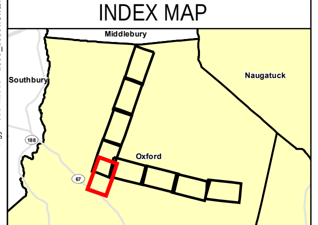
INDEX MAP



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1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

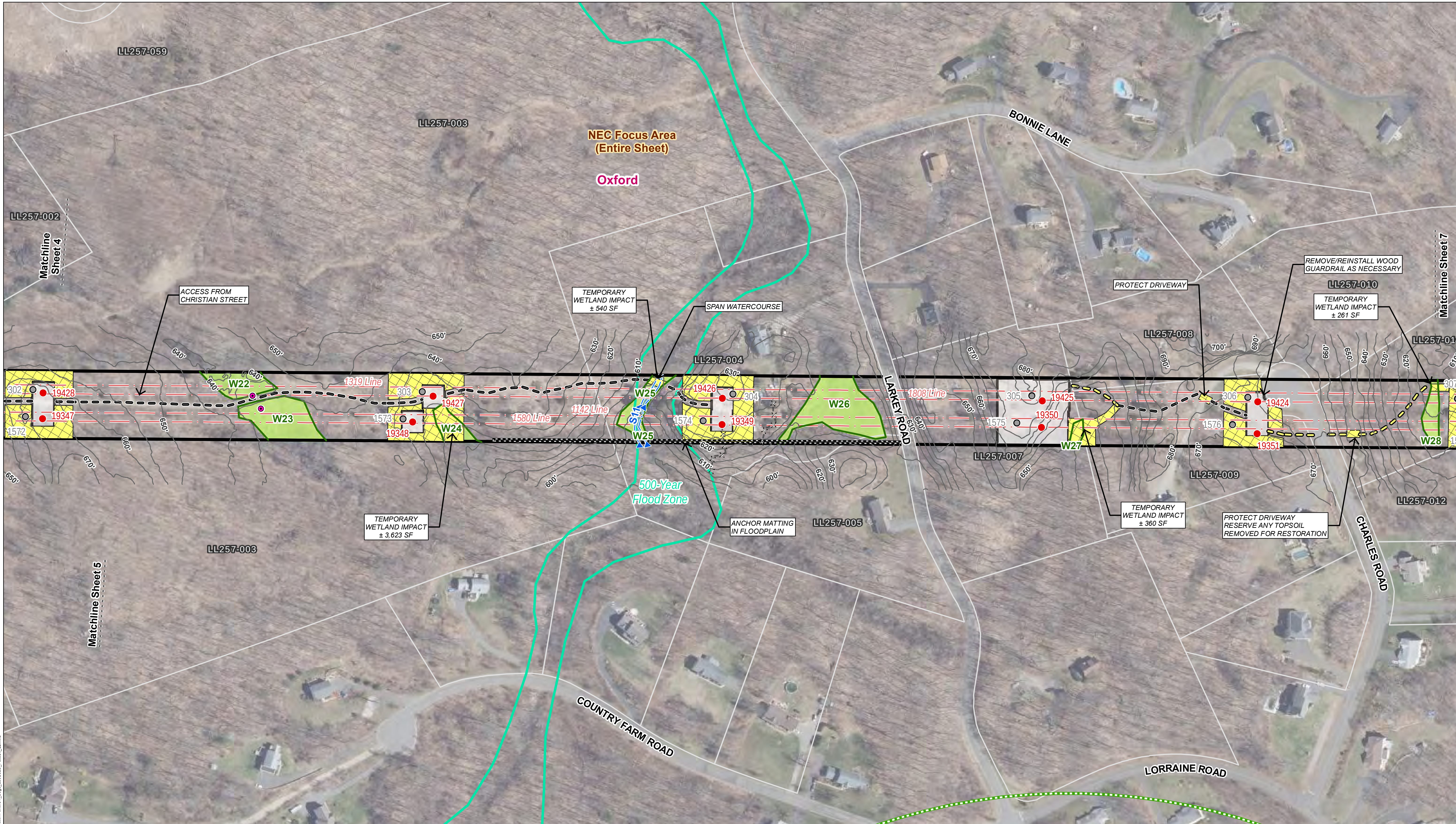
Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

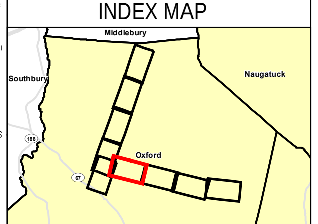
Map Sheet 5 of 9

Date: August, 27, 2024

Tighe&Bond



INDEX MAP



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- Municipal Boundary

N

1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 6 of 9

Date: August, 27, 2024

Tighe&Bond

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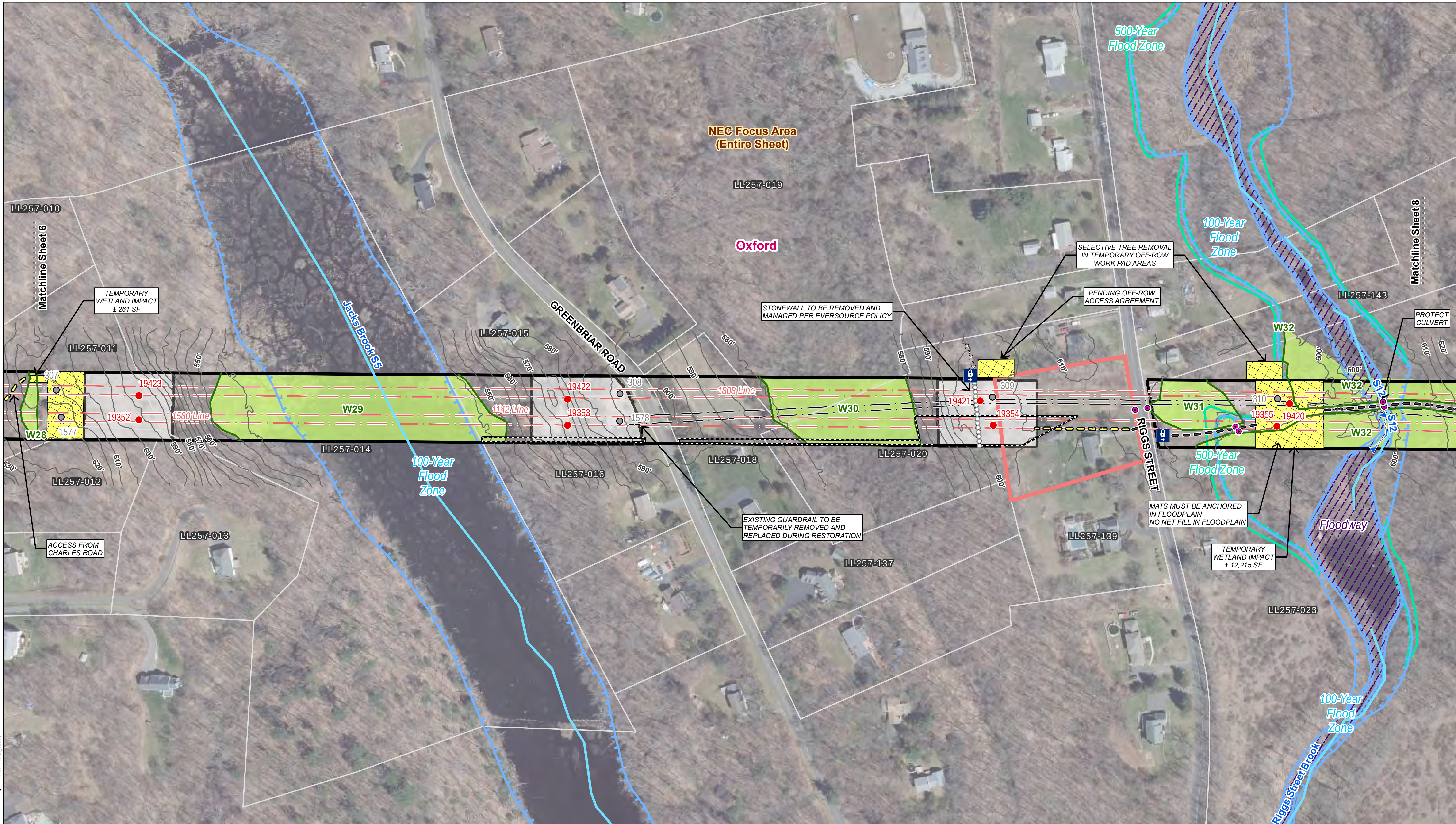
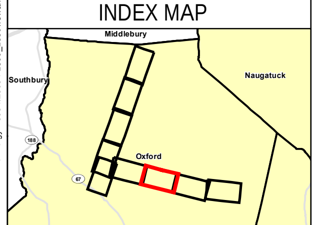


INDEX MAP



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1 inch = 200 feet
0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

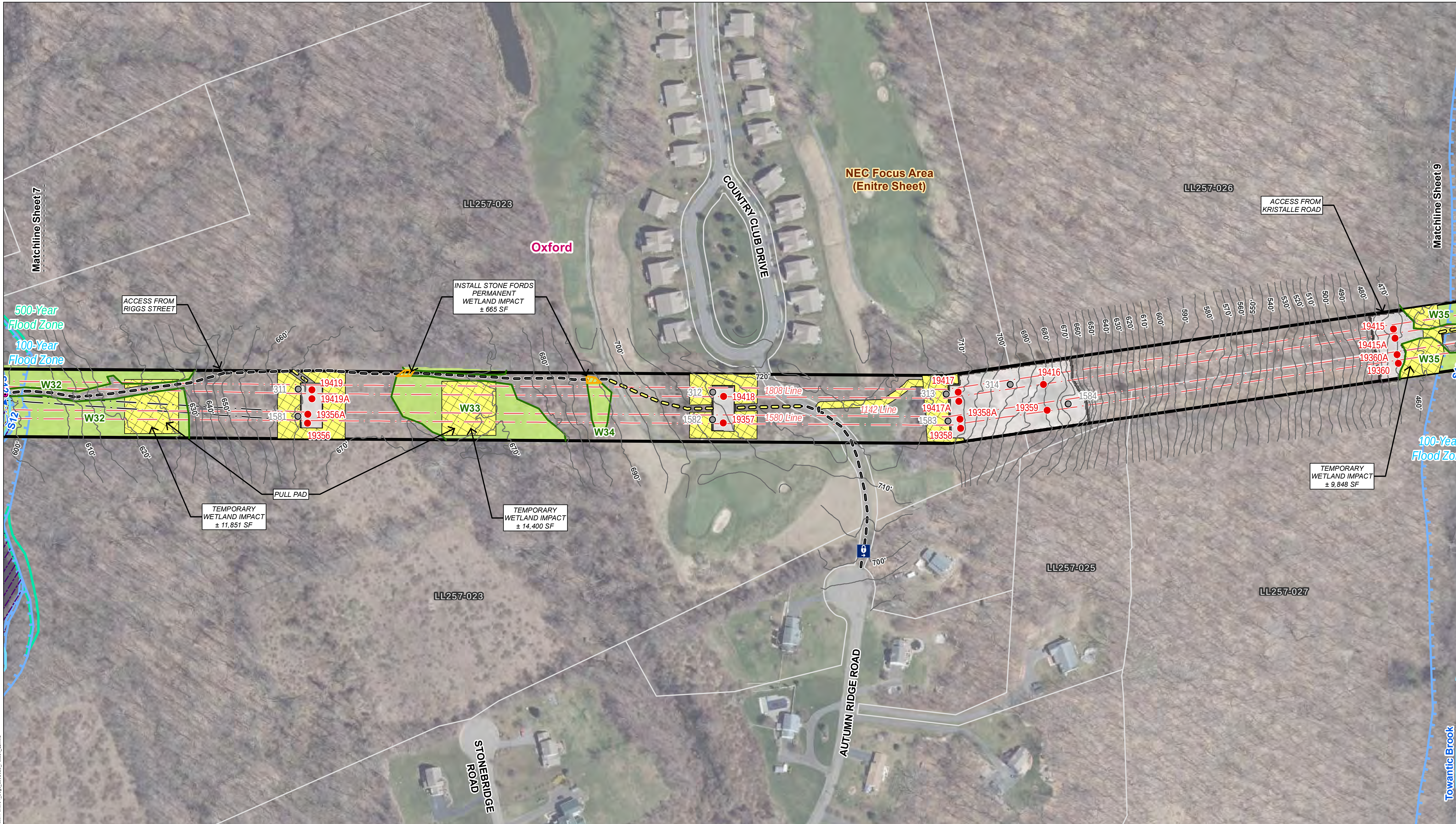
Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

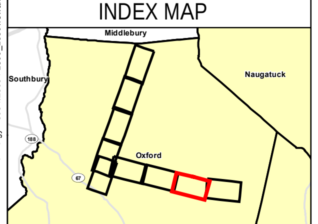
Map Sheet 7 of 9

Date: August, 27, 2024

Tighe&Bond



INDEX MAP



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1 inch = 200 feet

0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 8 of 9

Date: August, 27, 2024

Tighe&Bond

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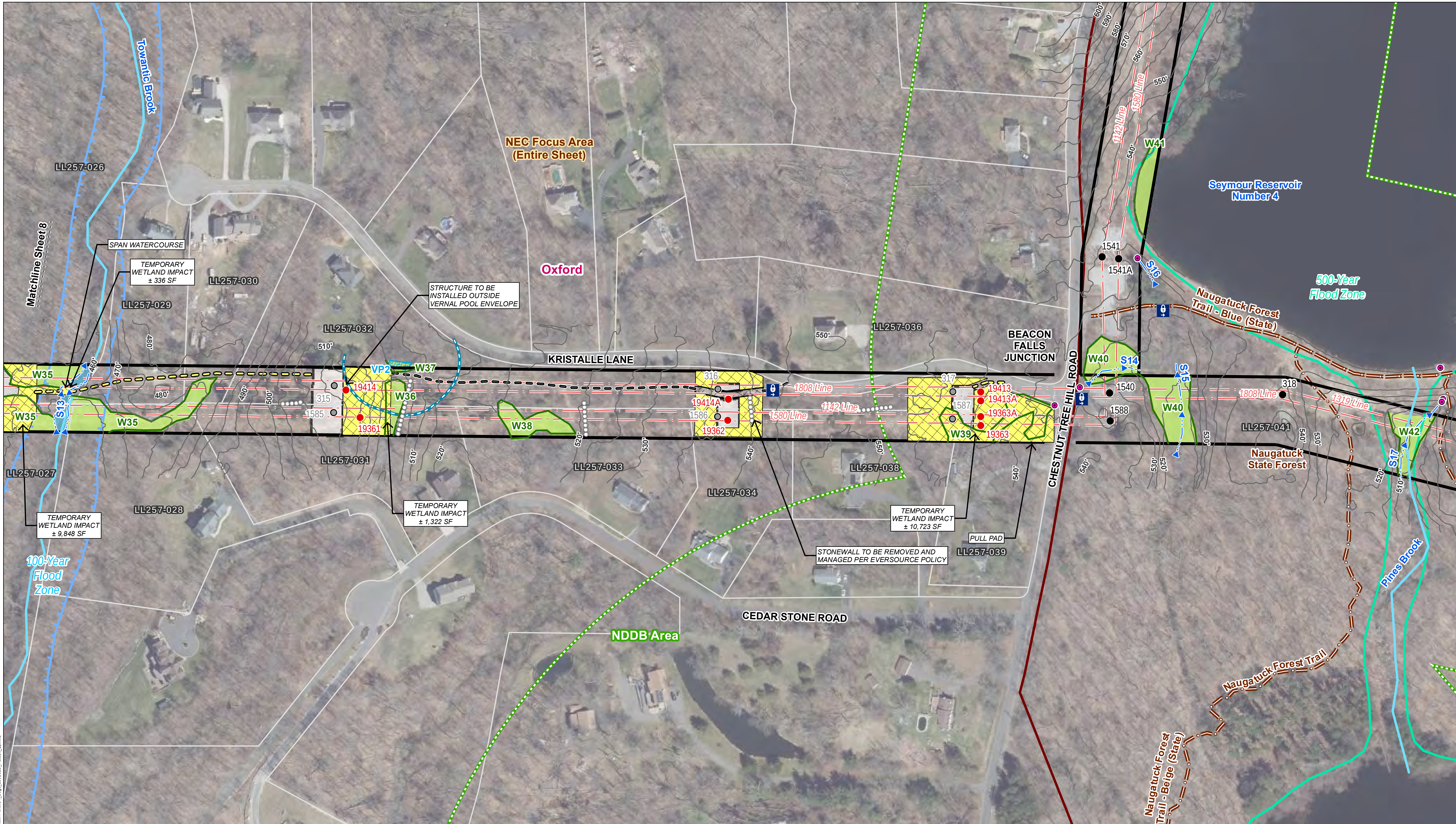
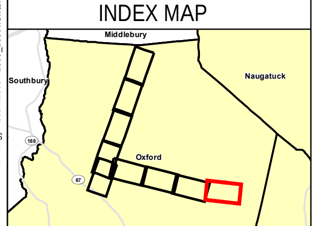


Towantic Brook
Matchline Sheet 8
NEC Focus Area
(Entire Sheet)
Oxford
LL257-026
LL257-027
LL257-028
LL257-029
LL257-030
LL257-031
LL257-032
LL257-033
LL257-034
LL257-036
LL257-038
LL257-039
LL257-041
SPAN WATERCOURSE
TEMPORARY WETLAND IMPACT ± 336 SF
STRUCTURE TO BE INSTALLED OUTSIDE VERNAL POOL ENVELOPE
TEMPORARY WETLAND IMPACT ± 9,848 SF
TEMPORARY WETLAND IMPACT ± 1,322 SF
TEMPORARY WETLAND IMPACT ± 10,723 SF
STONEWALL TO BE REMOVED AND MANAGED PER EVERSOURCE POLICY
PULL PAD
KRISTALLE LANE
CEDAR STONE ROAD
CHESTNUT TREE HILL ROAD
BEACON FALLS JUNCTION
W35
W36
W37
W38
W39
W40
W41
W42
VP2
S13
S14
S15
S16
S17
315
316
317
318
1585
1586
1587
1588
1540
1541
1541A
19414
19361
19414A
19362
19413
19413A
19363A
19363
1808 Line
1580 Line
1142 Line
1319 Line
100-Year Flood Zone
500-Year Flood Zone
NDDB Area
Seymour Reservoir Number 4
Naugatuck Forest Trail - Blue (State)
Naugatuck State Forest
Naugatuck Forest Trail
Naugatuck Forest Trail - Beige (State)
Pines Brook



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0 50 100 200 Feet

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE

Towantic Substation to Beacon Falls Junction Rebuild Project

Oxford, Connecticut

Map Sheet 9 of 9

Date: August, 27, 2024

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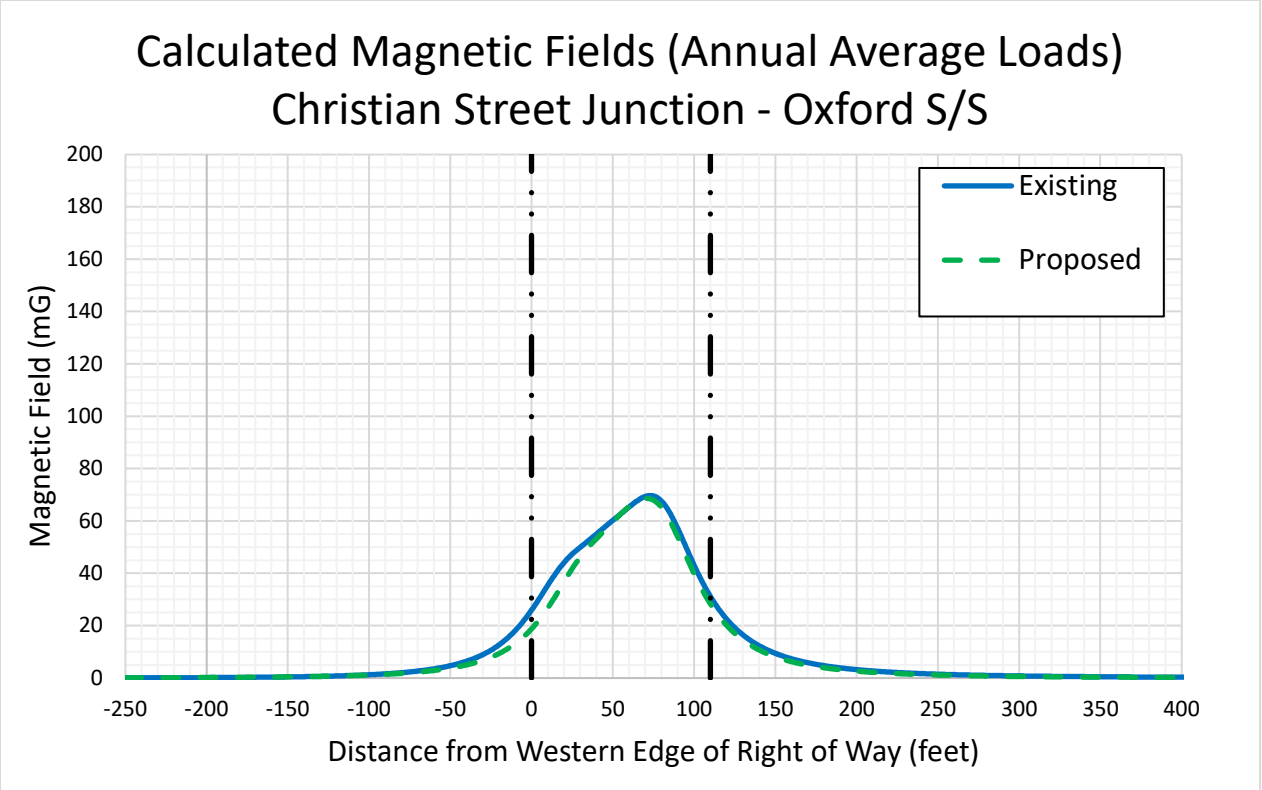
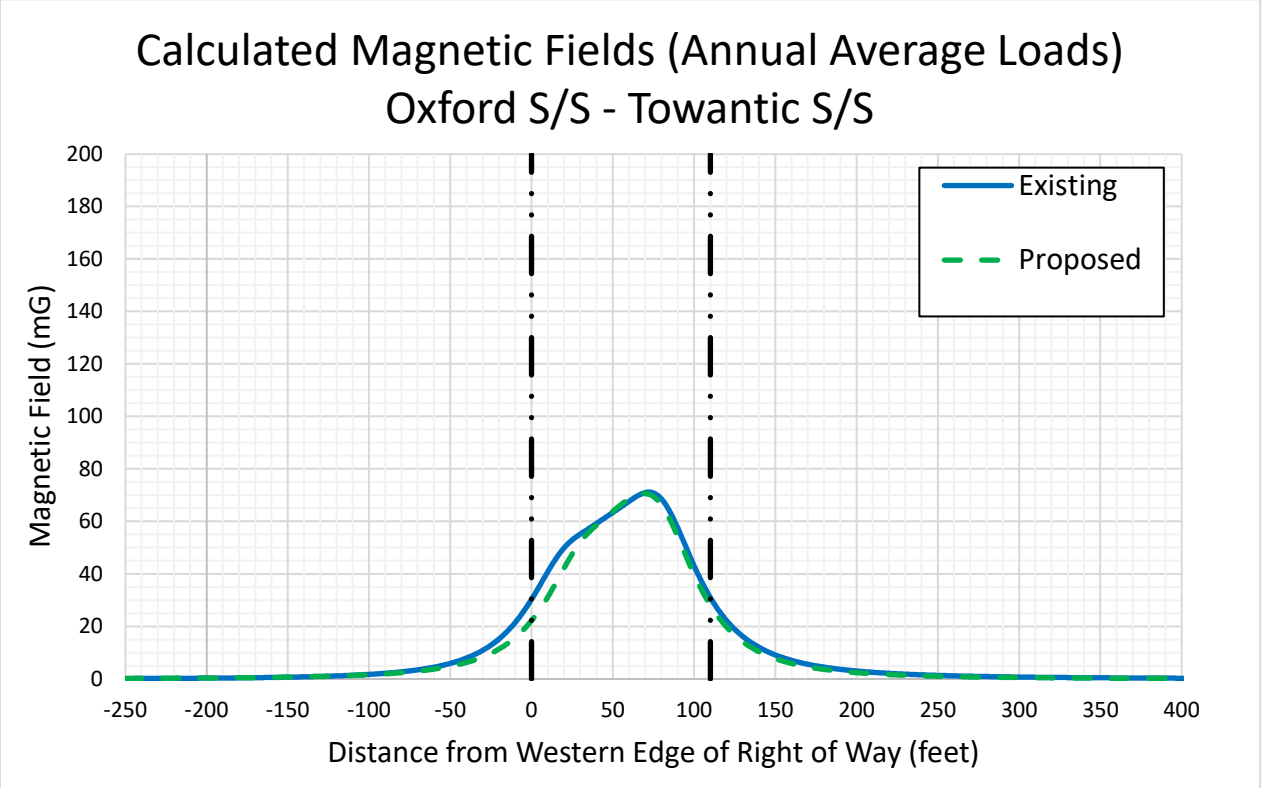
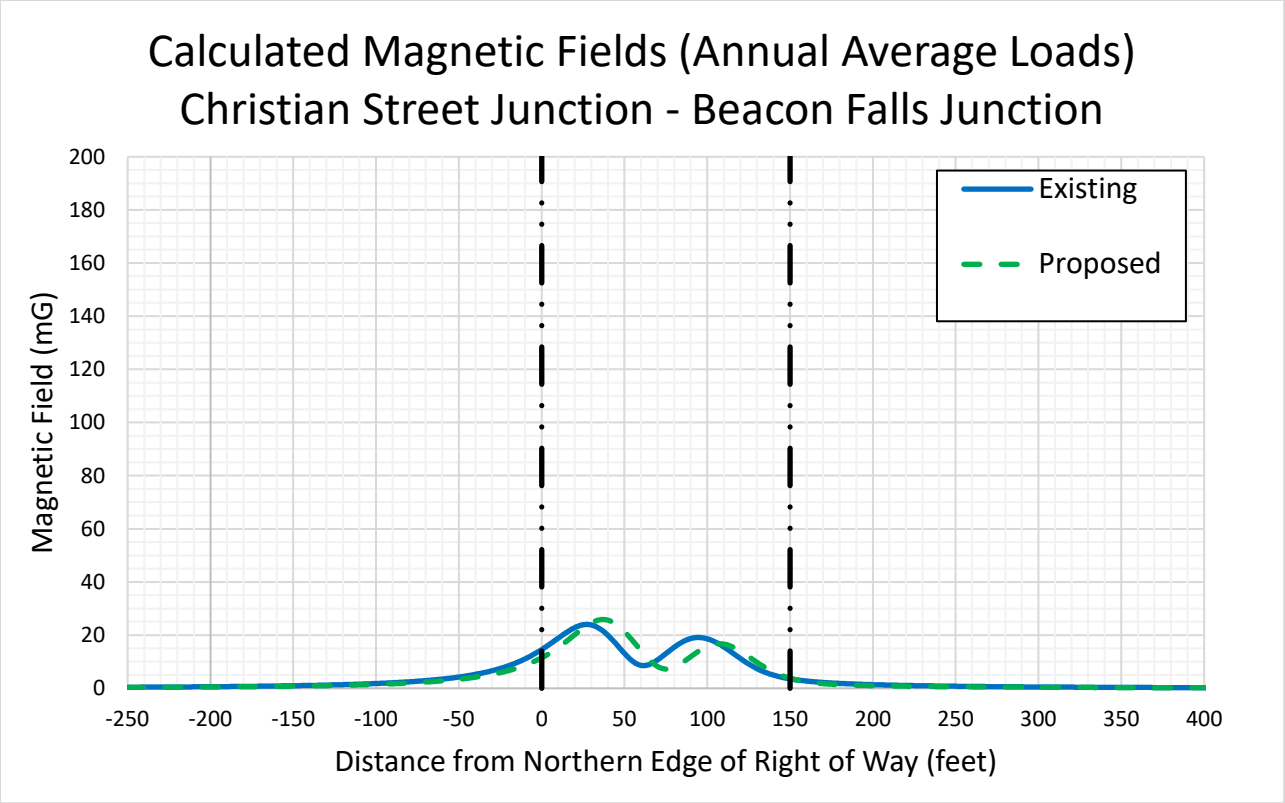
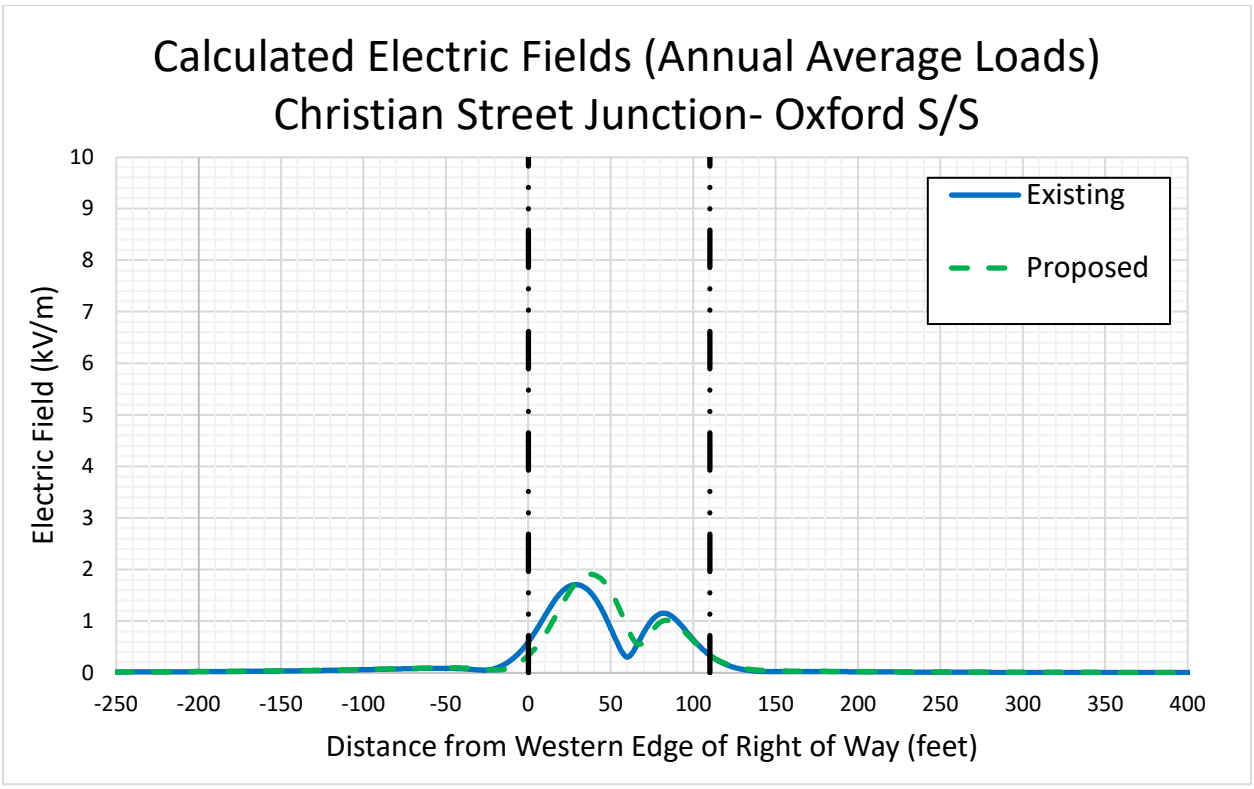
Attachment H

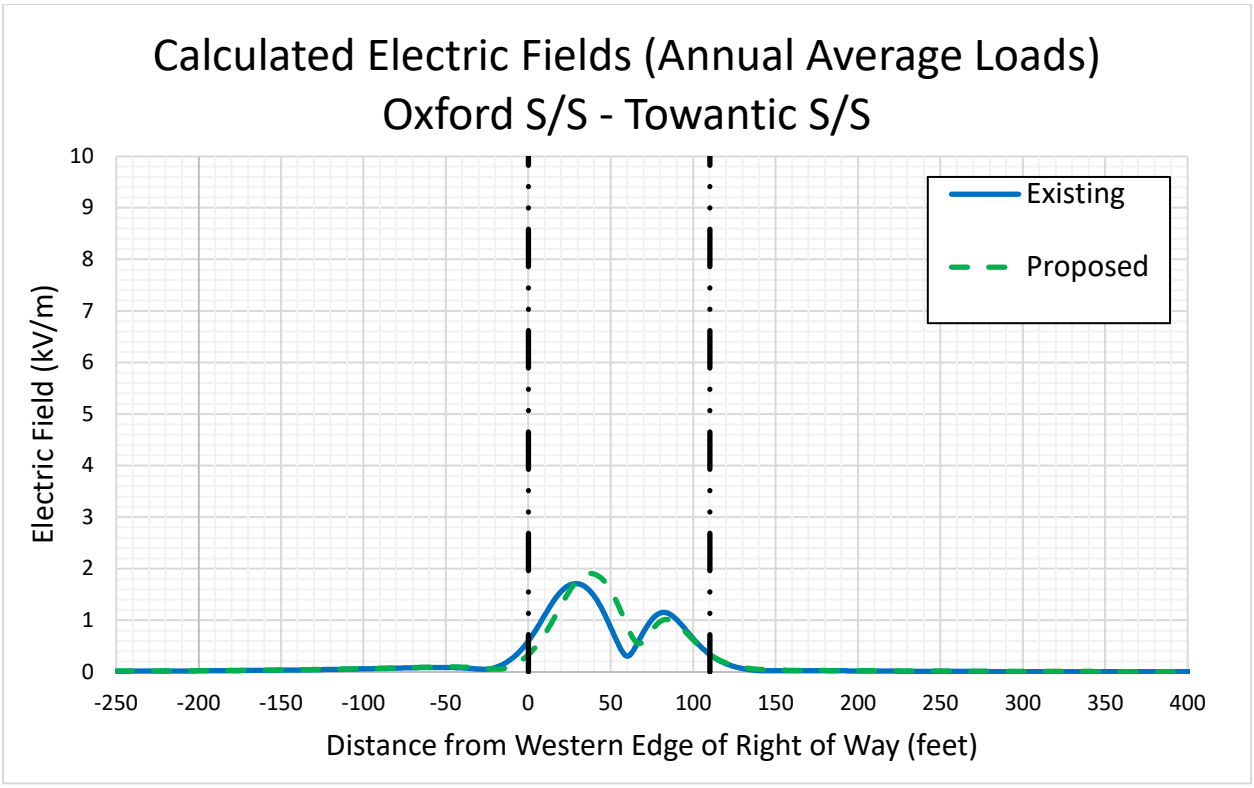
EMF Graphs

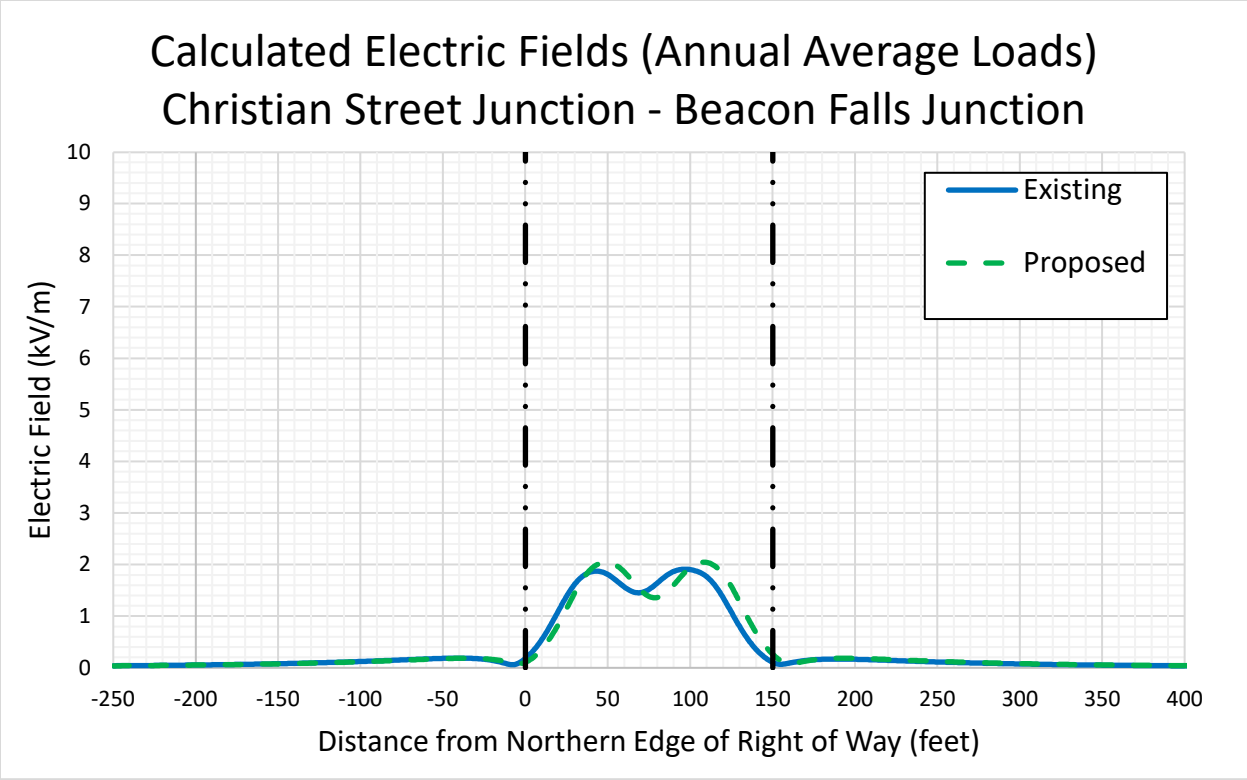

Calculated Magnetic Fields (Annual Average Loads)
Christian Street Junction - Oxford S/S
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Western Edge of Right of Way (feet)
Existing
Proposed


Calculated Magnetic Fields (Annual Average Loads)
Oxford S/S - Towantic S/S
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Western Edge of Right of Way (feet)
Existing
Proposed


Calculated Magnetic Fields (Annual Average Loads)
Christian Street Junction - Beacon Falls Junction
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Northern Edge of Right of Way (feet)
Existing
Proposed


Calculated Electric Fields (Annual Average Loads)
Christian Street Junction- Oxford S/S
Electric Field (kV/m)
10
9
8
7
6
5
4
3
2
1
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Western Edge of Right of Way (feet)
Existing
Proposed


Calculated Electric Fields (Annual Average Loads)
Oxford S/S - Towantic S/S
Electric Field (kV/m)
10
9
8
7
6
5
4
3
2
1
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Western Edge of Right of Way (feet)
Existing
Proposed


Calculated Electric Fields (Annual Average Loads)
Christian Street Junction - Beacon Falls Junction
Electric Field (kV/m)
10
9
8
7
6
5
4
3
2
1
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Northern Edge of Right of Way (feet)
Existing
Proposed

Attachment I

Letter to Abutters and Affidavit

P.O. Box 270
Hartford, CT 06141-0270

September, 2024

Dear Neighbor,

At Eversource, we're always working to serve you better. We are submitting a Petition to the Connecticut Siting Council (CSC) for a proposed electric reliability project in your area.

Proposed Project Information

The Project, called the Towantic Substation to Beacon Falls Junction Rebuild Project ("Project"), is one of several projects designed to support the continued reliability of the transmission system in your region. The Project work would be located within the existing Eversource right-of-way (powerline corridor) on or near your property in the town of Oxford.

The proposed project includes the replacement of existing transmission towers, conductor and shield wires along 4.6 miles between the Towantic Substation on Woodruff Hill Rd to slightly past the Christian Street Junction and continuing to the Beacon Falls Junction on Chestnut Tree Hill.

This work includes:

- Replace the existing steel lattice towers and select steel monopoles with new steel monopole structures. The location and heights of the new structures will vary depending on location, topography, and other factors. In select areas, additional new monopole structures will be installed within the right-of-way to meet updated engineering and national electrical code standards. Steel structures will be galvanized from the Christian St. Junction to Towantic Substation to match the existing line. Weathering steel will be used from the Christian St. Junction to the Beacon Falls Junction.
- Replace the existing conductor (energized wires) with new, upgraded conductor of the same voltage (115-kV).
- Replace the shield wire (top-most wire) with Optical Ground Wire (OPGW). The new wire will improve electric reliability by enabling communications between substations.
- Remove select trees and vegetation within the right-of-way as needed for construction, and conduct vegetation maintenance, which includes removing incompatible, tall-growing vegetation to comply with electric safety standards.
- Build or improve gravel roads and work pads to provide access to structure locations and to create a stable work area for equipment. Temporary construction matting will be used in and around environmentally sensitive areas (e.g., wetlands).

What You Can Expect

Pending receipt of the necessary approvals for this proposed work, construction is expected to begin in Quarter 1 of 2025.

Contact Information

Eversource is committed to being a good neighbor and doing our work with respect for you and your property. For more information, please call our Projects Hotline at 1-800-793-2202 or send an email to ProjectInfo@eversource.com. If you would like to send comments regarding Eversource's Petition to the CSC, please send them via email to siting.council@ct.gov or send a letter to the following address: Melanie Bachman, Executive Director, Connecticut Siting Council, Ten Franklin Square, New Britain, CT 06051.

Sincerely,

Taylor LaPierre
Project Manager – Eversource Energy

AFFIDAVIT OF SERVICE OF NOTICE

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Sec. 16-50j-40 of the Regulations of Connecticut State Agencies ("RCSA") provides that proof of notice to the affected municipalities, property owners and abutters shall be submitted with a petition for declaratory ruling to the Connecticut Siting Council ("Council"). In accordance with that RCSA section, I hereby certify that I caused notice of the petition for a declaratory ruling of The Connecticut Light and Power Company doing business as Eversource Energy to be served by mail or courier upon the following municipal officials:

Honorable George R. Temple
First Selectman
Town of Oxford
Oxford Town Hall
486 Oxford Road
Oxford, CT 06478

I also certify that I caused notice of the proposed modifications to be served by mail or courier upon owners of abutting properties shown on the maps in Attachment A to the Petition.

Deborah Denfeld
Team Lead – Transmission Siting

On this 5th day of September 2024, before me, the undersigned representative, personally appeared, Deborah Denfeld, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Officer of the Superior Court/ Juris No.: _____ 413393