THE FROST BRIDGE TO CAMPVILLE 115-kV PROJECT

BY

THE CONNECTICUT LIGHT AND POWER COMPANY

DOING BUSINESS AS EVERSOURCE ENERGY

VOLUME 2: WETLANDS AND WATERCOURSES REPORT

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Wetlands and Watercourses Report

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Section 1
Introduction

The Connecticut Light and Power Company doing business as Eversource Energy (Eversource) proposes to construct a new 10.4-mile 115-kilovolt (kV) overhead electric transmission line between its Frost Bridge Substation in the Town of Watertown and its Campville Substation in the Town of Harwinton (all within Litchfield County, Connecticut), and to make related improvements to both substations, collectively referred to herein as "the Project". This report provides a summary of wetland and watercourse inventories and delineations conducted by Tighe & Bond within the Project area. These delineations were conducted to identify both federal and Connecticut jurisdictional water resources.

1.1 Project Background and Location

The Project is required to bring the electric supply system in northwest Connecticut into compliance with applicable national and regional reliability standards and criteria by eliminating potential thermal overloads and voltage violations identified in studies conducted by ISO-New England, the independent regional system planning authority.

The proposed new 115-kV transmission line would cross portions of four towns in Litchfield County: Watertown, Thomaston, Litchfield, and Harwinton. The new line would be located entirely within Eversource's existing transmission line right-of-way (ROW). In addition, both the Frost Bridge and Campville substations are located on Eversource property.

Desktop analyses, as well as on-site field delineations were employed to determine state and federal wetland boundaries in accordance with applicable state and federal regulations. The desktop and field wetland and watercourse investigations were conducted during the spring of 2015. This report discusses the methods used to identify the wetlands and watercourses encountered in the Project area and summarizes the findings of the surveys.

Tables listing all wetlands and watercourses identified during the surveys are located in Attachments A and B; the locations of all of the delineated wetlands are depicted on the maps in Volume 5.

1.2 Project Area Geographic Overview

For descriptive purposes, the Project area can be characterized by three major ROW sections between line junctions, as discussed below.

Frost Bridge Substation to Purgatory Junction – This section crosses out of the Naugatuck River valley westerly through the Mattatuck State Forest crossing Park Road, Nova Scotia Hill Road, Jericho Road and U.S. Route 6 in Watertown. The section of the Project area crosses upland areas with prominent bedrock outcrops and the Turkey Brook drainage.

Purgatory Junction to Walnut Hill Junction – This section turns northerly towards Thomaston through Black Rock State Park, crossing the Branch Brook drainage and Branch Road (State Route 109), and then continues north through Mattatuck State Forest property, crossing Morton Pond and Walnut Hill Road. This section of the Project area is

characterized by bedrock controlled topography, with numerous outcroppings and steep, rugged terrain.

Walnut Hill Junction to Campville Substation – From Walnut Hill Junction, the ROW traverses State Highway 254 and the Northfield Brook drainage, then crosses Hopkins Road and enters the southeast corner of Litchfield near Campville Road and extends across State Route 8. From State Route 8, this ROW section crosses the Naugatuck River valley into Harwinton and travels northerly across Wildcat Hill Road to the Campville Substation.

1.3 Physiographic and Geologic Overview

According to Dowhan and Craig, the Project area is situated within the Northwest Hills physiographic region of Connecticut. This region is characterized by variably hilly terrain with local areas of considerable topographic relief and rugged hills. The bedrock is primarily metamorphic, derived from gneiss and schist, and exhibits north-trending belts and outcrops. A representative landscape of this region can be found along the ROW in Black Rock State Park and Mattatuck State Forest in Thomaston.

Bedrock geologic mapping indicates the Project area traverses extensive areas of schist bedrock (e.g., Taine Mountain formation) and some areas of granite. The surficial geology of the corridor is characterized by thin and thick till, with occasional valley settings exhibiting local outwash (sand and gravel) deposits.

Section 2
Wetland and Watercourses Regulations

Tighe & Bond personnel identified wetlands and watercourses subject to state or federal jurisdiction based upon the Connecticut Inland Wetlands and Watercourses Act (CGS Section 22a-36 through 45) and the Federal Clean Water Act ([CWA]; 33 U.S.C. 1344). The Project does not cross any Navigable Waters of the United States subject to Section 10 of the Rivers and Harbors Act (33 U.S.C. 403).

2.1 Section 404 – Clean Water Act

Wetlands, springs, and other waters of the United States are regulated under Section 404 of the Federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE). Federal jurisdictional wetlands include interstate wetlands, wetlands adjacent to waters of the United States, and intrastate wetlands whose degradation or destruction could affect interstate or foreign commerce as per the application of the CWA. The 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Corps Manual) requires a positive wetland indicator for each of the three parameters (vegetation, soils, and hydrology). Indicators for all three of the following parameters must be present for an area to be identified as a wetland:

- Hydrophytic Vegetation: Plants growing in water or in a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content;

- Hydric Soils: Soils that, in an undrained condition, are saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation; and,

- Wetland Hydrology: Inundation or saturation by surface or groundwater at a frequency and duration during the growing season sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

Wetlands satisfying these criteria are subject to federal jurisdiction under Section 404 of the CWA.

In January 2012, the USACE issued a *Regional Supplement to the Corps of Engineers Delineation Manual*[1] (Regional Supplement), which provides further guidance for wetland delineations in the northeastern United States. The Regional Supplement provides wetland indicators, delineation guidance, and other information specific to the Northcentral and Northeast Regions, supplementing the 1987 USACE Manual. Indicators and procedures in the 2012 Regional Supplement are designed to identify wetlands as

[1] Wetlands Regulatory Assistance Program. (2102). *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast*, U.S. Army Engineer Research and Development Center, Vicksburg, MS

defined jointly by the USACE (33 CFR 328.2) and the U.S. Environmental Protection Agency (40 CFR 230.3) and subject to regulation under Section 404 of the CWA.

2.2 Connecticut Inland Wetlands and Watercourses Act

Connecticut regulates inland wetlands under the Inland Wetlands and Watercourses Act (Section 22a-36 through 22a-45 of the Connecticut General Statutes; The Act). These state statutes are implemented through the Inland Wetlands and Watercourses regulations as administered by the individual municipalities. Under Section 2 of The Act, a wetland is defined as "land, including submerged land…which consists of poorly drained, very poorly drained, alluvial and floodplain soils as defined by the National Cooperative Soils Survey. Such areas may include filled, graded or excavated sites which possess an aquic (saturated) moisture regime as defined by the United States Department of Agriculture (USDA) Cooperative Soil Survey."

Watercourses are defined in The Act as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." The Act defines Intermittent Watercourses as having "a defined permanent channel bed and bank and the occurrence of two of the following: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration of longer than a particular storm incident, or C) the presence of hydrophytic vegetation."

Section 3
Wetland Delineation Procedures

In the spring of 2015, Tighe & Bond soil and wetland scientists delineated wetlands within the Project area. The wetland boundaries were delineated in accordance with USACE Headquarters and New England District guidance, including: 1987 Manual, 2012 Regional Supplement, and *Field Indicators for Identifying Hydric Soils in New England, Version 3*.

State jurisdictional wetlands were characterized using Connecticut delineation methodology pursuant to the Connecticut Inland Wetlands and Watercourses Act, C.G.S. §§ 22a-36 through 22a-45 (the Act). The Act defines a wetland as land, including submerged land, consisting of poorly drained, very poorly drained, alluvial, and floodplain soils as defined by the USDA Cooperative Soil Survey. Such areas may include filled, graded, or excavated sites possessing an aquic (saturated) moisture regime as defined by the USDA Cooperative Soil Survey. The Act defines watercourses as rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and also other bodies of water, natural or artificial, public or private, contained within, flow through or border upon the state, or any portion thereof.

The methods of investigation included both desktop analyses and on-site field investigations to determine the wetland and watercourse resource areas within and proximate to the Project area.

3.1 Pre-Survey Desktop Investigations

Prior to performing an on-site survey and wetland delineation, a thorough review of existing Project area information was conducted, including:

- Wetland mapping depicting the 2009 delineations along the Project ROW;
- United States Geologic Survey (USGS) 7.5-minute series topographic quadrangle maps;
- Natural Resources Conservation Service (NRCS) Web Soil Survey digital soil information;
- Connecticut Department of Energy and Environmental Protection (CT DEEP) digital wetland information;
- U.S. Fish and Wildlife Service (USFWS) Region 1, National Wetland Inventory (NWI) digital information;
- CT DEEP Natural Diversity Data Base digital listed species information;
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) digital information; and,
- Aerial photographs.

3.2 Field Surveys

The wetland delineation was initiated with an inspection of the ROW to identify soil topo-drainage sequences, drainage features, and plant associations that would indicate the potential for jurisdictional wetland classification. The wetland delineation was then completed using the *Routine On-Site Wetland Determination Method* (1987 Manual). The indicator status of dominant plant species in each stratum was evaluated in the field to determine whether a hydrophytic plant association was present. Soils profiles were sampled using a Dutch auger and/or a tile spade to determine if any hydric soil indicators were present. Indicators of wetland hydrology were also observed. Specific methods for characterizing and evaluating soil, vegetation, and hydrologic indicators are described below.

3.2.1 Soils

Soil profile observations were collected at each sampling location to a depth of at least 20 inches. Typically, a soil pit was dug with an auger or tile spade (sharpshooter) to provide a soil profile for examination. Soils profiles were inspected by identifying horizons and recording the depths to each horizon boundary. For each horizon the soil texture, structure, and moist color (matrix and redoximorphic features) were observed. Matrix and redoximorphic feature soil colors were identified using a *Munsell® Soil Color Chart.* In addition to color, the kind, size, quantity and contrast of redoximorphic features were evaluated. Hydric soil indicators were field identified using the *Field Indicators for Identifying Hydric Soils in New England.*

3.2.2 Vegetation

Dominant plant species in each vegetation stratum (herbaceous, shrub, sapling, tree, and liana) within the general vicinity of each sampling location were identified. Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. Plant species within the wetland/upland ecotone were recorded as to their percent cover and wetland indicator status according to the *National Wetland Plant List, Region 1*[2] and the NRCS Plants Database[3]. At each plot, visual estimates of dominant plant species cover was observed to determine the location of a change in plant communities from hydrophytic dominant to upland dominant. Total vegetation dominance for all strata was determined using the "50/20 rule" according to the 1987 Corps Manual.

3.2.3 Hydrology

The term wetland hydrology encompasses all hydrologic characteristics for areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Corps hydrology criteria consist of inundation, saturation to the surface, or the upper part of the soil for a long or very long duration. The 1987 Corps Manual suggests that this saturation must persist for at least five percent of the growing season in most years. Areas with evident characteristics for wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils. Indicators of wetland hydrology include vegetated hummocks, water marks on tree

[7] *National Wetland Plant List (Updated July 2013)*. U.S. Army Engineer Research and Development Center, Vicksburg, MS

[3] http://plants.usda.gov/wetland.html

trunks and other vegetation, evidence of inundation or ponding (e.g., water-stained leaves), morphological adaptations of plants (e.g., buttressed trunks, adventitious roots, shallow rooting), drift lines, and drainage patterns. The depths to saturation and standing water were noted where present within 20 inches of the soil surface. The presence or absence of wetland hydrology indicators was observed at each sampling location.

3.2.4 Wetland Numbering Method

For the purpose of documenting and organizing the water resource information on tables and maps for this Project, groups of wetlands occurring along the ROW between selected road crossings were identified by letters of the alphabet A through G[4]. Wetlands within each segment were then labeled in an alpha-numeric sequence (e.g., W-A1, W-A2, W-A3, etc). Watercourses were numbered independently of the wetlands and prefixed by the letter S. Tables 1 and 2 (Attachments A and B) list the delineated wetlands, watercourses, and waterbodies within the Project area.

During the field investigations, the boundaries of each wetland were identified by sequentially-numbered pink vinyl flagging tied to woody vegetation and spaced at regular intervals. The first flag of each boundary series was prefixed with the wetland name, and the watershed in which the wetland is located. For example the prefix "W-A4-NR" indicates Wetland W-A4 delineated in the Naugatuck River Watershed.

Subsequent flags were numbered sequentially with the wetland or watercourse number included as a prefix. Where a break in the boundary line was necessary, a gap of ten flag numbers was incorporated in the numbering sequence.

Watercourses were field-identified with blue flagging. Most watercourses were identified by centerline flags, however the banks of several larger watercourses representing the normal annual high water mark were flagged where important.

Wetlands that were considered to be hydraulically connected or part of a larger ecological functional unit were typically included within the same alpha-numeric label. Frequently, wetlands that appear to lack direct surface water connectivity (such as those bisected by historic disturbance activities such as road construction) were included under the same wetland label if they were considered to be part of the same hydrologic system. A similar approach was taken for small wetlands arrayed along the length of a connecting watercourse.

3.2.5 GPS Mapping

Wetland boundary flags and watercourse centerlines, or in some cases the ordinary high water (OHWM) were located using a Trimble Geo7X® Global Positioning System (GPS). A minimum of 30 static measurements with a Precision Dilution of Position (PDOP) no greater than 6.0 were also collected at each survey point to enhance a sub-meter level of accuracy. Real time positions were then post-processed for additional accuracy using

[4] Wetlands in the vicinity of the Frost Bridge Substation were identified with the letters FB. Wetlands identified with the letter A, or "A – Series" wetlands begin at Echo Lake Road (Watertown); B - Series at Park Road (Watertown); C - Series at Thomaston Road-Route 6 (Watertown); D - Series at Branch Road-Route 109 (Thomaston); E - Series at Northfield Road-Route 254 (Thomaston); F - Series at Campville Road (Litchfield); and G - Series at Wildcat Hill Road (Harwinton).

static data available at public continuously operating reference stations (CORS) and referenced to the Connecticut State Plane Coordinate System NAD 83.

3.3 Wetland and Watercourse Classification

While in the field, Tighe & Bond wetland scientists classified the various wetlands according to the "Cowardin system", which is a system described in the *Classification of Wetlands and Deepwater Habitats of the United States*. Identified wetlands were classified as Palustrine Forested (PFO), Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS) and Palustrine Open Water (POW) and are further described below. In some cases, a wetland complex contained more than one wetland classification type. In those situations, each wetland type is listed and the first classification type represents the more dominant type. For example, within the portions of the ROW that Eversource presently manages in shrub-scrub vegetation compatible with the existing overhead transmission lines, wetlands include PEM, POW, or PSS; in certain locations, the portions of these wetlands that extend into non-managed portions of the ROW are characterized by forested (PFO) vegetation.

3.3.1 Palustrine Forested Wetlands (PFO)

Forested wetlands are characterized by woody vegetation that is six meters (approximately 20 feet) tall or taller and normally includes an overstory of trees, an understory of young trees and/or shrubs, and an herbaceous layer.

3.3.2 Palustrine Scrub-Shrub Wetlands (PSS)

Scrub-shrub wetlands are dominated by woody vegetation less than six meters (approximately 20 feet) tall. Scrub-shrub land types may represent a successional stage leading to a forested wetland and include shrubs, saplings, and trees or shrubs that are small and/or stunted due to environmental conditions.

3.3.3 Palustrine Emergent Wetlands (PEM)

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes not including mosses and lichens. These wetlands maintain the same appearance year after year, and are typically dominated by perennial plants that are present for the majority of the growing season.

3.3.4 Palustrine Open Water (POW)

Areas of permanent or semi-permanent open water that border on palustrine systems are referred to as POW. Areas of open water may exist as man-made or natural waterbodies.

3.4 Post-Survey Desktop Analysis

Wetland and watercourse boundaries were plotted on 2012 Aerial Imagery with 0.5-foot resolution at 100 scale and reviewed and confirmed by Tighe & Bond personnel responsible for the field delineation of wetlands. The aerial photograph based Volume 5 maps show the locations of the delineated resources relative to the limits of the ROW.

Section 4
Results

4.1 Wetlands

A total of 91 wetlands were delineated within Eversource's easements or fee-owned properties in proximity to Project activities. An additional 4 wetlands were delineated along publically accessible (State Park/Forest) off-ROW access roads that are proposed for use. Of the total 95 wetlands delineated, 48 would be within the portions of the ROW traversed by the new transmission line.[5] A summary of the delineated wetlands is provided in Table 1 (Attachment A).

For most of the wetlands identified in Project area, the field investigations determined that the Connecticut and federal wetland jurisdictional boundaries coincided. In locations where the difference in the boundary location was estimated to be less than 15 feet, the upper (higher) limit was identified as sufficient to encompass jurisdiction.

In two locations, the occurrence of well-drained to excessively-drained alluvial soils required areas of state jurisdiction to be identified separately from the federal wetland boundary. These areas are characterized by floodplain soils associated with the Naugatuck River at the Frost Bridge Substation property in Watertown, and at the Naugatuck River at the Litchfield/Harwinton boundary.

4.1.1 Wetlands Vegetation

The predominant forested wetland type found in the Project area is red maple (*Acer rubrum*) swamp. Following Metzler and Barrett, the plant communities encountered in the ROW would most commonly be classified as acidic to circumneutral seepage swamps (*Acer rubrum*/ *Lindera benzoin* community) or acidic red maple/ericaceous basin swamp (*Acer rubrum*/ *Ilex verticillata* community). Acidic Eastern hemlock (*Tsuga canadensis*) basin swamps (and hillslope wetlands) are also encountered. Another common forested wetland canopy association is red maple and green ash (*Fraxinus pennsylvanicus*).

Representative tree species in forested wetlands include red maple, yellow birch (*Betula allegheniensis*), green ash (*Fraxinus pennsylvanicus*), and occasionally black gum (*Nyssa sylvatica*). Characteristic shrub species include winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*) and. to a lesser extent, northern arrowwood (*Viburnum recognitum*) and wild raisin (*Viburnum cassinoides*). Common herbaceous species include cinnamon fern (*Osmunda cinnamomea*), skunk cabbage (*Symplocarpus foetidus*), jewelweed (*Impatiens capensis*), and occasionally false hellebore (*Veratrum viride*) and swamp rue (*Thalictrum* sp.). *Sphagnum* sp. moss is common in many of these wetlands at locations exhibiting a saturated to temporarily flooded water regime.

The upper margin of forested wetlands often exhibit broad bands of cinnamon fern interspersed with such plants as tree clubmoss (*Lycopodium obscurum*), Canada mayflower (*Maianthemum canadense*), New York fern (*Thelypteris noveboracensis*), jack-

[5] The 48 wetlands are those located within the footprint of the new 115-kV line

in-the-pulpit (*Arisaema triphyllum*), witch hazel (*Hamamelis virginiana*) and hickories (*Carya* spp.). These transition areas frequently trend into uplands supporting such plants as hay-scented fern (*Dennstaedtia punctilobula*), Christmas fern (*Polystichum acrostichoides*), wood-ferns (*Dryopteris* spp.), mountain laurel (*Kalmia latifolia*), American hornbeam (*Carpinus caroliniana*), black birch (*Betula lenta*), sugar maple (*Acer saccharum*) and red oak (*Quercus rubra*). Representative community types of these locations (as identified by Metzler and Barrett 2006) include 1) sugar maple-American beech/intermediate woodfern community of the bedrock-controlled hills of western Connecticut, 2) hemlock forest, and 3) sugar maple-white ash/silver false spleenwort community. It is not uncommon to observe wetland soils and seasonal wetland hydrology extending into areas dominated by or supporting facultative upland (FACU) vegetation (Reed 1988) such as red oak, sugar maple, hickory, or white pine (*Pinus strobus*).

Forested wetland dominated by Eastern hemlock can be observed at several locations within the Project area. These typically have sparse to negligible shrub cover and an herbaceous layer comprised of ferns (e.g., *Osmunda cinnamomea*, *Dryopteris* sp.) and including *Sphagnum* sp. moss.

Shrub wetlands are commonly dominated by winterberry, highbush blueberry, silky dogwood (*Cornus amomum*), and support occasional pussy willow (*Salix discolor*). Maleberry (*Lyonia ligustrina*) is often located in drier portions and along the upland margins of these wetlands. Larger shrub swamps that are temporarily flooded to seasonally flooded also support such shrubs as swamp azalea (*Rhododendron viscosum*), black chokeberry (*Aronia* sp.), poison sumac (*Toxicodenron vernix*), and swamp rose (*Rosa palustris*).

Emergent wetlands within the Project area commonly exhibit perennial forbs such as wrinkle-leaved goldenrod (*Solidago rugosa*), sensitive fern (*Onoclea sensibilis*), joe-pyeweed (*Eupatorium* spp.), marsh fern (*Thelypteris palustris*), and low woody plants such as hardhack (*Spiraea latifolia*), poison ivy (*Toxicodendron radicans*), and steeplebush (*Spiraea tomentosa*). Wetter areas (commonly referred to as shallow marsh) exhibit such plants as tussock sedge (*Carex stricta*), woolgrass (*Scirpus cyperinus*), broad-leaved cattail (*Typha latifolia*), and skunk cabbage. Deep marsh areas commonly support pure stands of tussock sedge interspersed with areas of open water. Fallow agricultural land, wet meadows, and wet pastures typically support herbaceous plants such as soft rush (*Juncus effusus*), foxtail sedge (*Carex vulpinoidea*), marsh fern, Canada rush (*Juncus canadensis*), and grasses such as bluegrasses (*Poa* spp.), bentgrasses (*Agrostis* spp.), bluejoint grass (*Calamagrostis canadensis*), and fowl-meadow grass (*Glyceria striata*).

4.1.2 Wetland Suficial Geology, Soils, and Hydrology

Soil types within the Project area are predominantly derived from glacial till. As explained in Metzler and Barett: "these soils are generally [stony] and have little organic-matter accumulation in the upper layers. In the western hills, till soils are derived primarily from crystalline rocks (gneiss and schist)..."

The Hollis-Chatfield catena is the representative soil type continuum throughout the majority of the Project area. This catena includes well drained Charlton, Canton, Paxton, and Montauk soils, moderately well drained Woodbridge and Sutton soils, and poorly drained to very poorly drained Ridgebury, Leicester and Whitman soils.

The most common hydric (wetland) soil mapping unit is the extremely stony Ridgebury Leicester and Whitman fine sandy loam. This mapping unit ranges from poorly drained (Ridgebury and Leicester soils) to very poorly drained (Whitman soils) and is found in depressions and drainageways on till uplands.

Other common and characteristic wetland soil types (and characteristic of outwash areas) include poorly drained Walpole sandy loam and Raypol Series. Very poorly drained areas with mineral soils are typically Scarboro muck.

Floodplain soils are found along the Naugatuck River at the Litchfield / Harwinton town boundary and also occasionally in narrow bands along smaller streams. These soil types are characterized by moderately well drained Pootatuck and poorly drained Limerick, Lim, and Rippowam soils. Generally, however, the sloping terrain traversed by the transmission line ROW – in combination with upper landscape stream gradients – inhibits the accumulation of alluvium and the development of alluvial soils along watercourses in the upland till.

The most common water regime in the identified wetlands is seasonally saturated. These wetlands commonly support wetter areas that are saturated to temporarily flooded. A few marsh areas and vernal pool locations exhibit water regimes that are seasonally flooded to semi-permanently flooded. Permanently flooded areas include small ponds and the deeper parts of the perennial watercourses and rivers.

A substantial number of wetland areas are episaturated[6] and supported by groundwater discharge – specifically functioning as groundwater slope wetlands leading to a surface water depression (cf. Novitski 1982). The widespread presence of glacial till substrates on this landscape promotes episaturation hydrology and lateral discharge of return flows.

4.2 Watercourses

A total of 58 watercourses (including waterbodies) were delineated[7] within the Project area, including the Naugatuck River, 14 perennial streams, six ponds and 38 intermittent watercourses. A summary of the delineated watercourse and waterbodies is provided in Table 2 (Attachment B). The majority of the watercourses delineated within the Project area are less than five feet wide and exhibit intermittent flow. These watercourses typically exhibit a meandering channel, a sand/gravel and cobble substrate with gradual to slightly undercut banks.

Three of the identified perennial watercourses average greater than 20 feet wide and are named brooks or rivers. These include Branch Brook, Northfield Brook, and the Naugatuck River. At Eversource's existing ROW crossing in Litchfield and Harwinton, the Naugatuck River is an estimated 110 feet wide. None of the watercourses crossed by the Project area met the criteria for federal designation as navigable[8] pursuant to Section 10 of the

[6] Perched groundwater often a result of underlying densic material

[7] Six ponds are included in this total; however, they were also included within the delineated wetlands figures as they were located within larger delineated wetlands.

[8] The USACE's general definition of navigable waters of the United States is "those waters subject to the ebb and flow of the tide shoreward to the mean high water mark and/or presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce." Waterways considered to be navigable waters may be subject to regulatory jurisdiction under Section 10 of the Rivers and Harbors Act.

Rivers and Harbors Act. All of these watercourses are presently spanned by Eversource's overhead transmission lines that occupy the existing ROW along which the Proposed Route would be located.

Six unnamed ponded areas were identified within the Project area. These include natural areas of standing water, man-made agricultural and recreational ponds, and beaver impoundments. All of these ponds are already spanned by Eversource's overhead transmission lines that occupy the existing ROW along the Proposed Route.

Section 5
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APPENDIX A:

TABLE 1: DELINEATED WETLANDS WITHIN THE PROJECT AREA

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Table 1: Delineated Wetlands within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Water Regime	Associated Watercourse[3]
Watertown					
1/1	W-FB1	PFO	PSS	Seasonally saturated	
1/1	W-FB2	PFO	PSS	Saturated	S-FB1
1/1	W-FB3	PEM	PSS	Seasonally saturated	
1/1	W-FB4	PEM	PSS	Seasonally saturated	
1	W-FB5	PFO	PSS	Saturated	
1	W-FB6	PEM		Seasonally saturated	S-FB2, S-FB3
1/3A	W-MSF1	PFO		Seasonally saturated	
1/3	W-MSF2	PFO		Seasonally saturated	
1/3A	W-MSF3	PFO		Seasonally saturated	
1/1	W-A1	PSS	PEM	Saturated	S-A1
1/1	W-A2	PSS	PEM	Seasonally saturated	S-A2
1/2	W-A3	PFO	PSS	Seasonally saturated	S-A3
1/2	W-A4	PFO	PEM	Saturated	
1/3	W-A5	PSS	PEM	Temporarily flooded	
1/3	W-A6	PEM		Temporarily flooded	S-A4
1/4	W-A7	PFO	PEM	Seasonally saturated	
1/4	W-A8	PSS		Temporarily flooded	S-A5
1-2/4-5	W-A9	PSS	PEM	Saturated	S-A6, S-A7
1/4	W-A10	PEM		Seasonally saturated	
2/5	W-A11	PSS		Saturated	
2/6	W-A12	PSS	PEM	Seasonally	

Table 1: Delineated Wetlands within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Water Regime	Associated Watercourse[3]
				saturated	
2/6	W-B1	PSS	PEM	Saturated	
2/6	W-B2	PSS	PEM	Saturated	
2/6	W-B3	PSS	PEM	Intermittently flooded	
2/6	W-B4	PFO		Saturated	
2/6-7	W-B5	PSS	PEM	Seasonally saturated	
2/6-7	W-B6	PSS	PEM	Saturated	
2/8	W-B7	PSS	PEM	Saturated	
2/8	W-B8	POW	PEM	Temporarily flooded	
2/8	W-B9	POW	PSS, PEM	Saturated	
3/9	W-B11	PSS	POW	Saturated	S-B1, S-B2, S-B3
3/10A/10B	W-C1A	PSS	PFO	Saturated	
3/10A/10B	W-C2A	PSS	PEM	Saturated	
3/10	W-C1	PFO	PSS	Seasonally saturated	S-C1
3/10	W-C2	PFO		Seasonally saturated	S-C2
3/10	W-C3	PSS	PEM	Seasonally saturated	
3/11	W-C4	PFO	PSS	Seasonally saturated	VP C4-1
3/11	W-C6	PSS		Seasonally saturated	
3/11	W-C7	PFO		Seasonally saturated	
3/11	W-C8	PFO		Saturated	
3/11	W-C10	PFO		Seasonally flooded	
3/12	W-C12	PFO	PSS, PEM	Saturated	S-C3
3/12	W-C14	PSS	PEM	Seasonally saturated	
3-4/12-13	W-C15	PFO	PSS, PEM	Saturated	S-C4, S-C5

Table 1: Delineated Wetlands within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Water Regime	Associated Watercourse[3]
3/11	W-C16	PSS	PEM, PFO (off-ROW)	Saturated	
3-4/13	W-C18	PFO		Seasonally saturated	
4/14	W-C20	PFO	PSS	Saturated	S-C6
4/15	W-C21	PFO	POW	Semi-permanently flooded	
4/16	C-C22	PEM	PFO	Saturated	S-C7
4/17	W-C23	PSS	PEM	Saturated	S-C8, S-C9
Thomaston					
5/18	W-D1	PUB		Temporarily flooded	
5/18	W-D2	PEM		Seasonally saturated	S-D2
5/18-19	W-D3	PFO	PSS	Seasonally saturated	S-D3
5/19	W-D4	PFO		Seasonally saturated	
5/20	W-D5	PEM		Seasonally saturated	
5/20	W-D6	POW	PEM	Permanently flooded	
6/21	W-D7	PFO	PEM	Seasonally saturated	S-D5
6/21	W-D8	PFO		Seasonally saturated	
6/22	W-D10	PFO	PFO	Seasonally saturated	
6/22	W-D11	PFO	PSS	Seasonally saturated	S-D8
6/22-23	W-D12	PSS	PFO, PEM	Seasonally saturated	S-D9, S-D10
6/23	W-D13	PFO	PSS	Seasonally saturated	S-D11
6/24	W-D14	PFO		Saturated	

Table 1: Delineated Wetlands within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Water Regime	Associated Watercourse[3]
5/21	W-D15	PSS	PEM	Semi-permanently flooded	
6/24	W-E1	PFO	PSS	Permanently flooded	S-E2
7/25-26	W-E2	PSS	PFO	Saturated	S-E3
Litchfield					
7/25-26	W-E2	PSS	PFO	Saturated	S-E4
7/26	W-E3	PEM		Saturated	
7/26	W-E4	PFO	PSS, PEM	Seasonally saturated	S-E5
7/26	W-E5	PEM		Seasonally saturated	
7/26	W-E6	PEM		Seasonally saturated	
7/26-27	W-E7	PSS		Seasonally saturated	
7/27	W-E8	PSS	PFO	Seasonally saturated	
7/27-28	W-E9	PFO	PSS	Saturated	S-E7
7/28	W-E10	PSS	PFO	Saturated	
7/28	W-E11	PSS	POW	Saturated	
7/29	W-E12	PEM		Seasonally saturated	
7/28	W-E13	PFO		Seasonally saturated	
8/29	W-F2	PEM		Seasonally saturated	S-F2
8/29	W-F3	PFO		Seasonally saturated	
8/29	W-F4	PFO		Seasonally saturated	S-F1
8/29	W-F5	PSS	PEM	Seasonally saturated	S-F1, S-F3
8/29	W-F6	PFO		Seasonally saturated	

Table 1: Delineated Wetlands within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Water Regime	Associated Watercourse[3]
8/29-30	W-F7	PSS	PFO, PEM, POW	Seasonally saturated	S-F4
8/30	W-F8	PEM	PSS	Seasonally saturated	S-F5
8/31	W-F9	PFO	POW	Intermittently flooded	S-F7
Harwinton					
8/31	W-F9	PFO	POW	Intermittently flooded	S-F7, S-F8
8/31	W-F10	PFO		Temporarily flooded	S-F9
8/32	W-F11	PFO	PSS	Seasonally saturated	S-F11
8/32	W-F12	PSS	PEM	Seasonally saturated	S-F10
8-9/33	W-F13	PFO	PSS, PEM	Saturated	S-F12
9/34	W-F14	PSS	PFO	Seasonally saturated	
9/34-35	W-F15	PEM	PFO, PSS, POW	Seasonally saturated	S-F13, S-F14
9/35	W-G1	PFO	PSS	Seasonally saturated	S-G1, S-G2, S-G3
9/35	W-G2	PSS	PFO	Saturated	
9/35	W-G3	PSS	PEM	Seasonally saturated	

[1] Wetland No. refers to the number generated during the 2015 field surveys to identify wetlands within the Project area. This Wetland No. is keyed to those depicted in Volume 5.

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

[3] Associated Watercourse refers to the identification number generated during the 2015 field surveys to identify watercourses within the Project area.

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APPENDIX B:

TABLE 2: DELINEATED WATERCOURSES AND WATERBODIES WITHIN THE PROJECT AREA

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Table 2: Delineated Watercourses and Waterbodies within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Watercourse No.[1]	Watercourse / Waterbody Name	Flow Regime	Water Quality Classification	Approximate Width	Associated Wetland
Watertown						
1/1	S-FB1		Intermittent	A	1 - 2'	W-FB2
1	S-FB2	Tributary to Naugatuck River	Perennial	B/A	3 - 6'	W-FB6
1	S-FB3	Tributary to Naugatuck River	Intermittent	B/A	1'	W-FB6
1/1	S-A1	Tributary to Naugatuck River	Perennial	B/A	3 - 4'	W-A1
1/1	S-A2	Tributary to Naugatuck River	Intermittent	B/A	1 - 3'	W-A2
1/2	S-A3	Tributary to Naugatuck River	Perennial	B/A	2 - 5'	W-A3
1/3	S-A4	—	Intermittent	A	1 - 2'	W-A6
1/4	S-A5	Tributary to Turkey Brook	Perennial	A	4 - 8'	W-A8
1/4	S-A6	Turkey Brook	Perennial	A	3 - 7'	W-A9
1-2/4-5	S-A7	Turkey Brook	Perennial	A	3 - 7'	W-A9
2/8		Unnamed Pond	Perennial	A		W-B9
3/9		Unnamed Pond	Perennial	A		W-B11
3/9	S-B1	Tributary to Hannon Pond/Purgatory Brook	Intermittent	A	2 - 3'	W-B11
3/9	S-B2	Tributary to Hannon Pond/Purgatory Brook	Intermittent	A	2 - 3'	W-B11
3/9	S-B3	Tributary to Hannon Pond/ Purgatory Brook	Intermittent	A	2 - 3'	W-B11
3/10	S-C1	—	Intermittent	A	2 - 3'	W-C1, W-C2
3/10	S-C2	Tributary to Hannon Pond/ Purgatory Brook	Intermittent	A	2 - 3'	W-C1, W-C2
3/12	S-C3	—	Intermittent	A	3 - 4'	W-C12
3/12	S-C4	Tributary to Lockwood Pond	Perennial	A	3 - 4'	W-C15
3/12	S-C5	Tributary to Lockwood Pond	Intermittent	A	1'	W-C15
4/14	S-C6	—	Intermittent	A	2'	W-C20

Table 2: Delineated Watercourses and Waterbodies within the Project Area

Municipality; Vol. 5, 100 and 400 Scale Mapsheet Nos.	Watercourse No.[1]	Watercourse / Waterbody Name	Flow Regime	Water Quality Classification	Approximate Width	Associated Wetland
4/16	S-C7	—	Intermittent	A	3'	W-C22
4/17	S-C8	Branch Brook	Perennial	A	20 - 30'	W-C23
4/17	S-C9	Tributary to Branch Brook	Intermittent	A	3'	W-C23
Thomaston						
5/18	S-D1	—	Intermittent	A	< 1'	
5/18	S-D2	Tributary to Branch Brook	Intermittent	A	2 - 3'	W-D2
5/18-19	S-D3	Tributary to Branch Brook	Intermittent	A	2 - 8'	W-D3
5/20		Morton Pond	Perennial	A		W-D6
6/21	S-D5	Tributary to Northfield Brook	Perennial	A	3 - 8'	W-D7
6/22	S-D8	—	Intermittent	A	< 1'	W-D11
6/22	S-D9	Tributary to Northfield Brook	Intermittent	A	5 - 10'	W-D12
6/22	S-D10	Tributary to Northfield Brook	Intermittent	A	2 - 4'	W-D12
6/23	S-D11	Tributary to Northfield Brook	Intermittent	A	2 - 8'	W-D13
6/24	S-E2	Northfield Brook	Perennial	A	20 - 30'	W-E1
7/25	S-E3	Tributary to Northfield Brook	Intermittent	A	3 - 4'	W-E2
Litchfield						
7/26	S-E4	—	Intermittent	A	< 1'	W-E2
7/26	S-E5	—	Intermittent	A	2'	W-E4
7/27	S-E7	—	Intermittent	A	1'	W-E9
7/28		Unnamed Pond	Perennial	A		W-E11
8/29	S-F1	—	Intermittent	A	4 - 6'	W-F4, W-F5
8/29	S-F2	—	Intermittent	A	< 1'	W-F2
8/29	S-F1/S-F3	—	Intermittent	A	3'	W-F2, W-F4, W-F5
8/30		Unnamed Pond	Perennial	A		W-F7
8/30	S-F4	—	Intermittent	A	1 - 2'	W-F7
8/30	S-F5	—	Intermittent	A	< 1'	W-F8

Table 2: Delineated Watercourses and Waterbodies within the Project Area

Municipality; Vol. 5, 400 and 100 Scale Mapsheet Nos.	Watercourse No.[1]	Watercourse / Waterbody Name	Flow Regime	Water Quality Classification	Approximate Width	Associated Wetland
8/30-31	S-F6	Tributary to Naugatuck River	Perennial	A	5-15’	
8/31	S-F7	Naugatuck River	Perennial	B	70 - 110'	W-F9
Harwinton						
8/31	S-F7	Naugatuck River	Perennial	B	70 - 110'	W-F9
8/30	S-F8	Tributary to Naugatuck River	Perennial	A	4 - 7'	W-F9
8/31	S-F9	Tributary to Naugatuck River	Intermittent	A	1 - 2'	W-F10
8/32	S-F10	Tributary to Naugatuck River	Intermittent	A	1 - 3'	W-F12
8/32	S-F11	Tributary to Naugatuck River	Perennial	A	6 - 9'	W-F11
8/33	S-F12	Tributary to Naugatuck River	Intermittent	A	4 - 8'	W-F13, W-F15
9/34	S-F13	Tributary to Naugatuck River	Intermittent	A	1 - 3'	W-F15
9/35	S-F14	Tributary to Naugatuck River	Intermittent	A	1 – 2’	
9/35		Unnamed Pond	Perennial	A		W-F15
9/35	S-G1	—	Intermittent	A	1 - 2'	W-G1
9/35	S-G2	—	Intermittent	A	1 - 2'	W-G1
9/35	S-G3	—	Intermittent	A	1 - 2'	W-G1

[1] Watercourse No. refers to the number generated during the 2015 field surveys to identify watercourses within the Project area. This Wetland No. is keyed to those depicted in Volume 5.

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APPENDIX C:

REPRESENTATIVE WETLAND PHOTOGRAPHS

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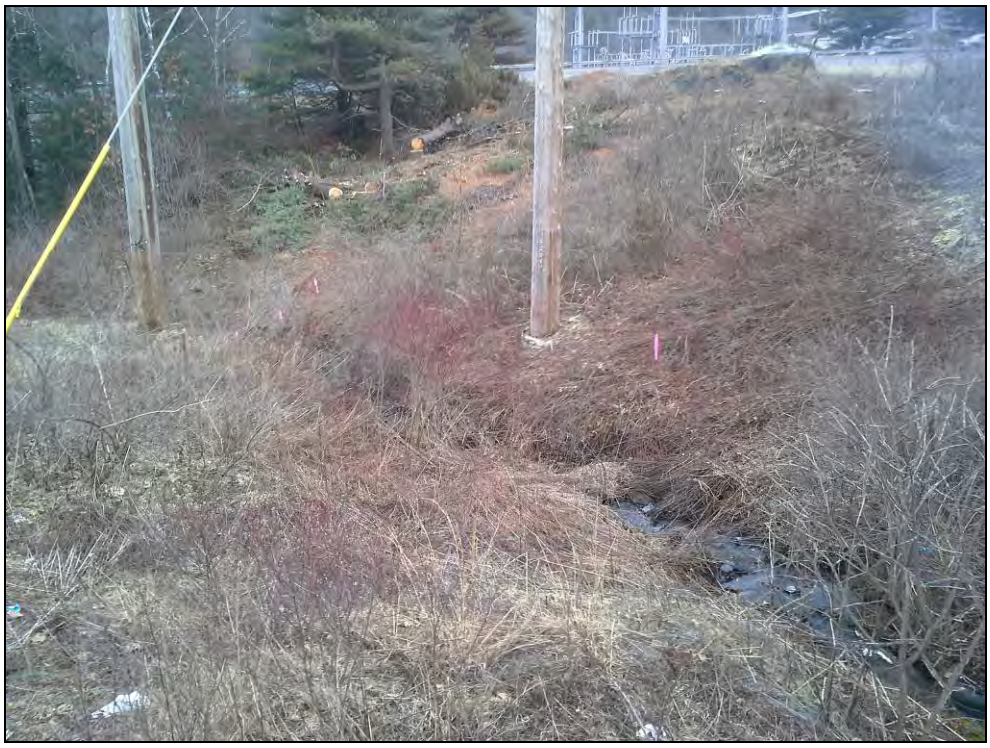
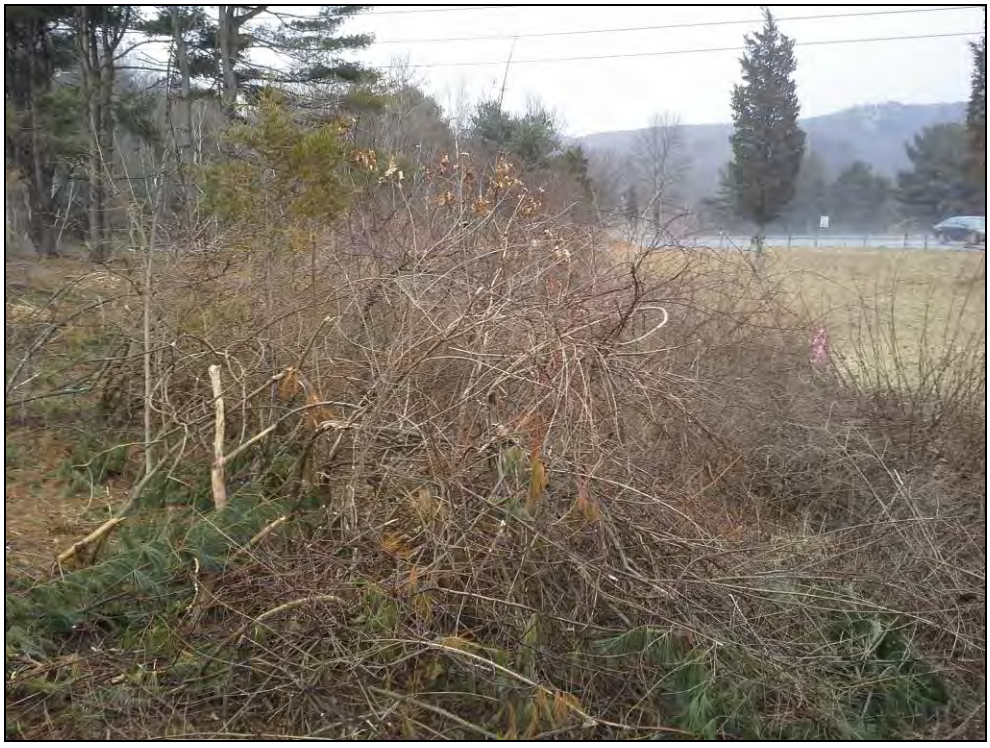
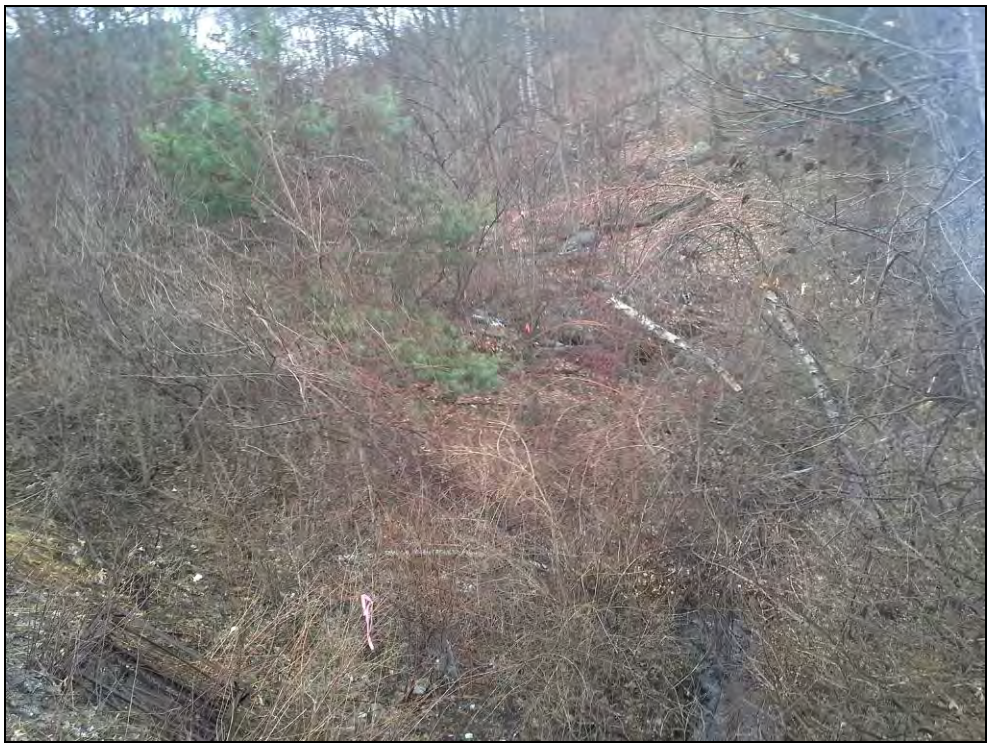


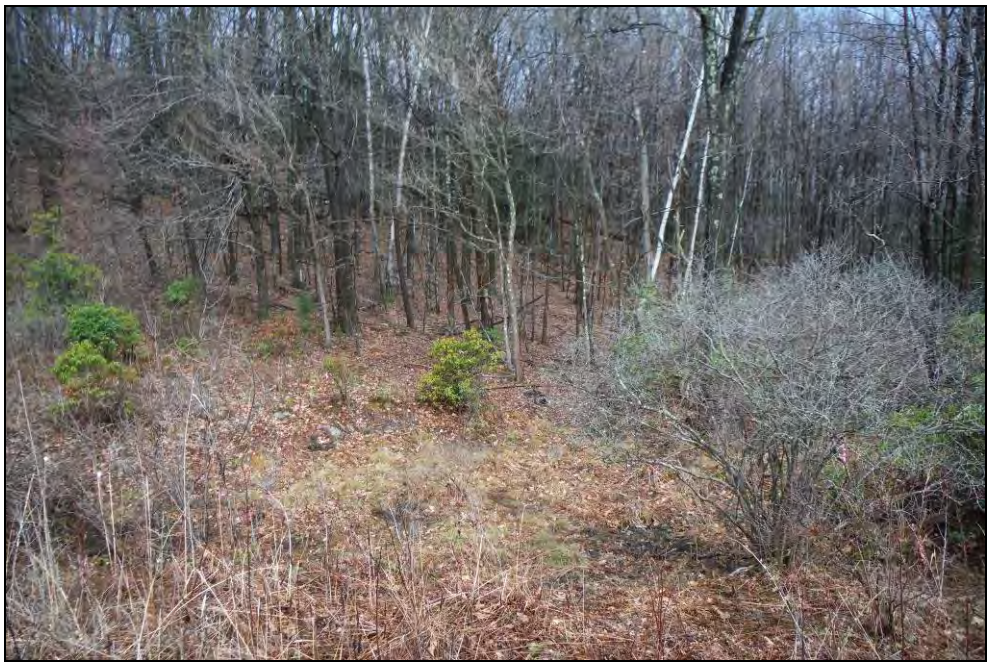
View facing east, Wetland A1. Frost Bridge Substation in the background.



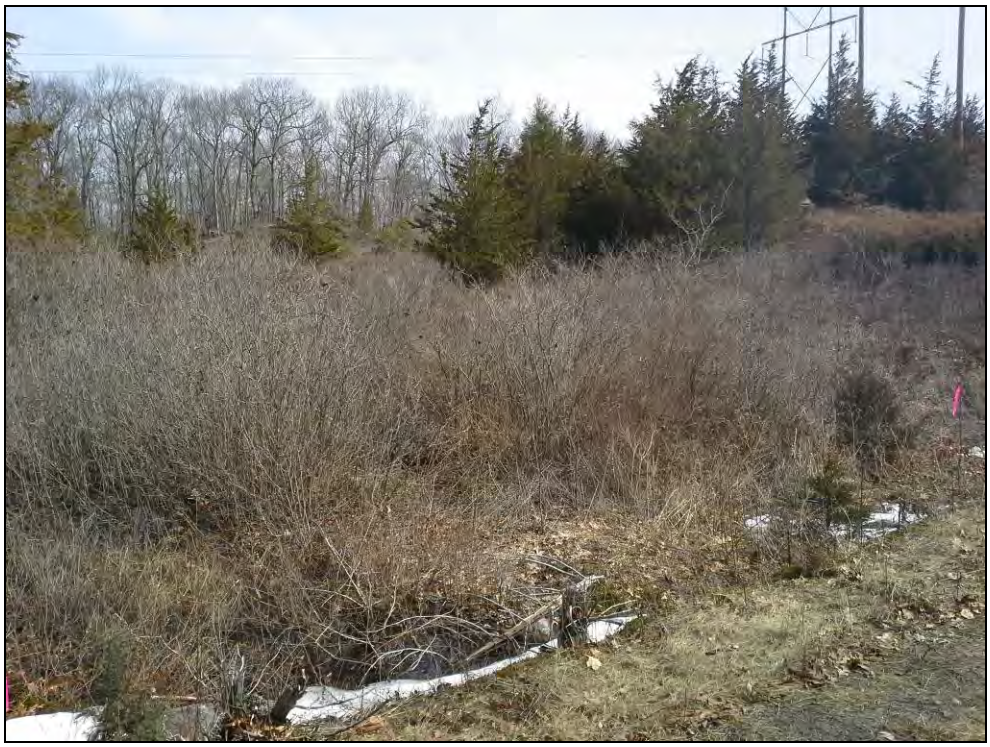
View facing northeast, Wetland A2. Route 8 in the background.



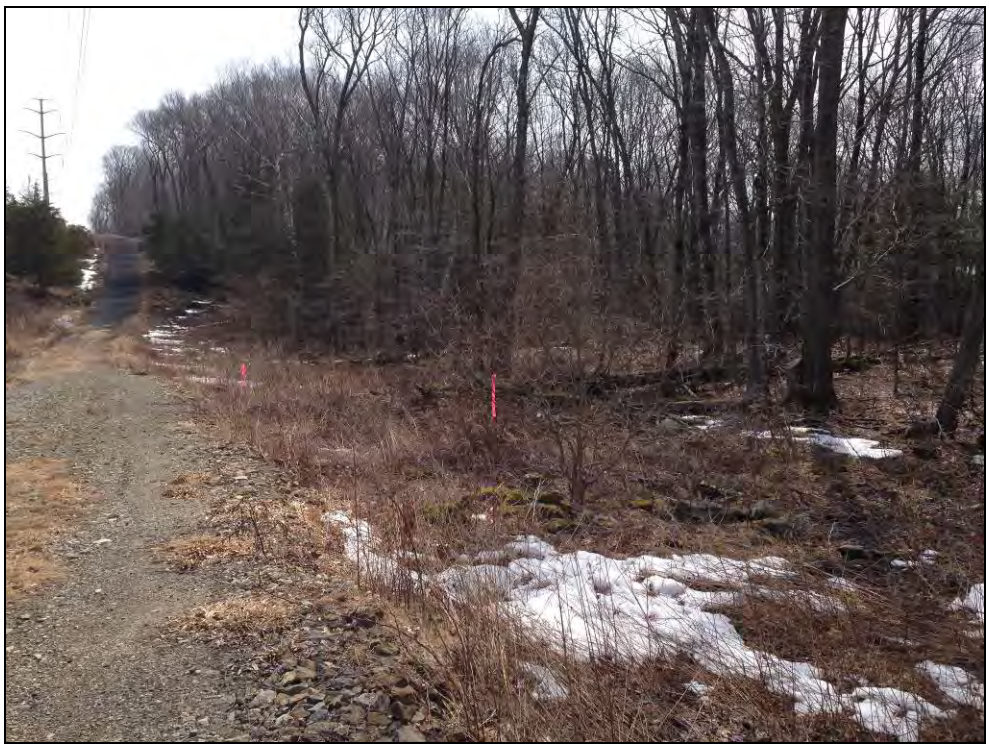
View southwest, Wetland A3 to south side of existing ROW.



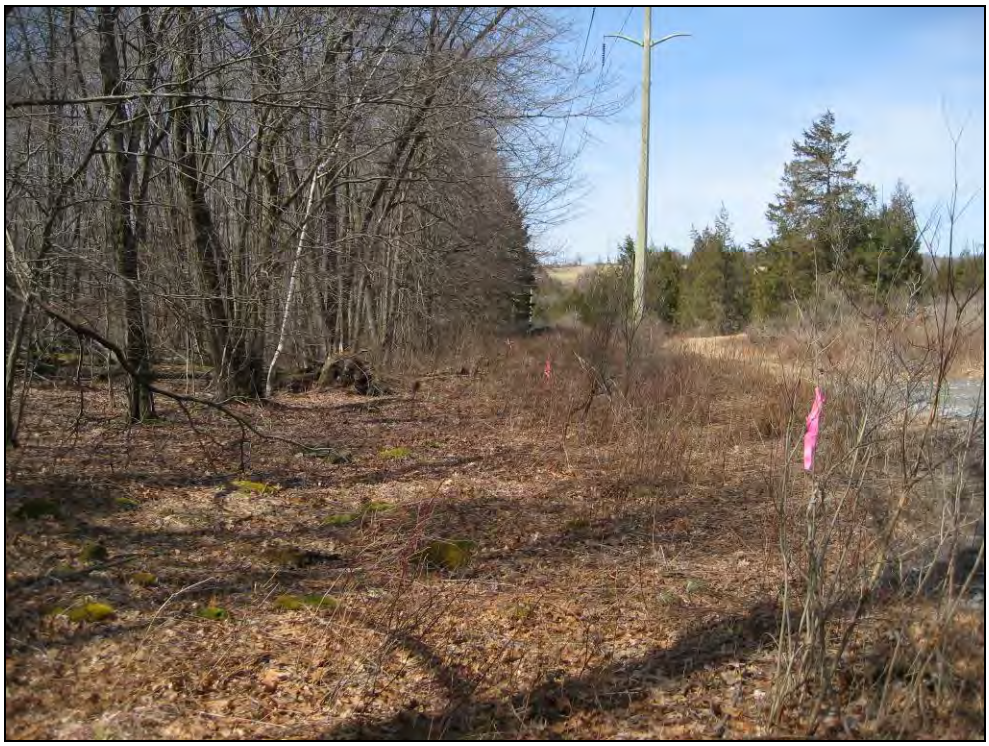
View facing north, Wetland A4 to north side of ROW.



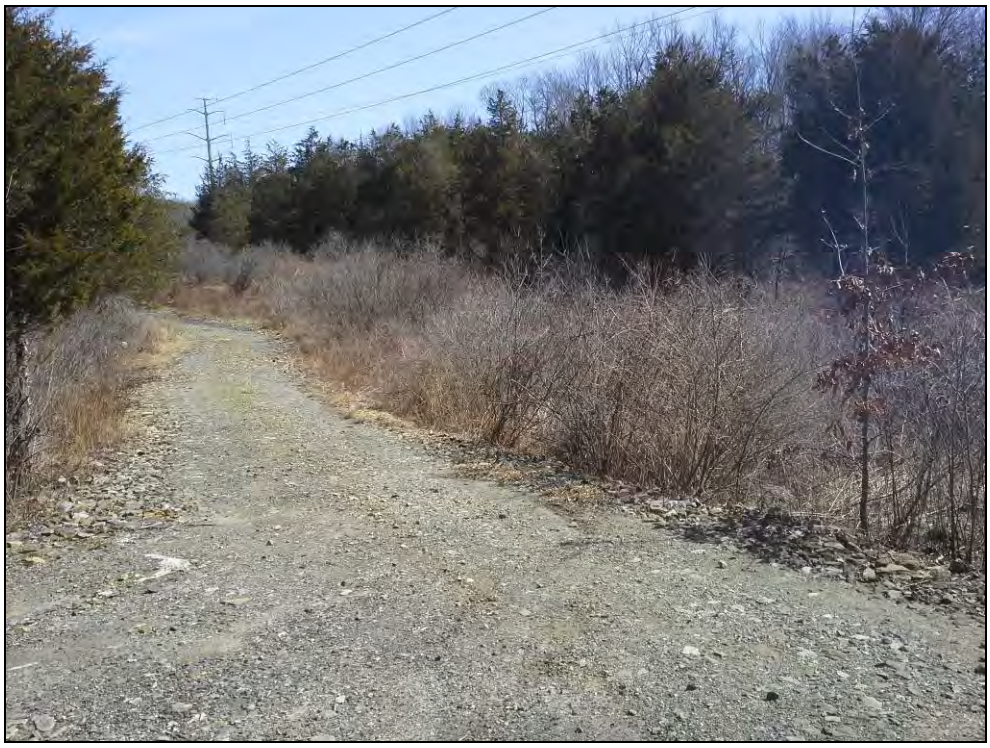
View facing north, Wetland A5 on north side of access road.



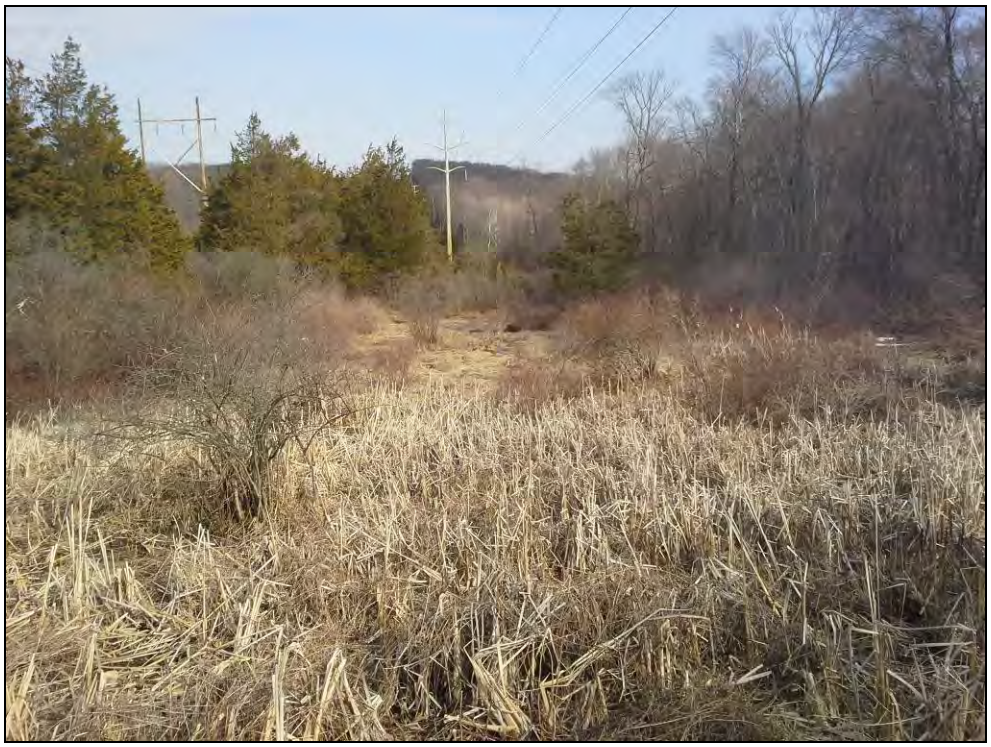
View facing east, Wetland A6 to south side of access road.



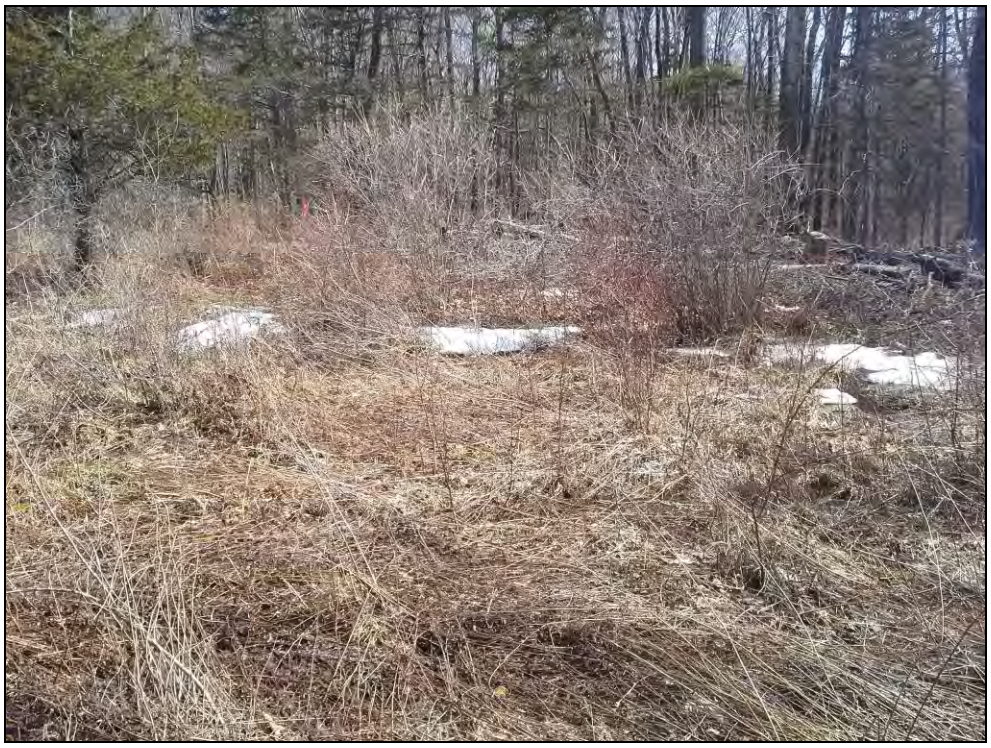
View facing west, Wetland A7 along south side of ROW of access road.



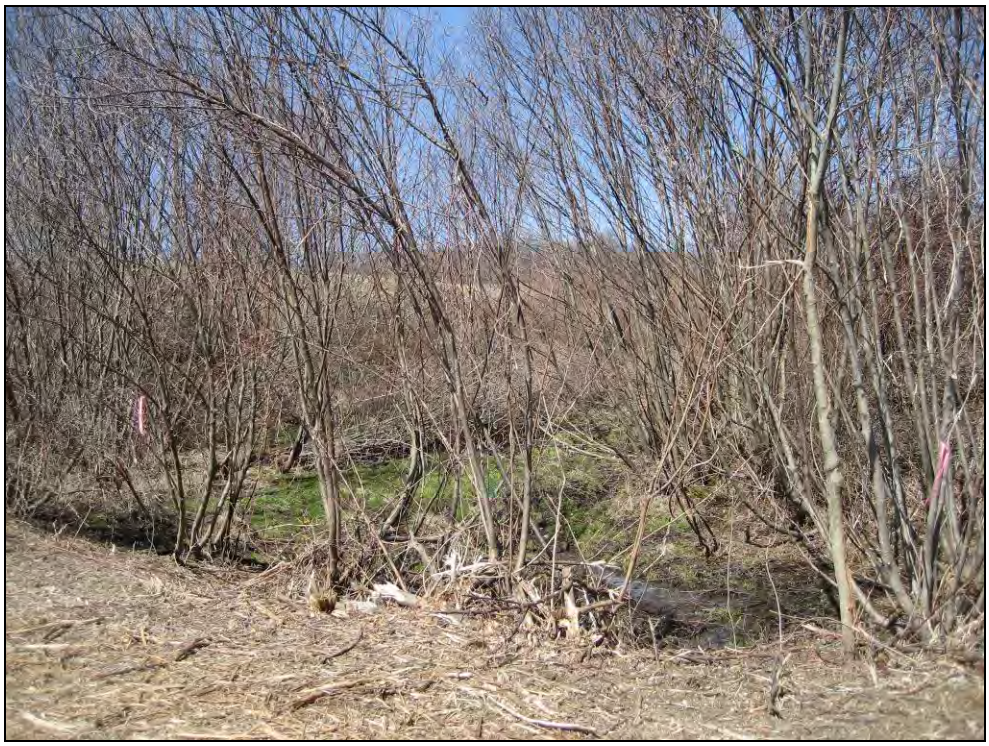
View facing east, Wetland A8 on both side of access road.



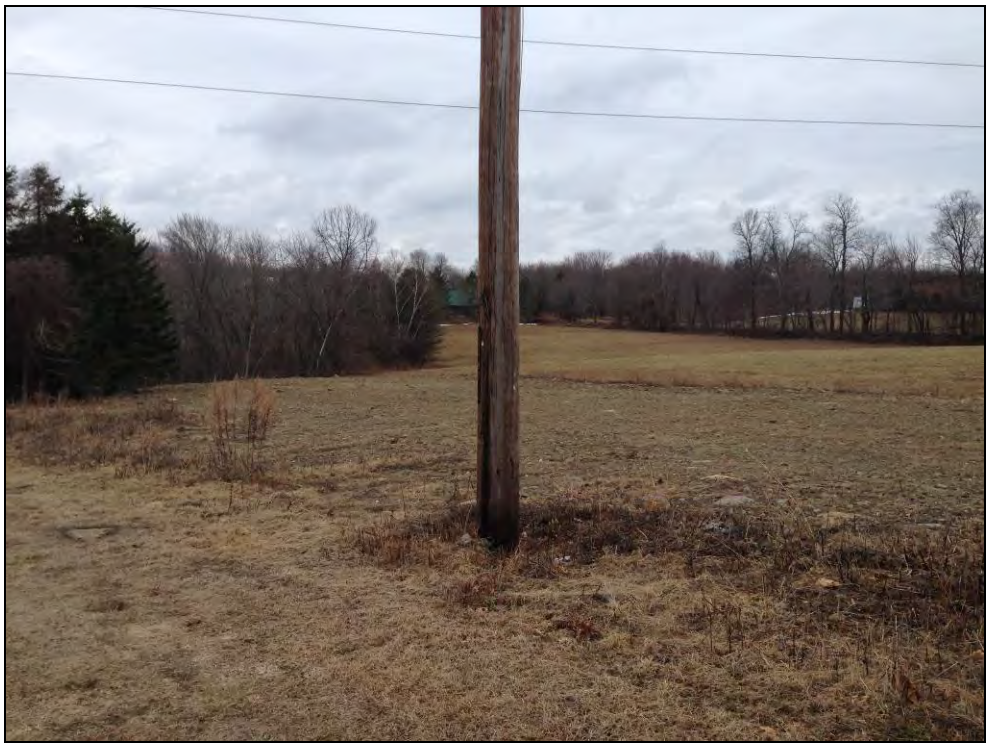
View facing southeast, Wetland A9 along the southern edge of the ROW.



View facing southwest, Wetland A10 along south side of ROW.

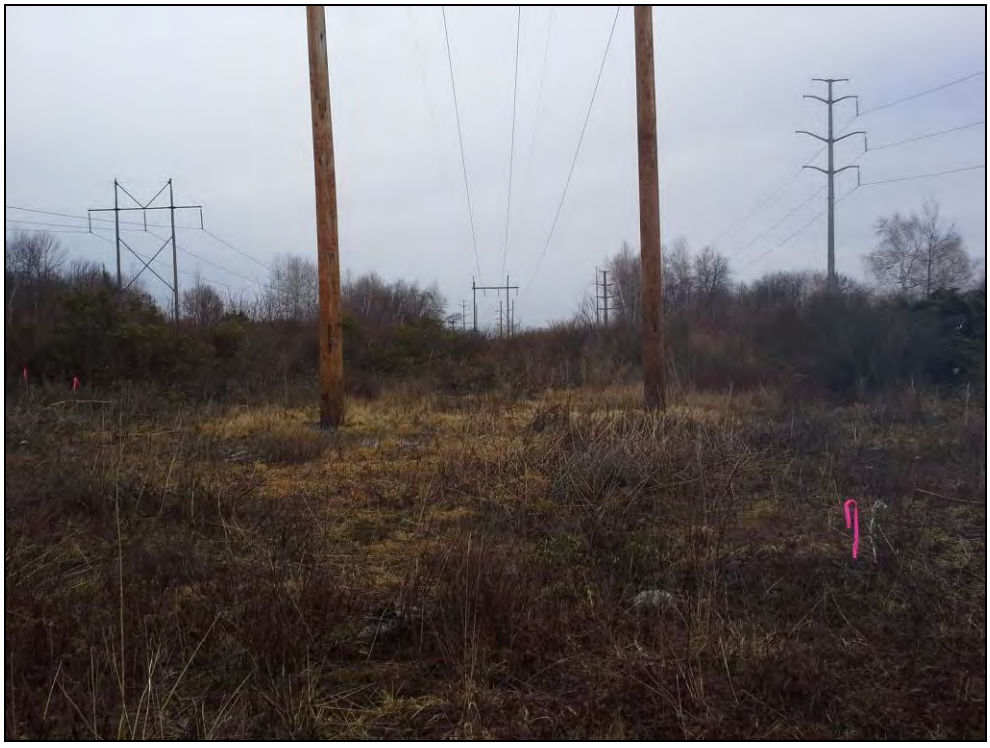


View facing northeast, Wetland A11 on north side of ROW.



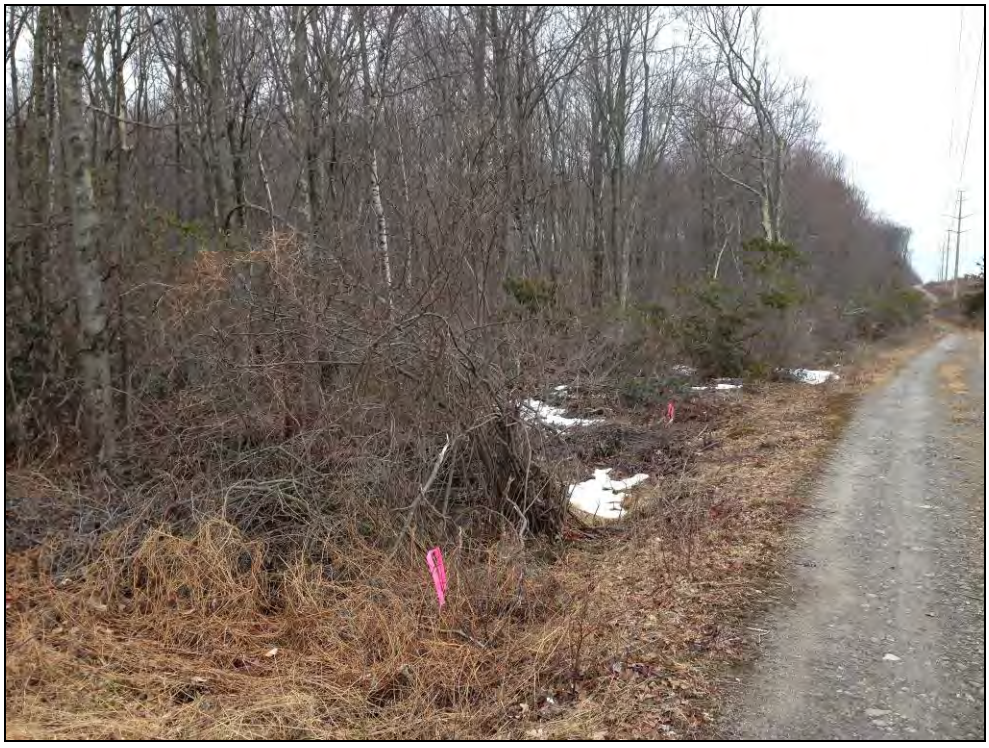
View facing southeast, Wetland A12 within existing ROW.

View facing southwest, Wetland B1 on south side of ROW.



View southeast, Wetland B2 on north side of ROW.

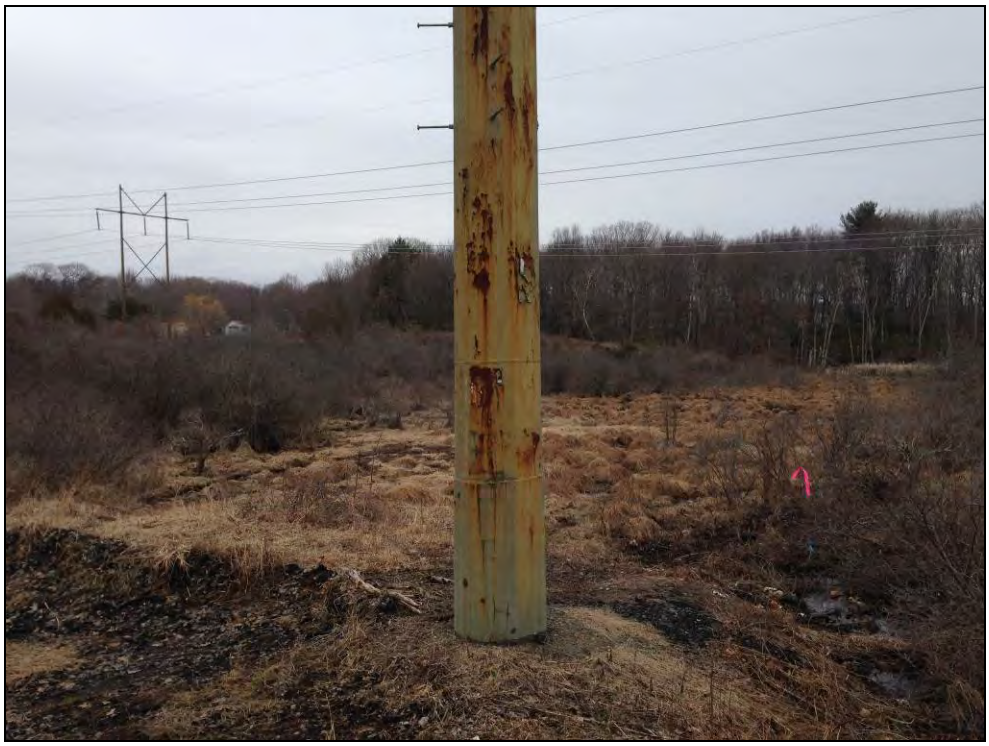
View southeast, Wetland B3 on south side of ROW.



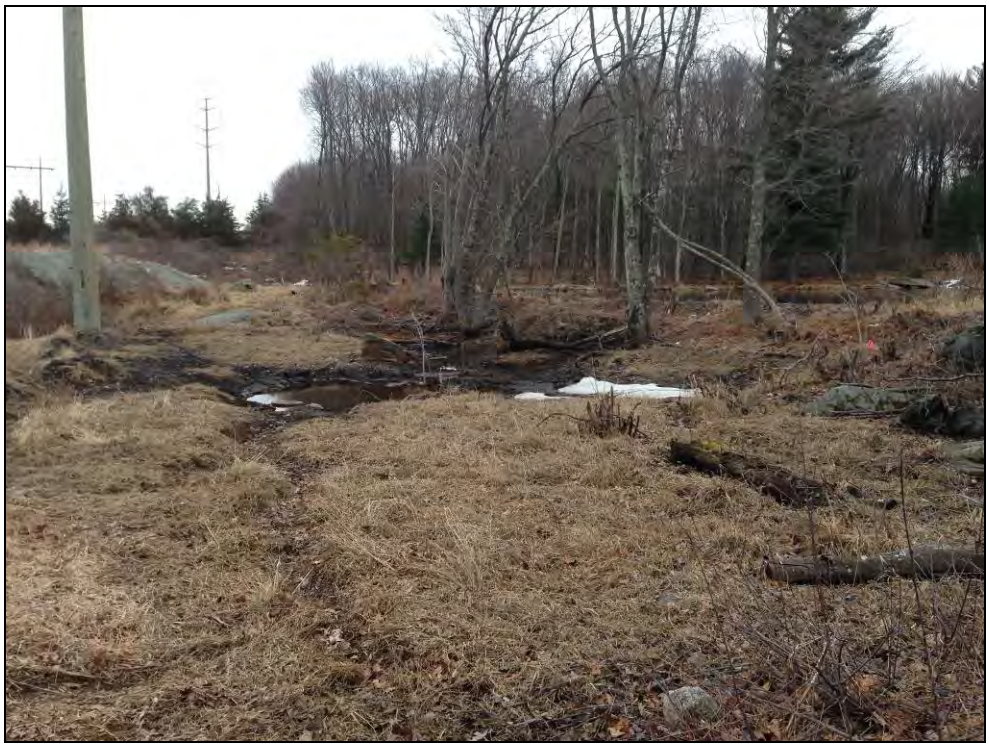
View northwest, Wetland B4 on south side of ROW.

View south, Wetland B5 on south side of ROW.

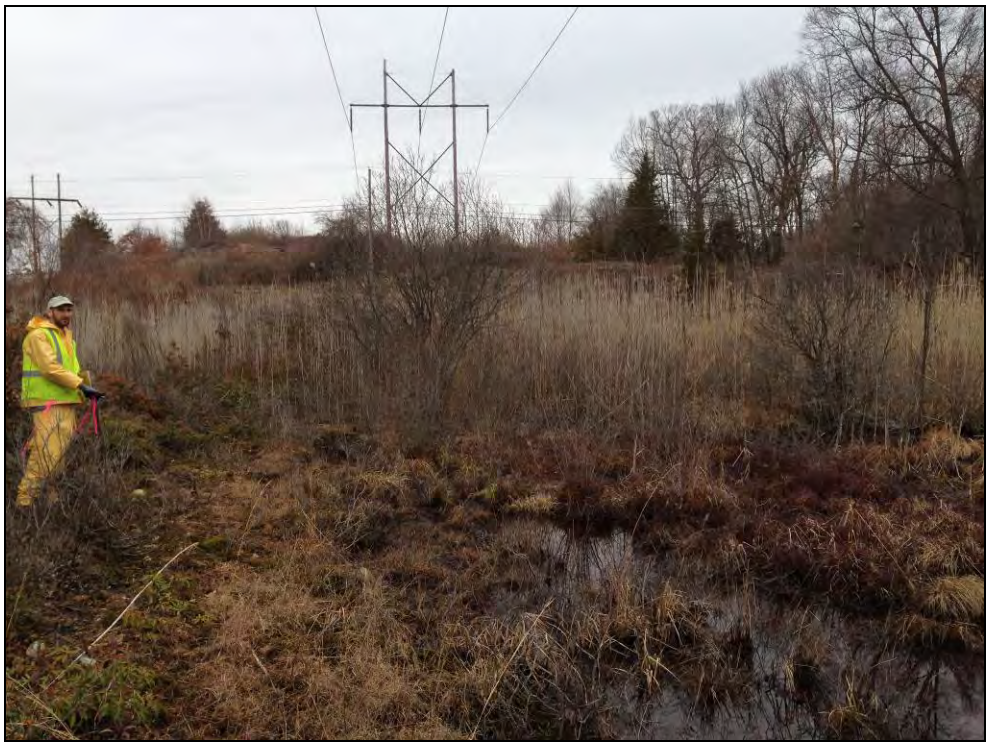
View east, Wetland B6 on north side of ROW.



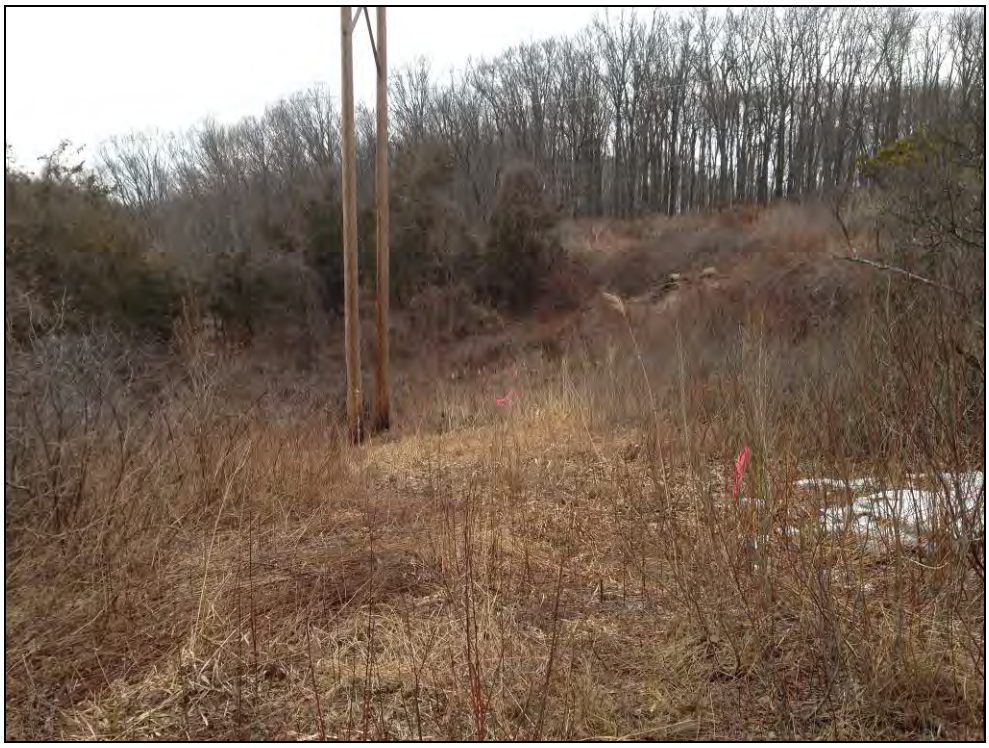
View north, Wetland B7 on south side of ROW (4/8/15).



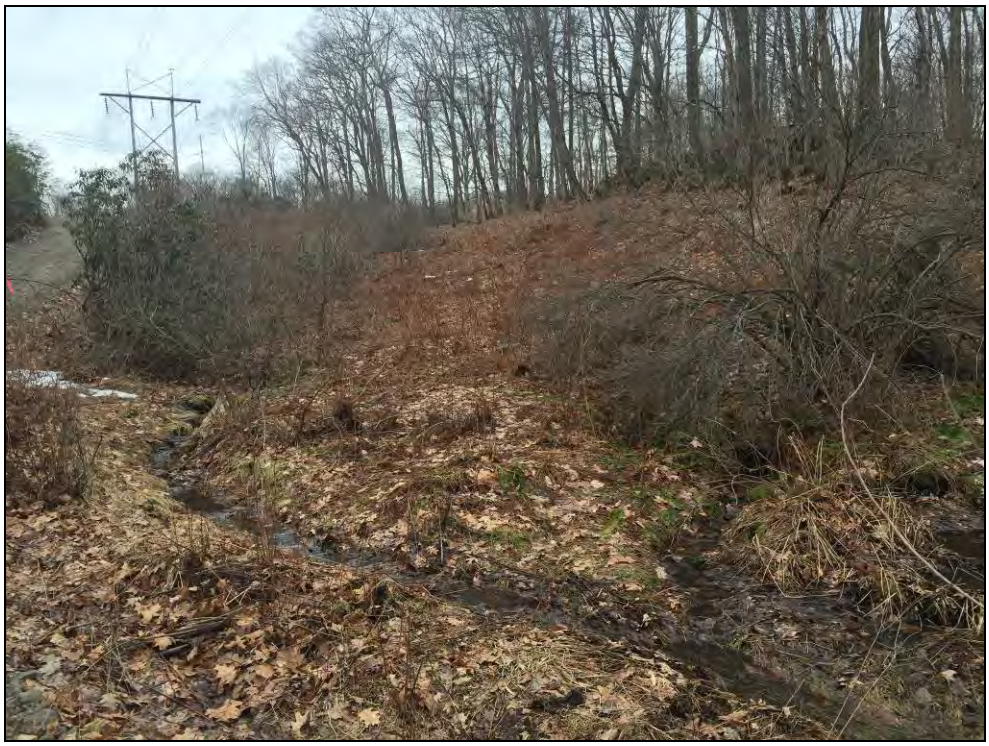
View south, Wetland B8 on south side of ROW.



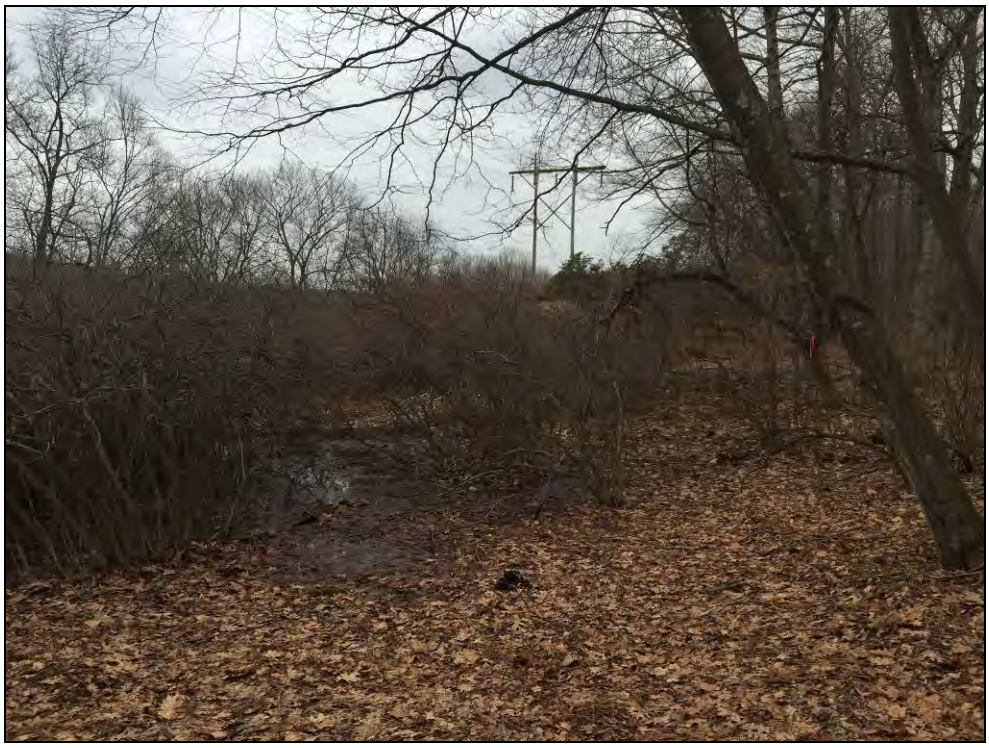
View northwest, Wetland B9 on north side of ROW.



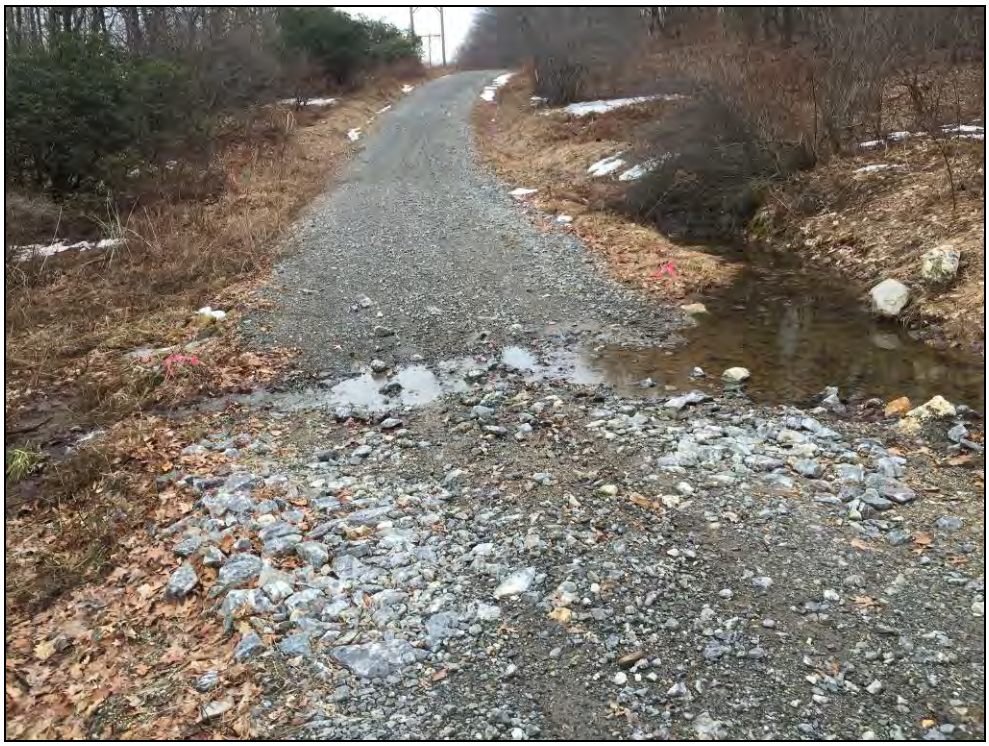
View northeast, Wetland B11 on south side of ROW.



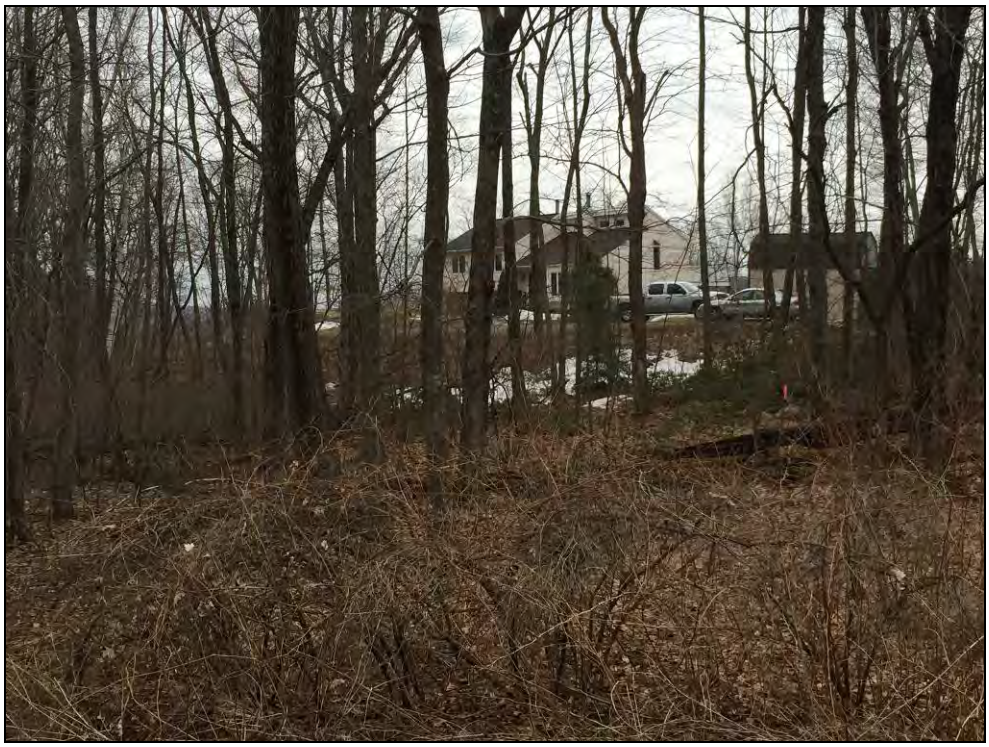
View south, Wetland C1 on south side of access road.



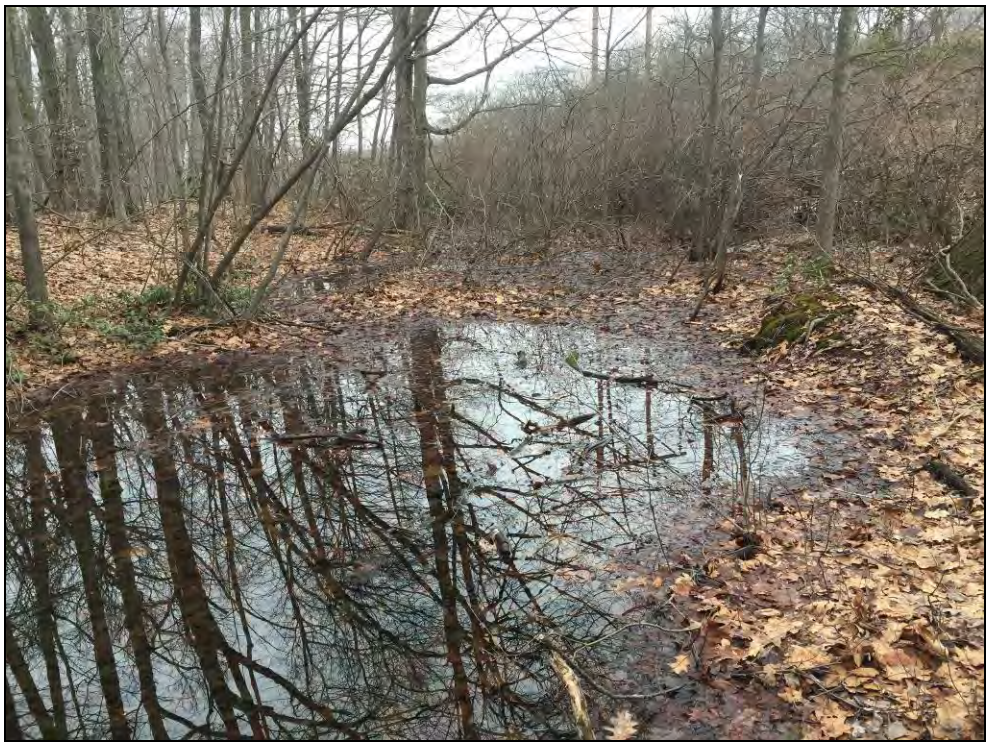
View west, Wetland C3 on north side of ROW.



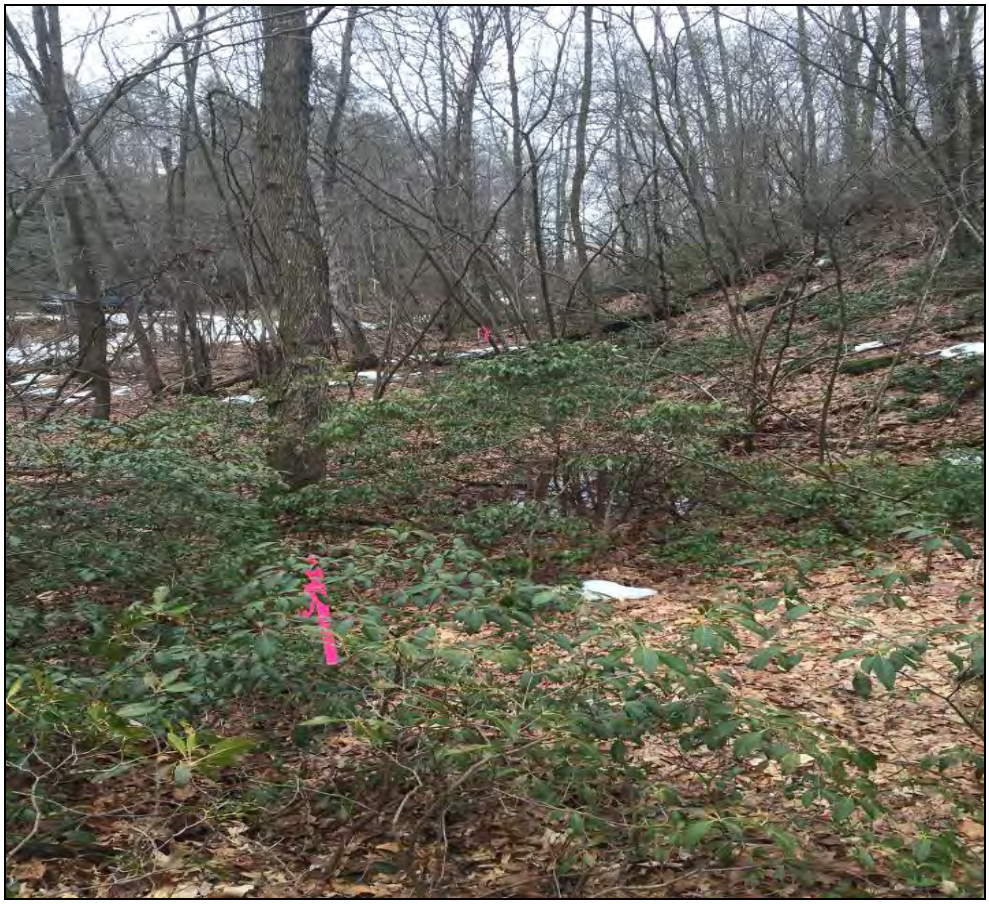
View north, Wetland C4 on both sides of access road along north side of ROW.



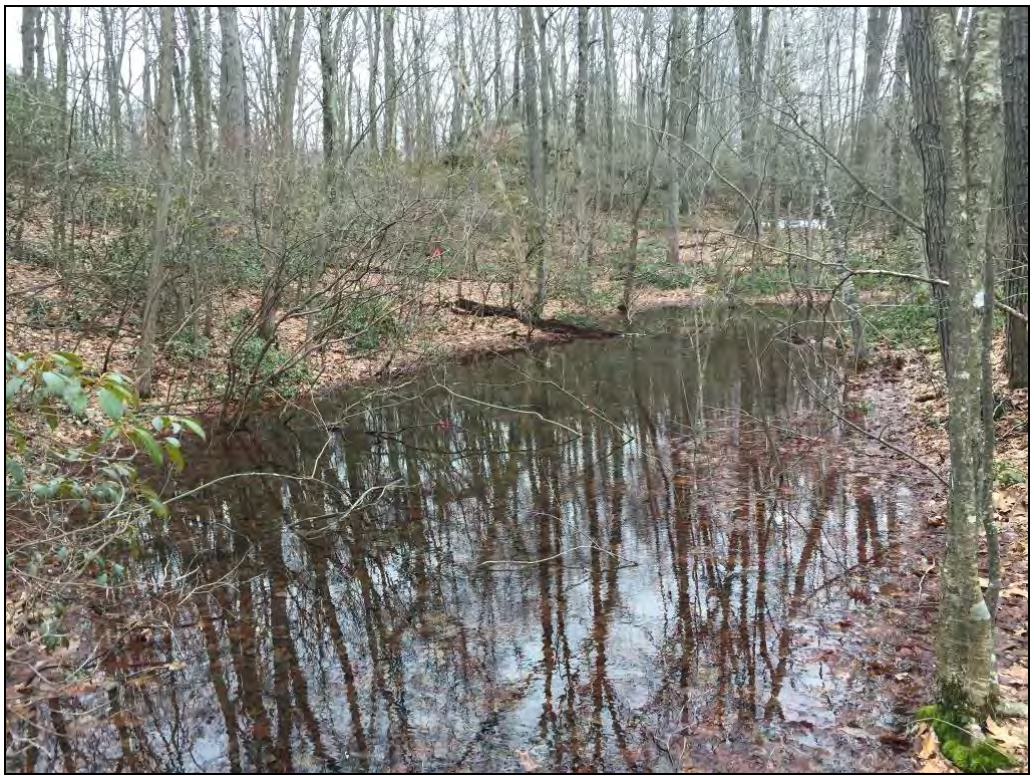
View southwest, Wetland C6 on north side of ROW.



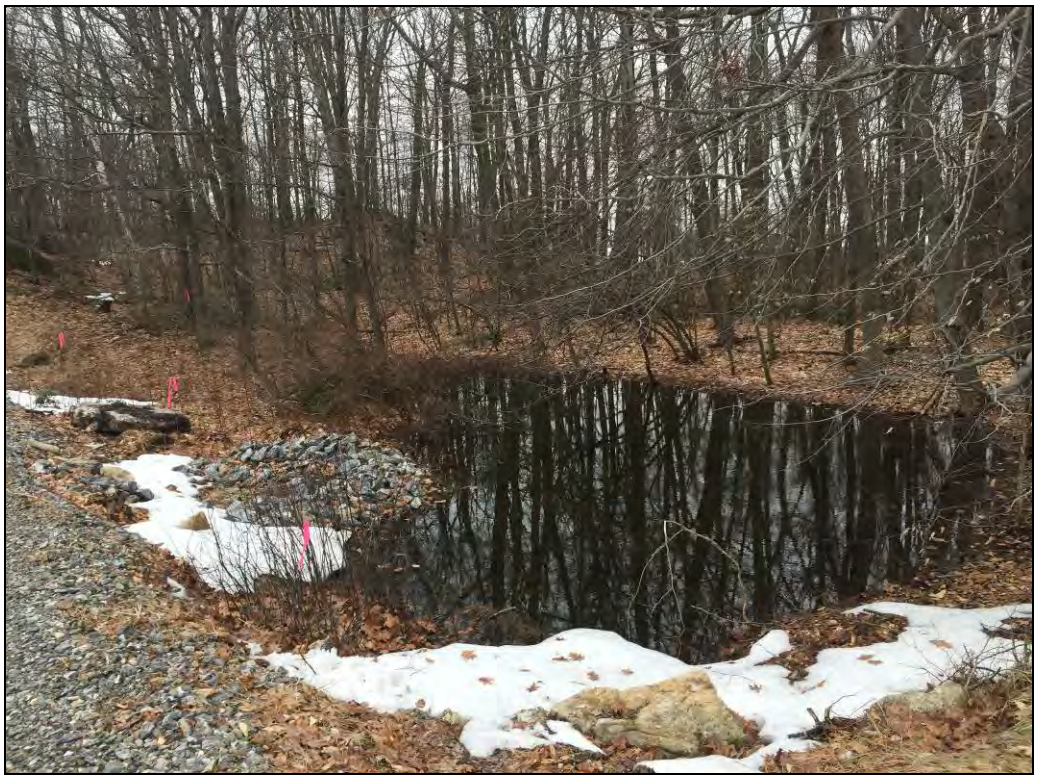
View north, Wetland C7 on south side of ROW.



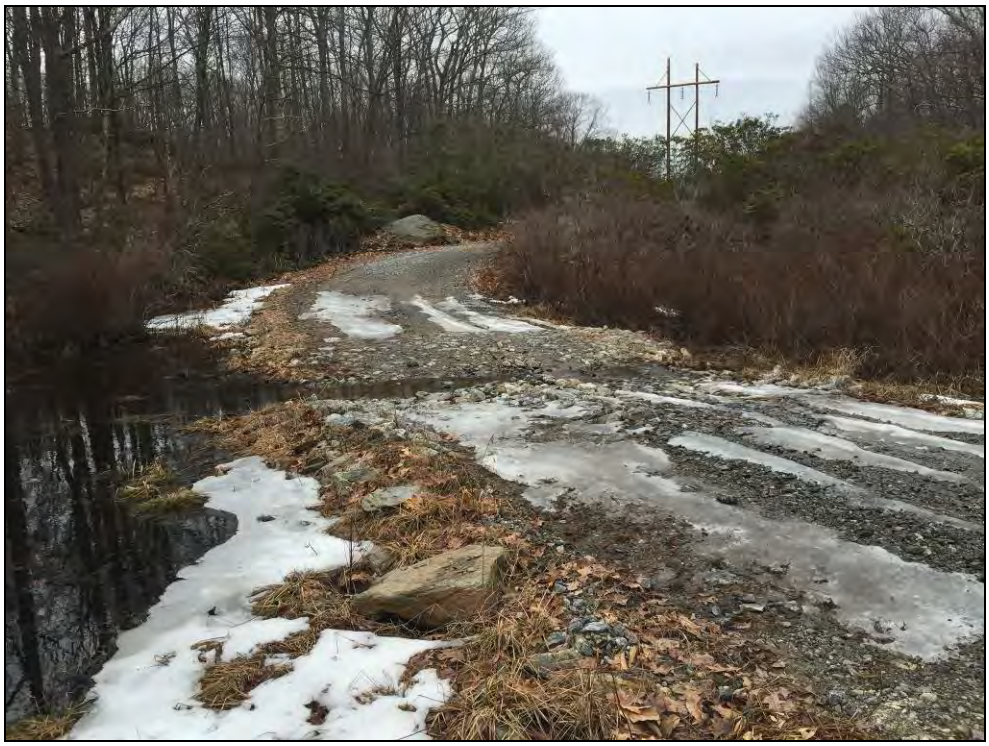
View east, Wetland C8 on south side of ROW.



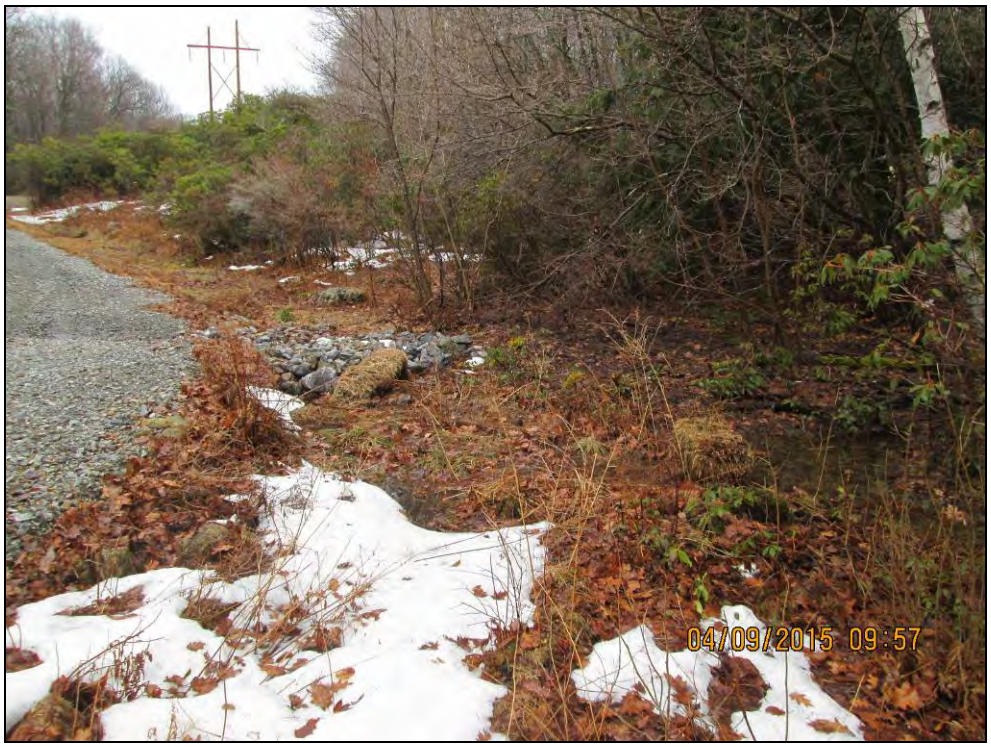
View southeast, Wetland C10 on south side of ROW.



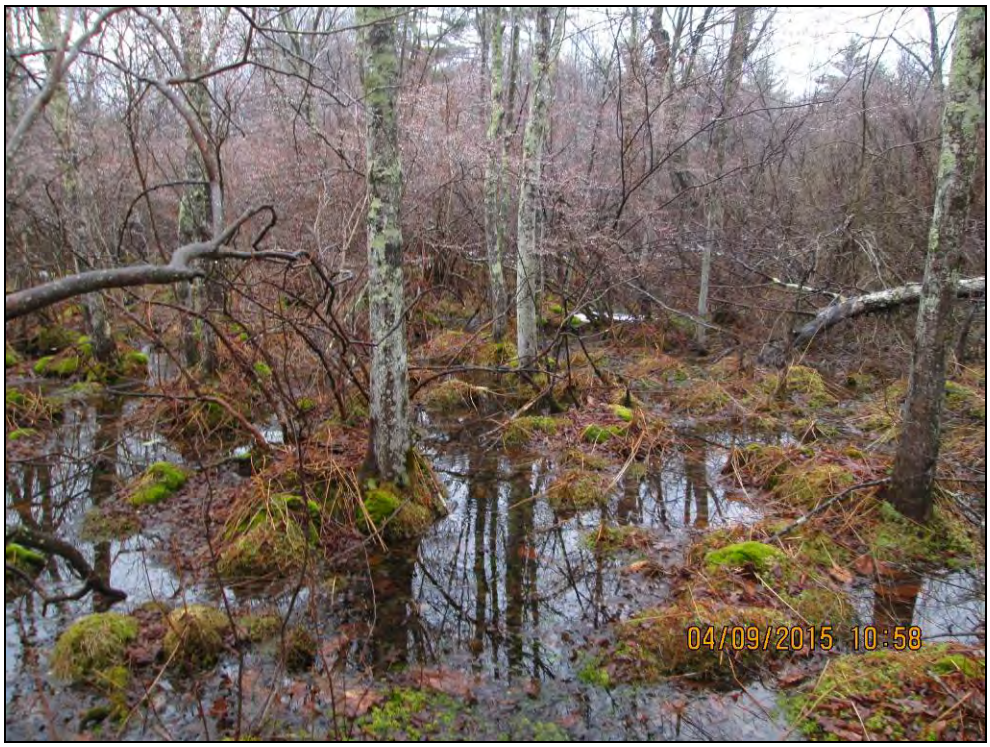
View southwest, Wetland C11 on north side of ROW.



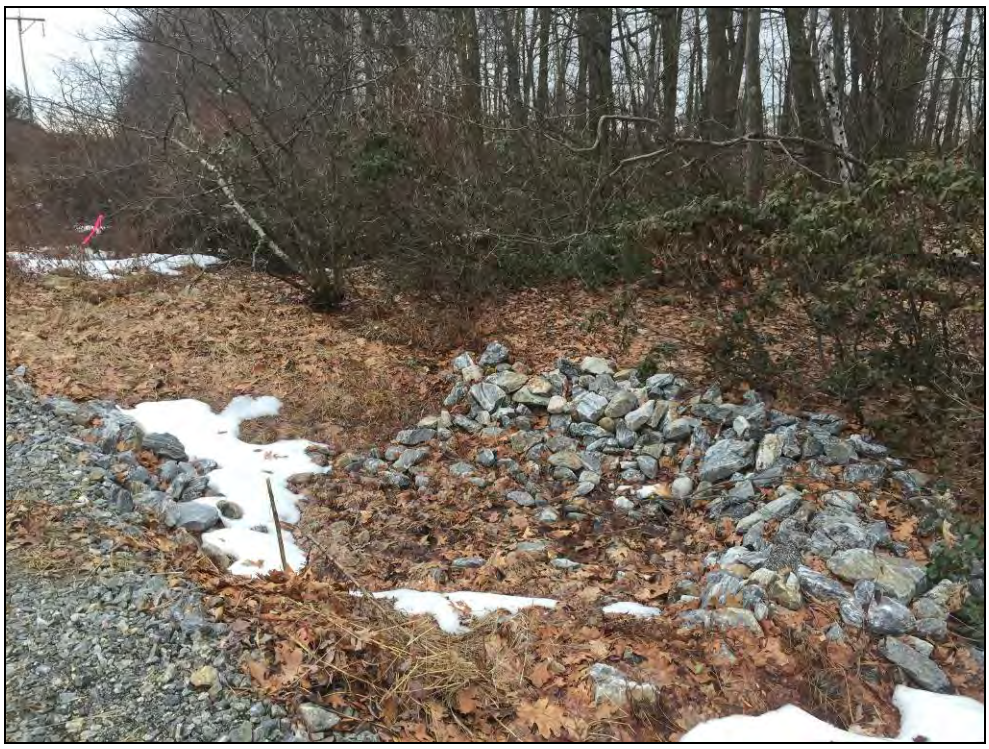
View northwest, Wetland C12 and Vernal Pool VP C12-1 on west side of ROW.



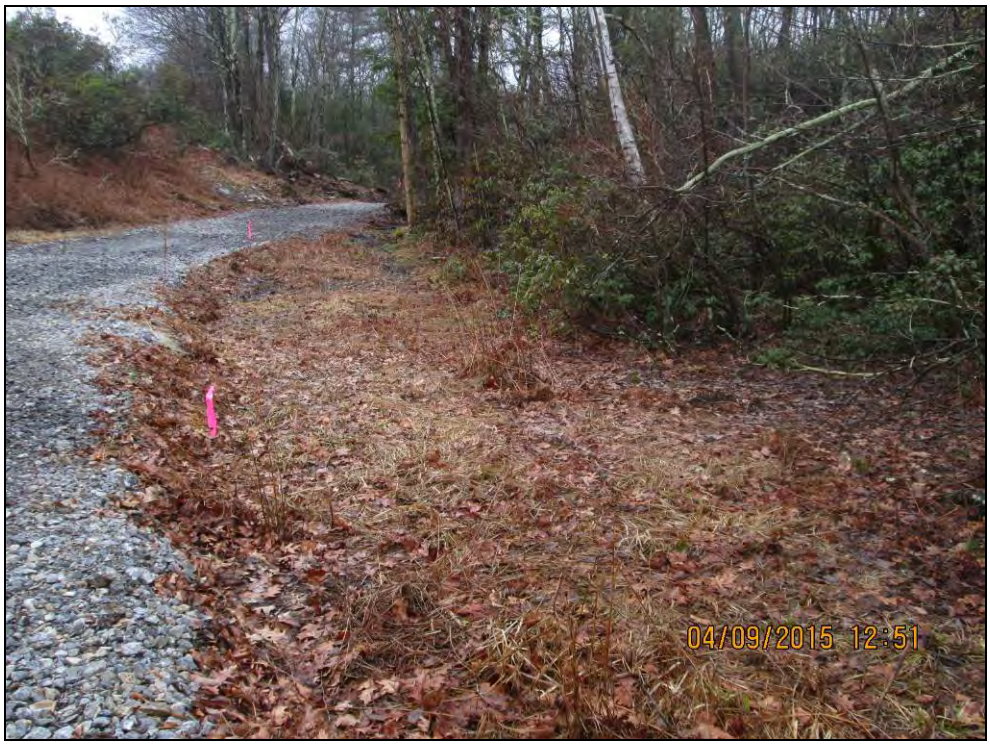
View of Wetland C14 along the western side of the access road.View facing south.



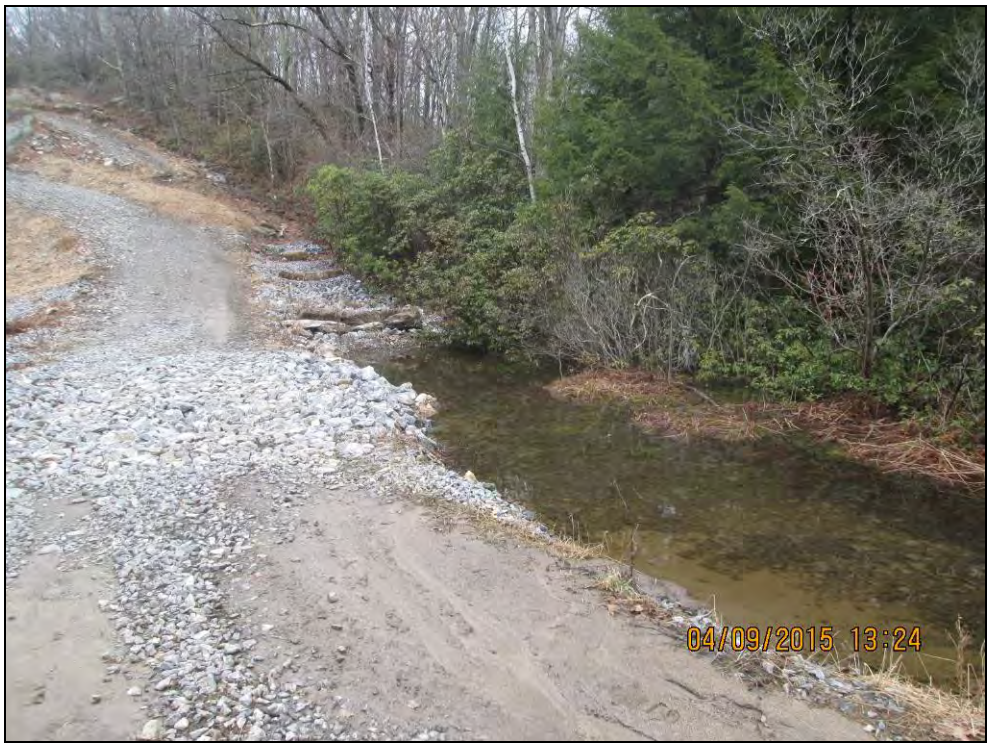
View of Wetland C15 of the large forested/emergent wetland along the eastern ROW boundary. View facing east.



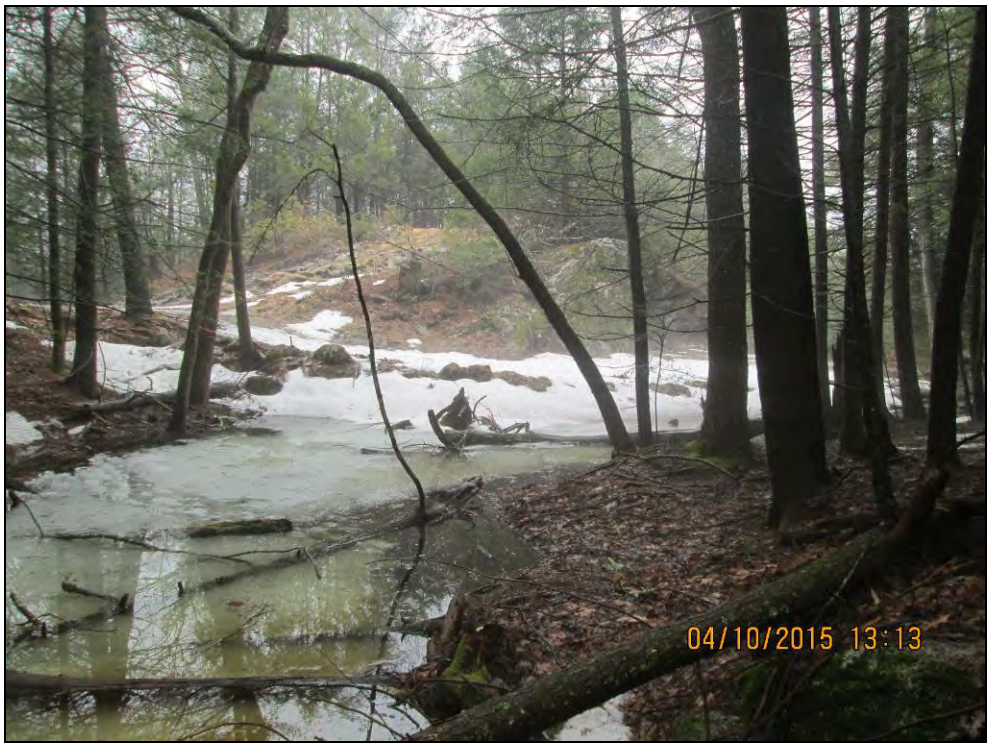
View of Wetland C16 and riprap swale. View facing southwest.



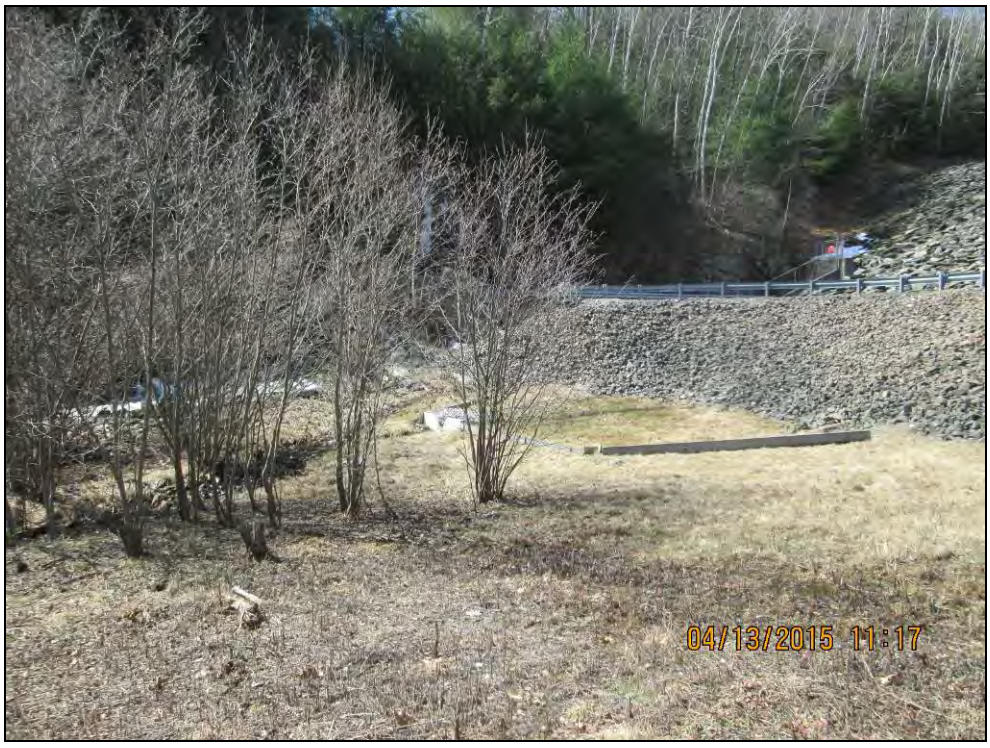
View to the south of Wetland C18 on west side of ROW.



View of Wetland C20 on west side of access road, view facing east.



View north towards the access road of Wetland C21.

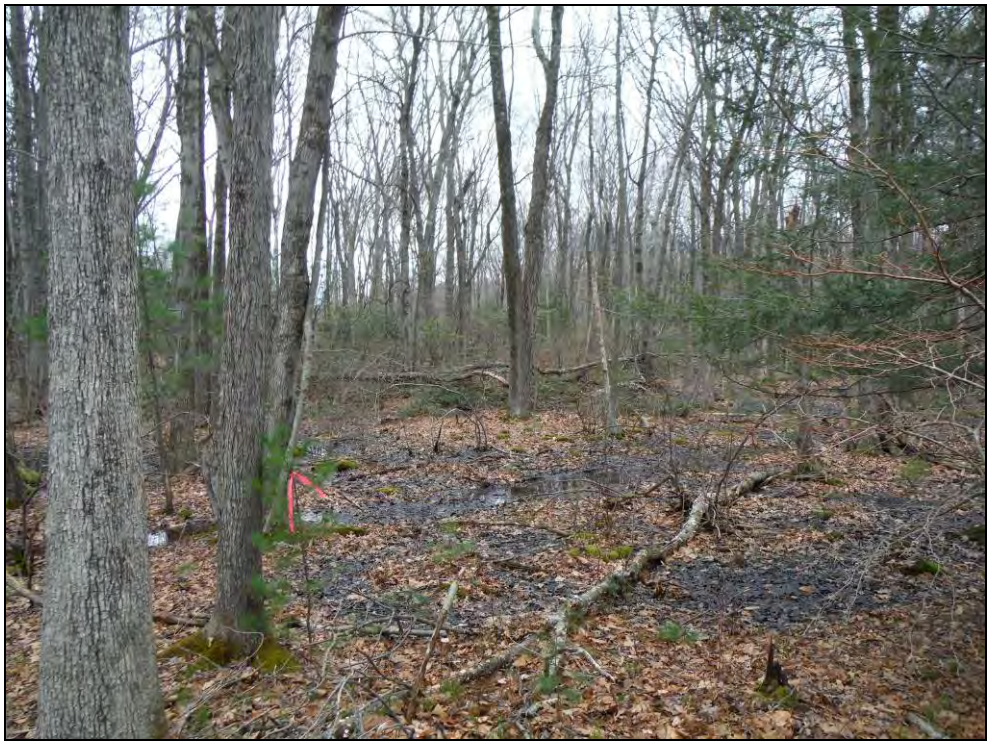


View southwest of Wetland C23 on west side of ROW.

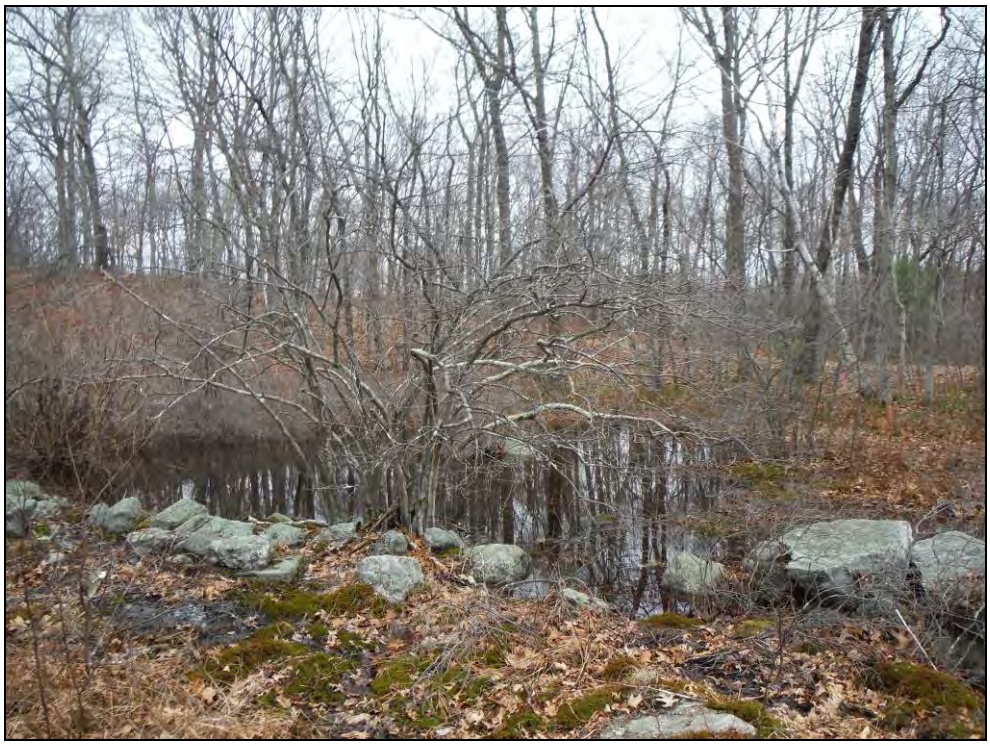
View northwest, Wetland D1 on east side of ROW.

View northwest, Wetland D2 on the east side of the existing access road.

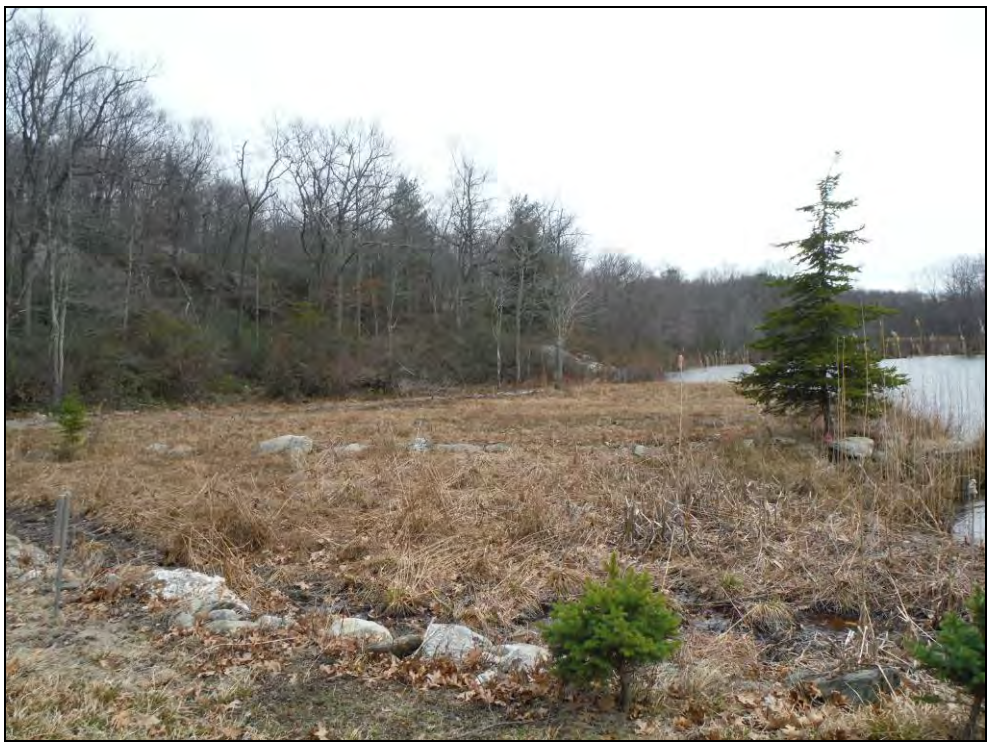
View northeast, Stream S-D3 within Wetland D3 on east side of ROW.



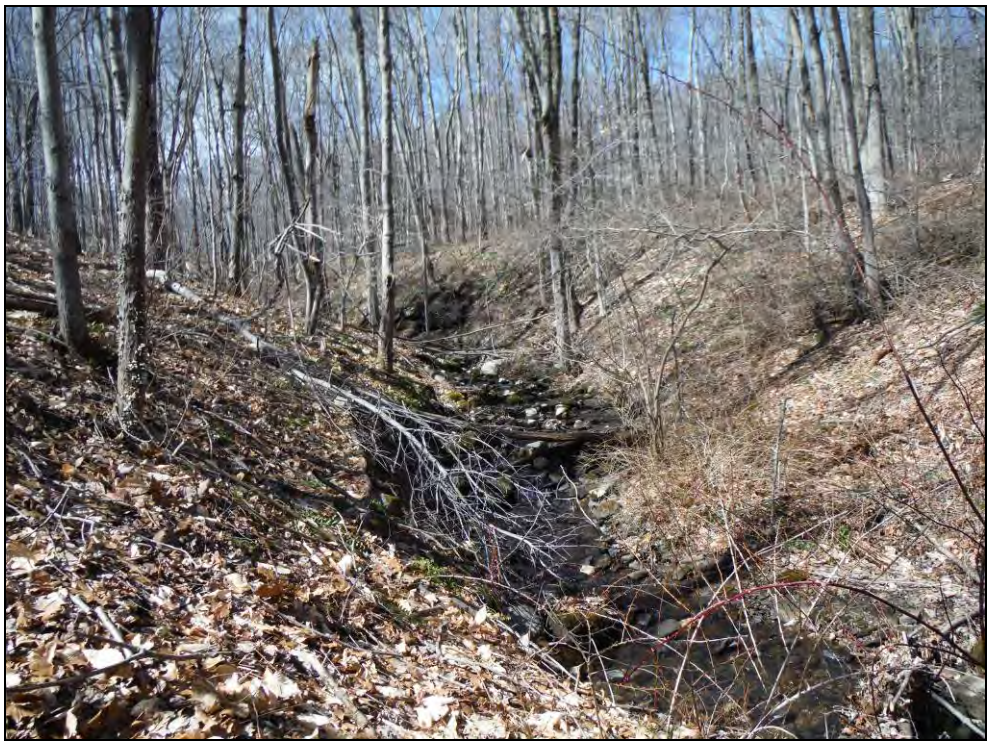
View northeast, Wetland D4 on east side of ROW.



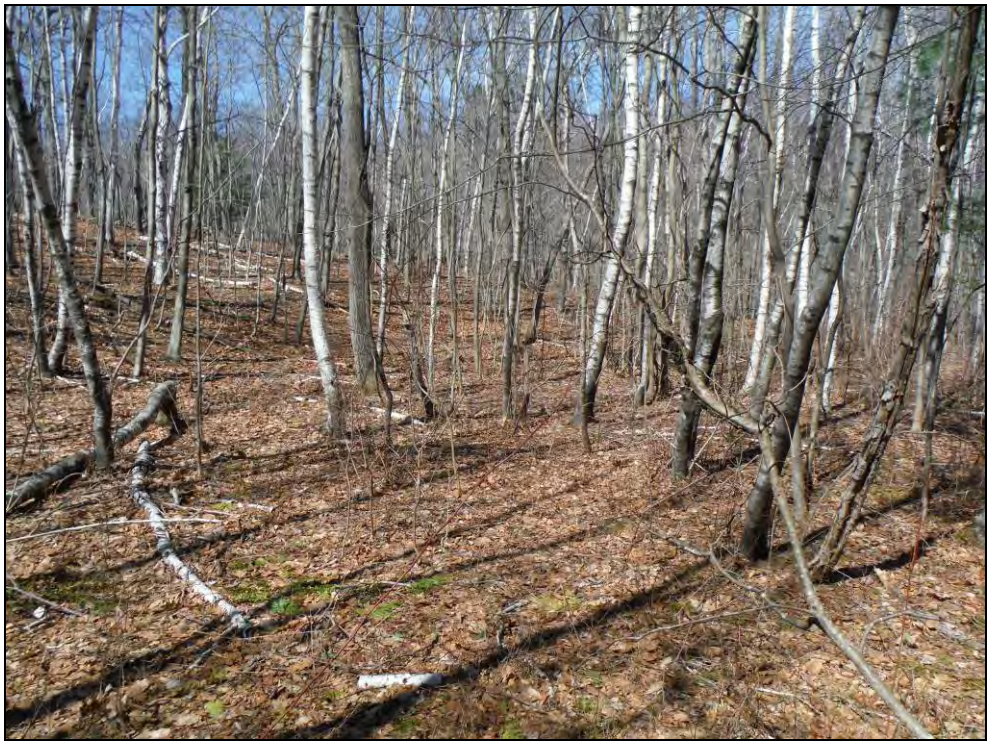
View northeast, vernal pool VP D5-1 located within Wetland D5 on west side of ROW.



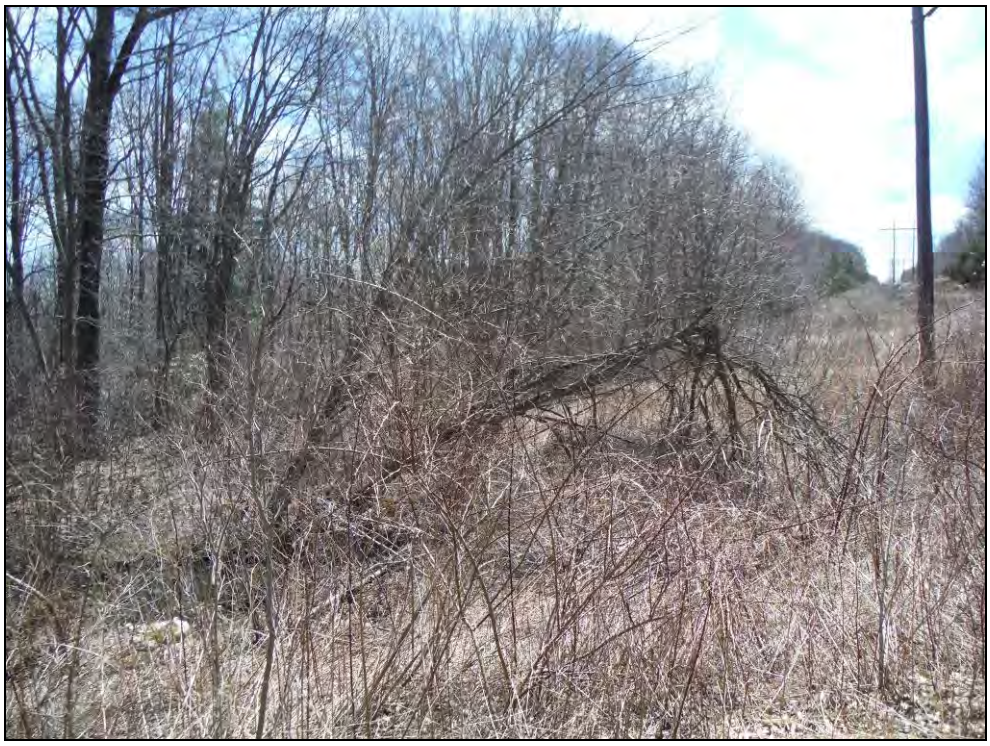
View northwest, Wetland D6 on east side of ROW.



View southwest, Wetland D7 and Stream SD5 on west side of ROW.

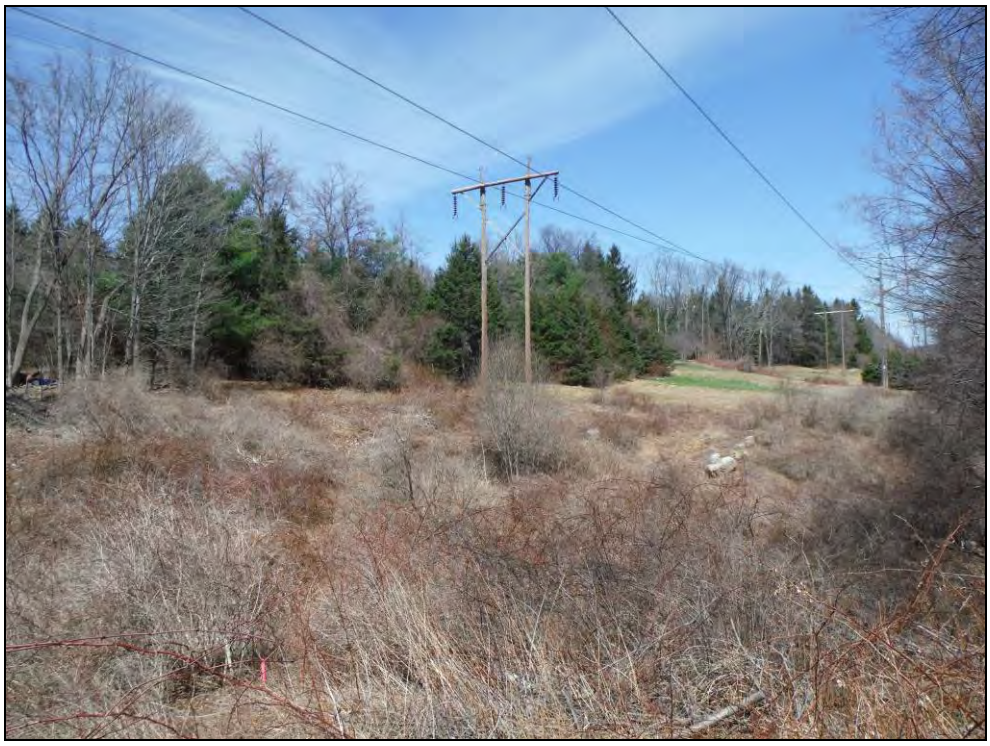


View northwest, Wetland D8 on east side of ROW.

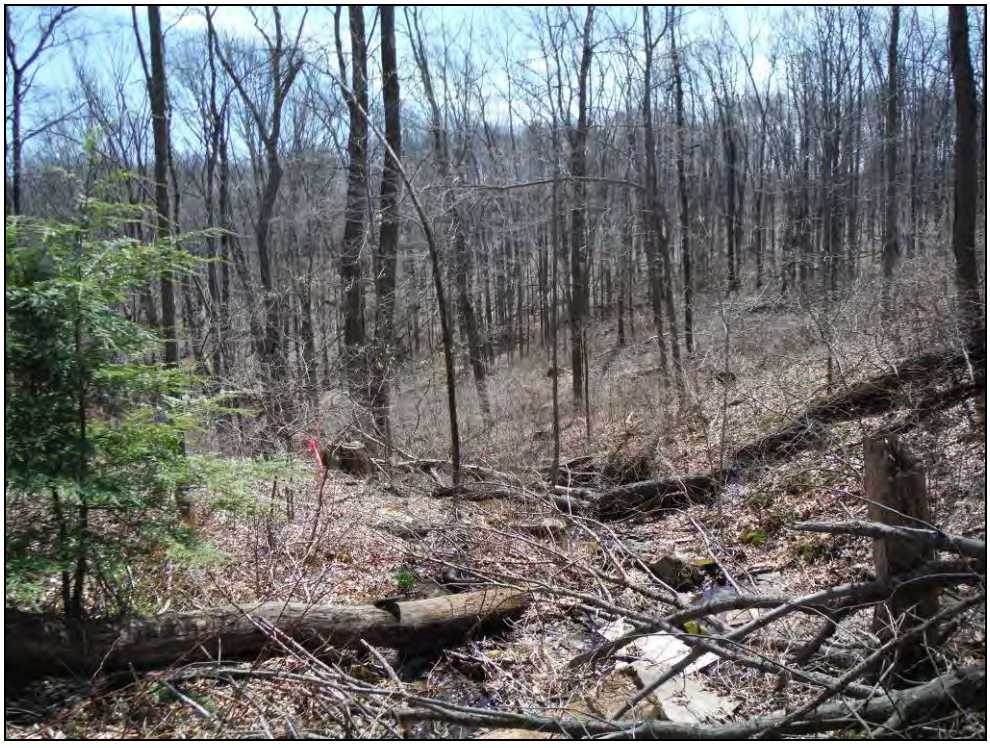


View south, Wetland D10 on east side of ROW.

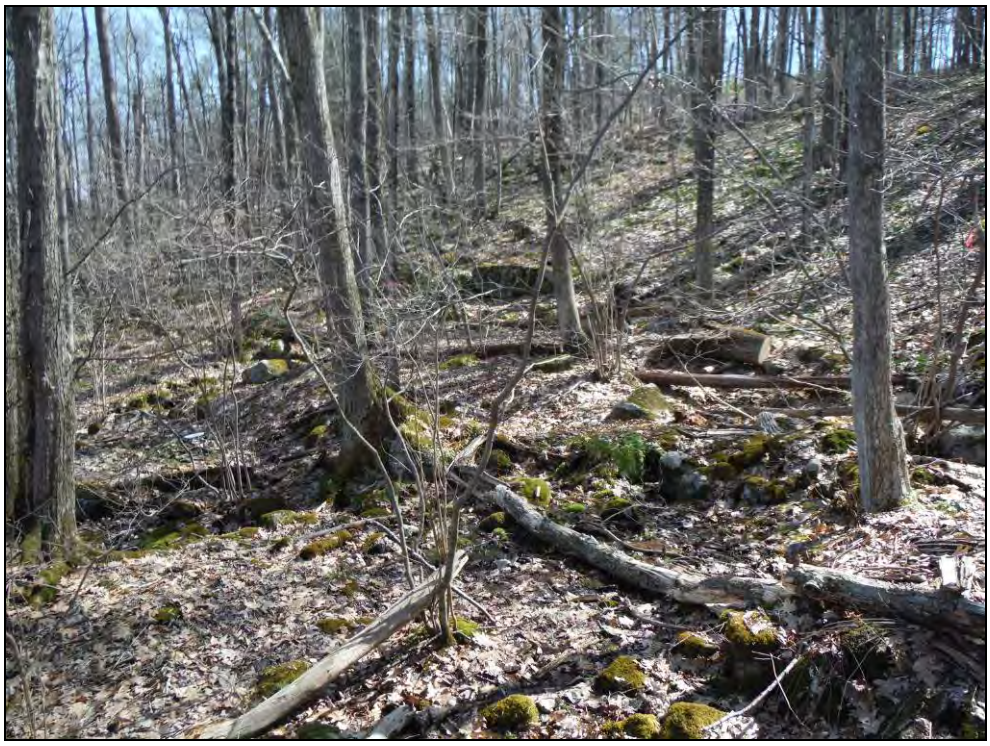
View south, Wetland D11 on west side of ROW.



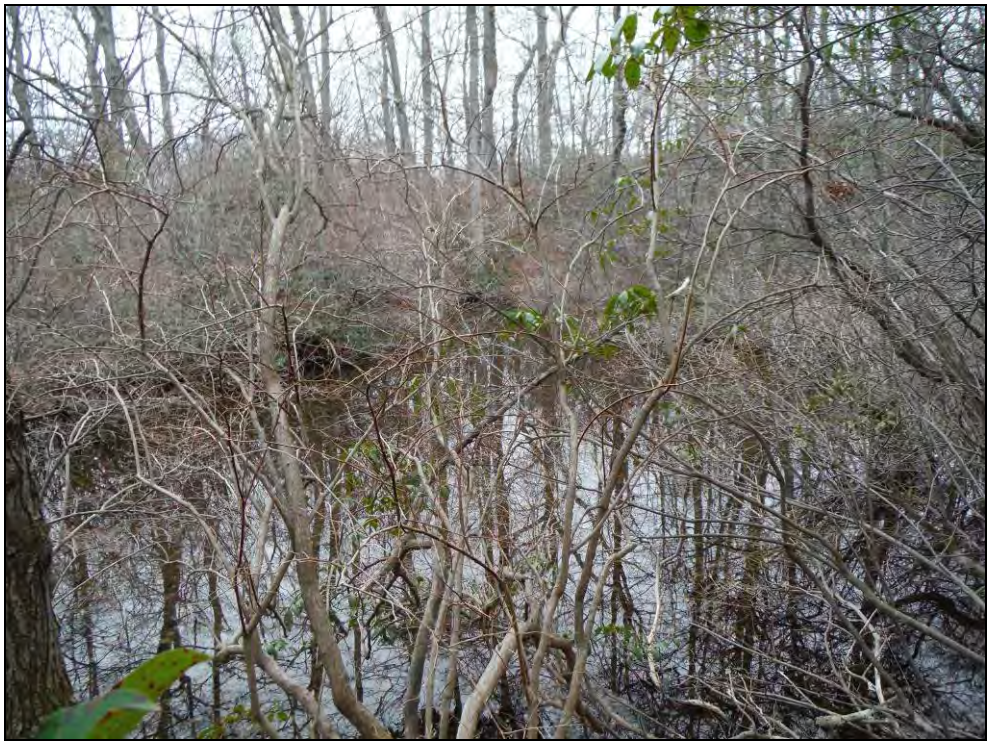
View northeast, Wetland D12 on west side of ROW.



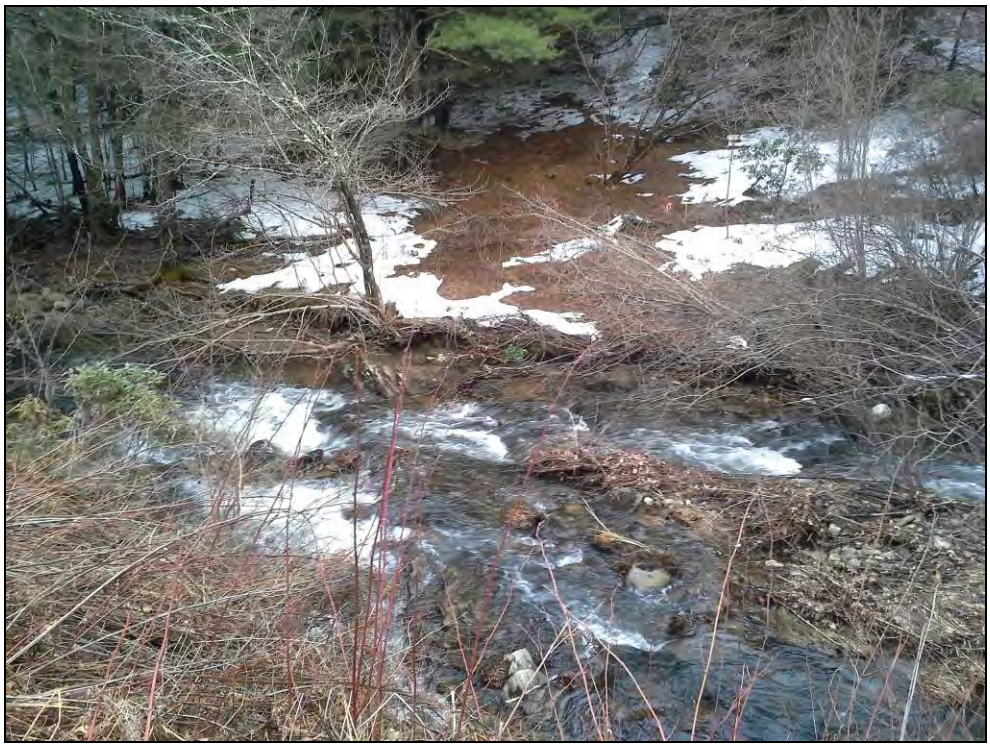
View southeast, Wetland D13 on east side of ROW.



View southeast, Wetland D14 on east side of ROW.



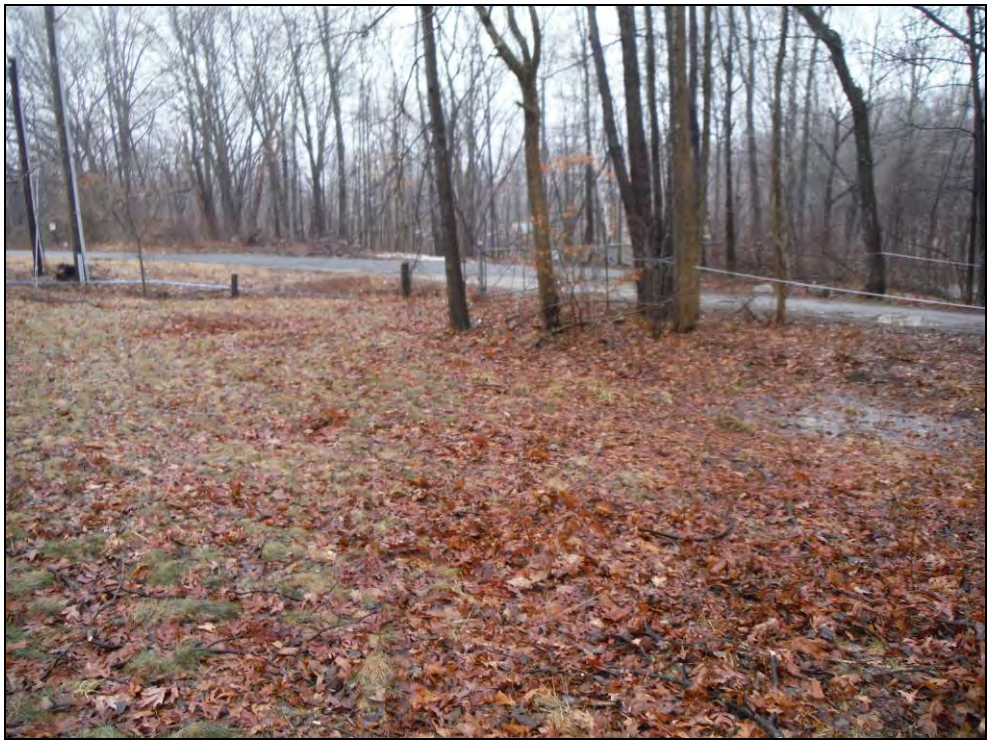
View southeast, vernal pool VP D15-1 within Wetland D15 on east side of ROW.



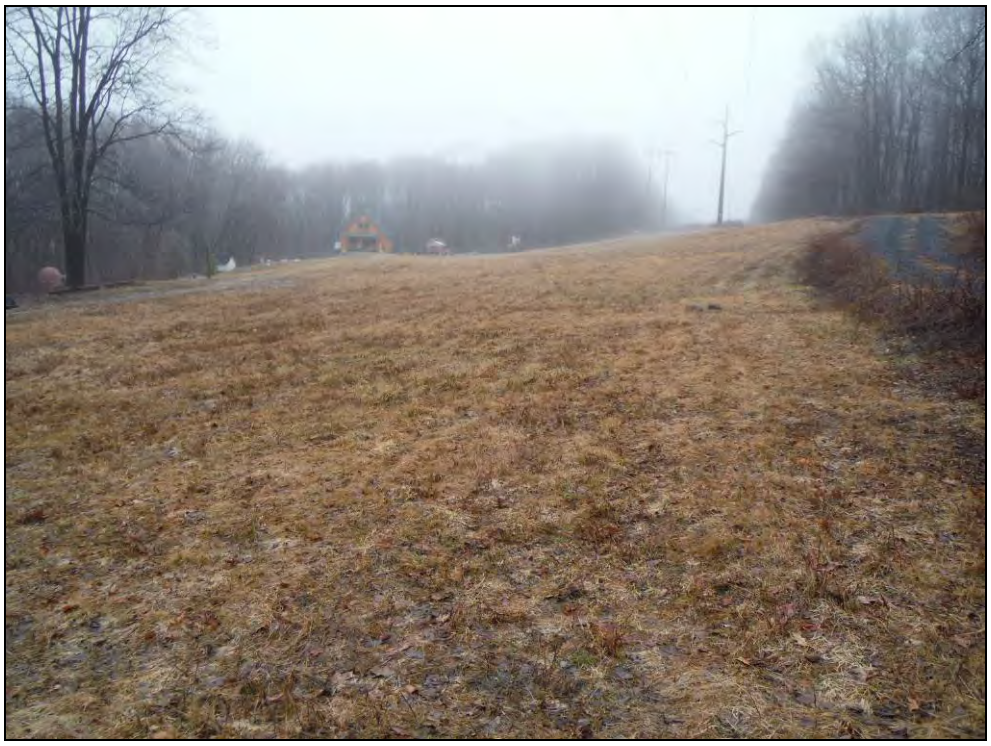
View northwest, Wetland E1 on east side of ROW..

View southeast, Wetland E2 on east side of ROW.

View south, Wetland E3 on west side of ROW.

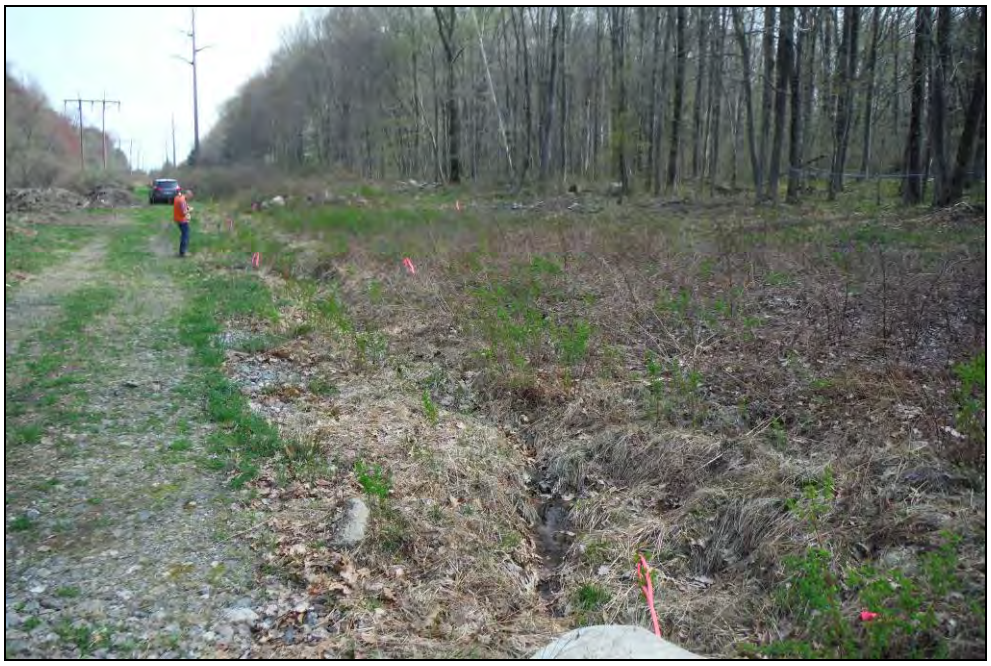


View northwest, Wetland E4 on east side of existing access road.

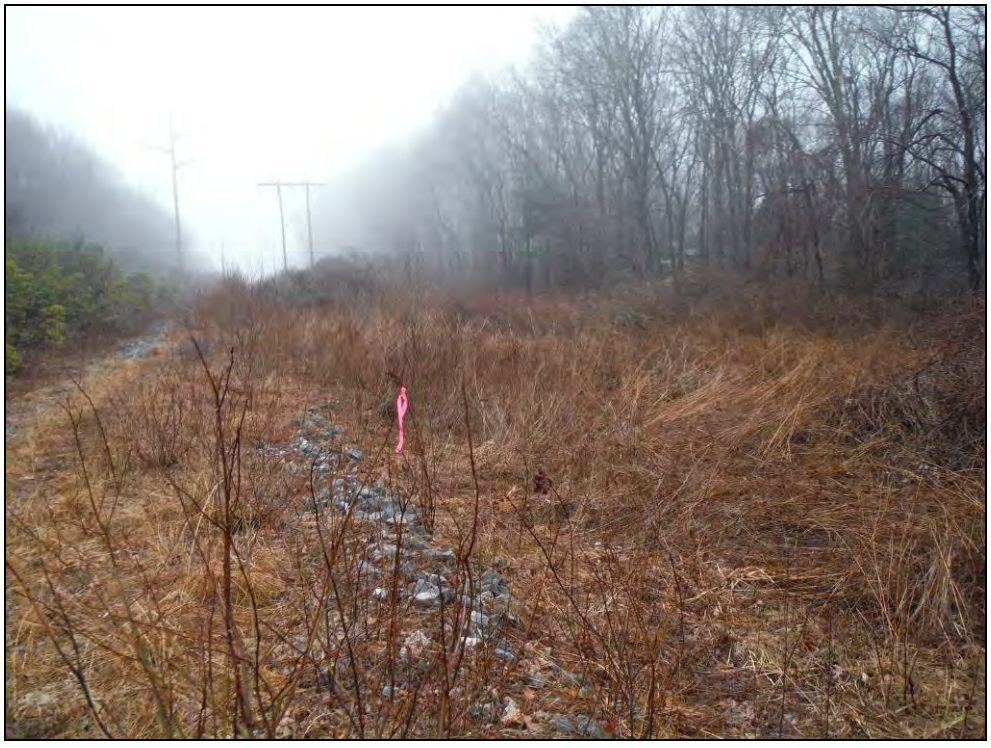


View north, Wetland E5 on west side of ROW.

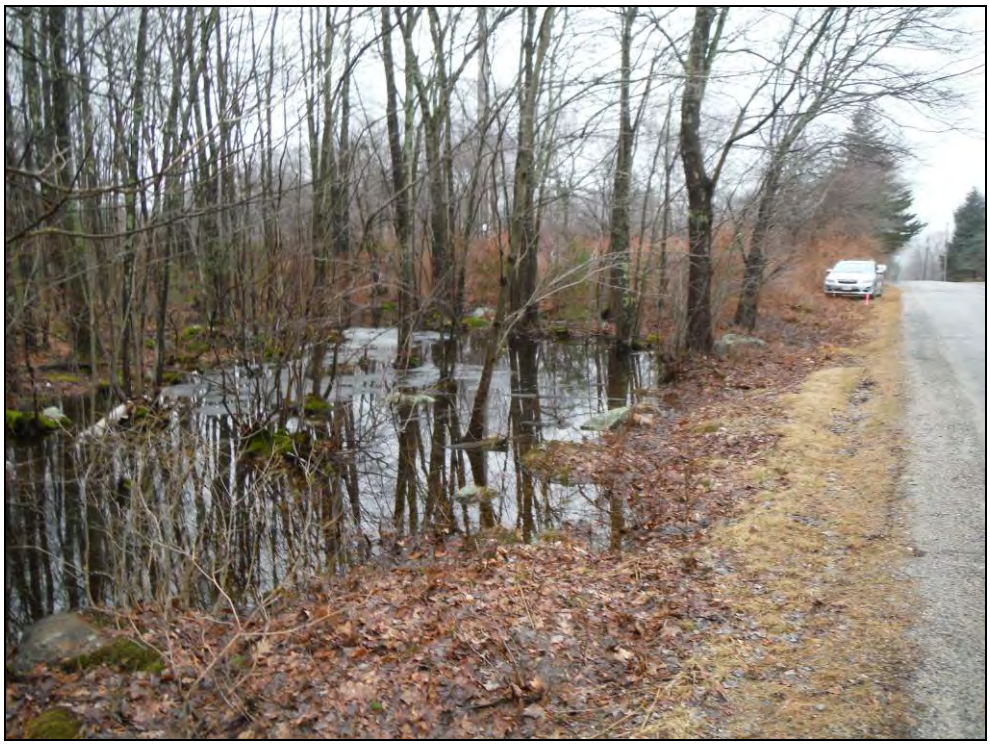
View east, Wetland E6 on east side of ROW.



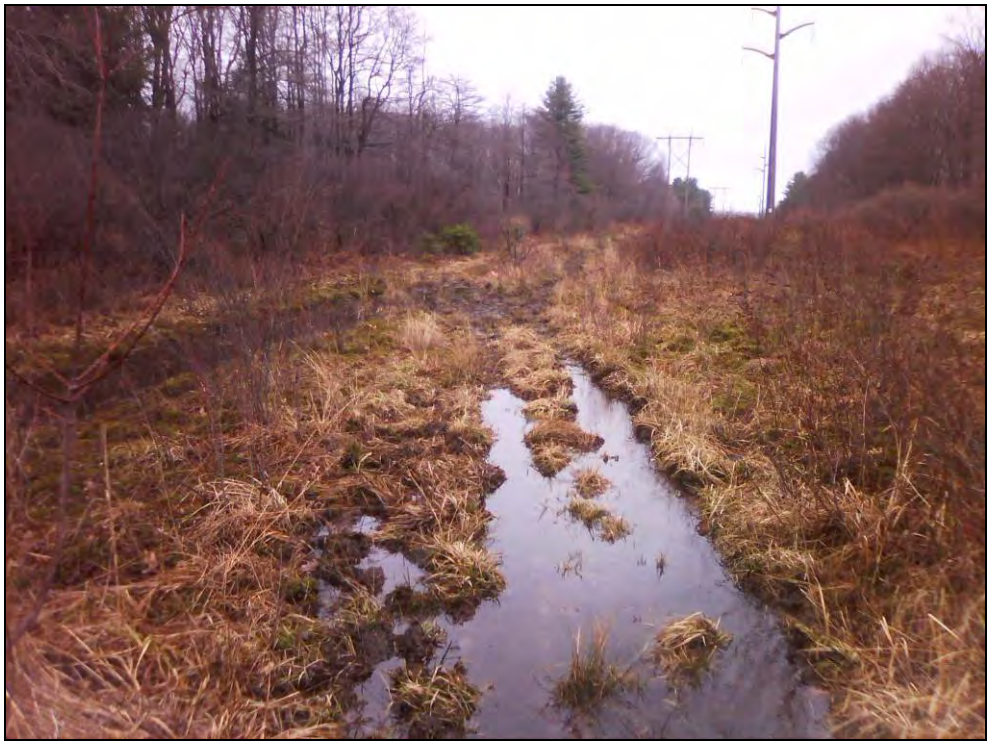
View east, Wetland E7 on east side of access road.



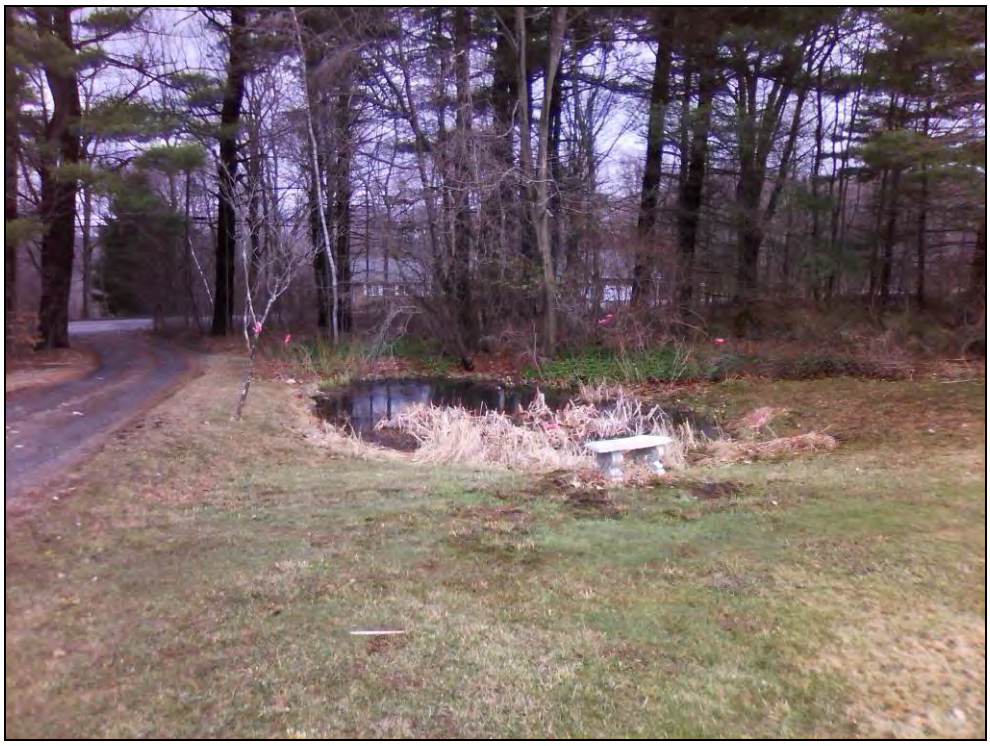
View northeast, Wetland E8 on east side of ROW.



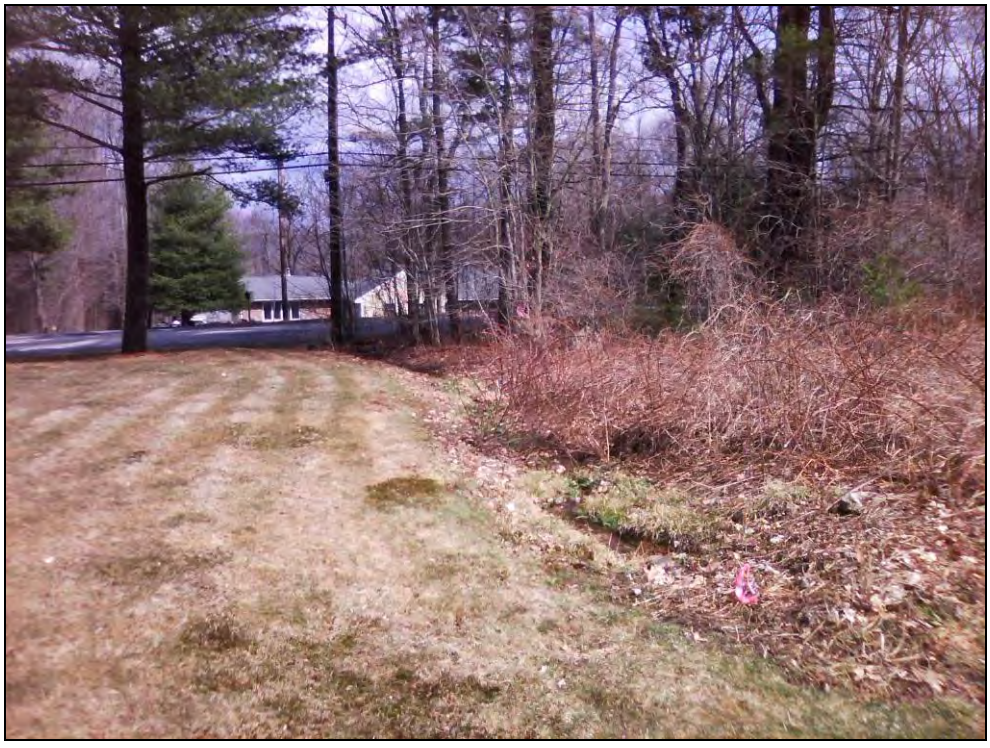
View south, Wetland E9 on east side of ROW.



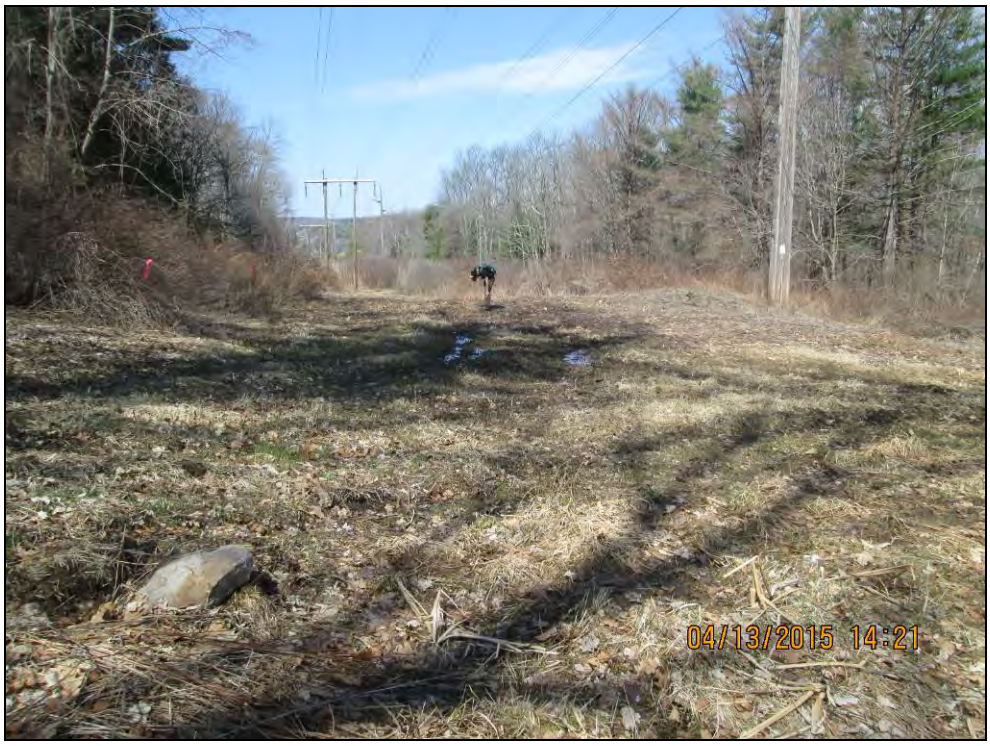
View north, Wetland E10 on west side of ROW.



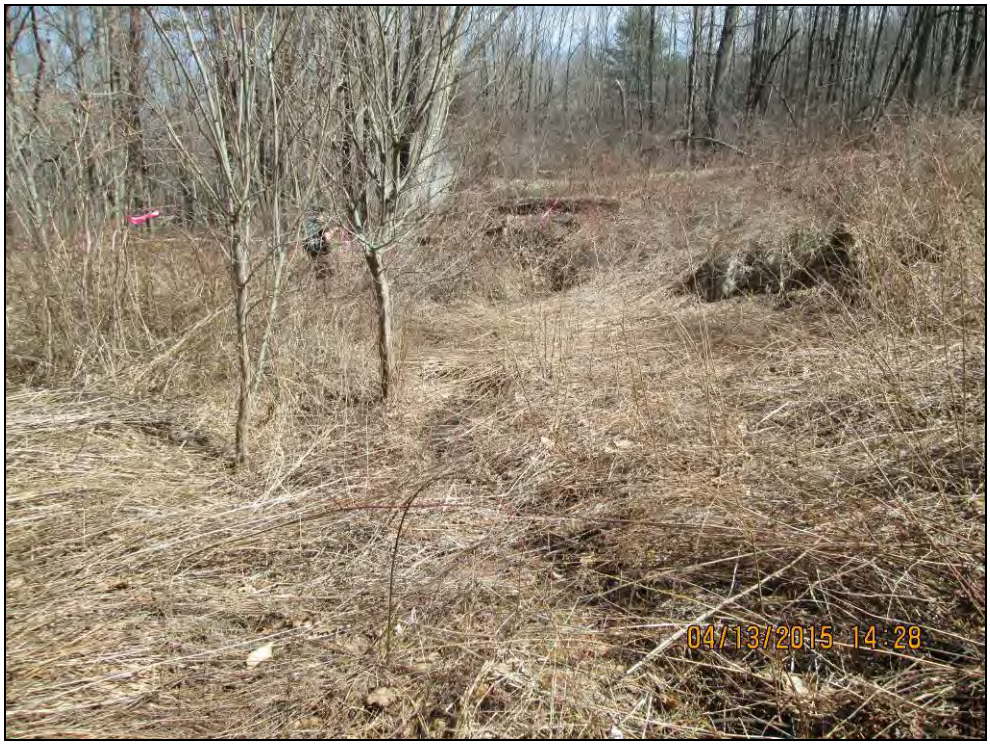
View north, Wetland E11 on east side of existing access road.



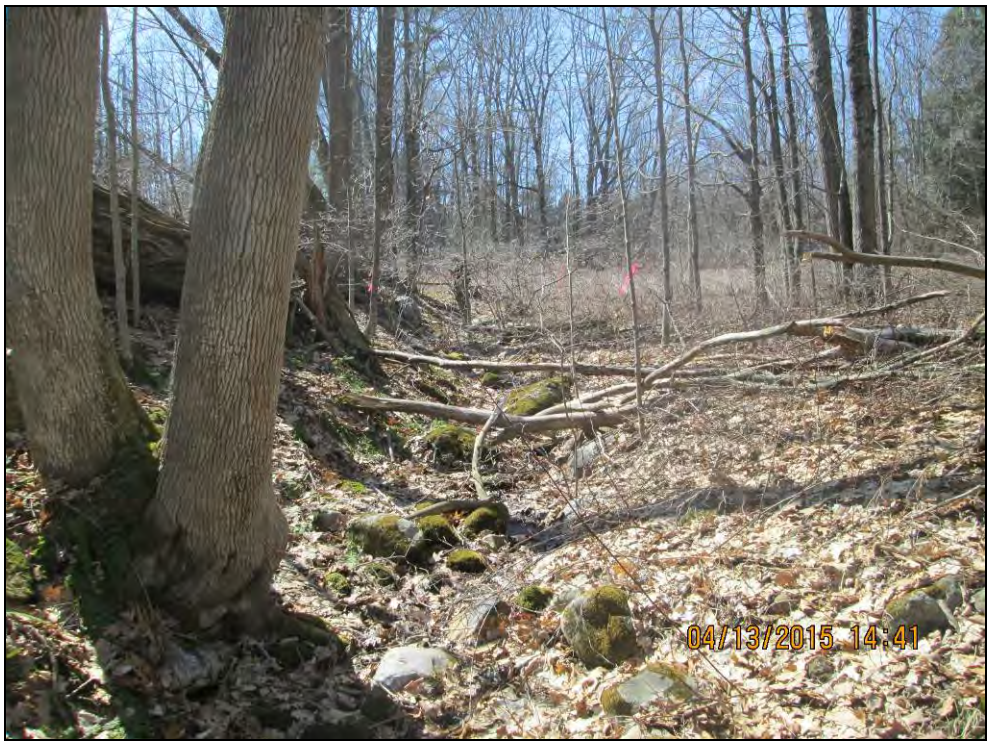
View southwest, Wetland E12 with Campville Road in the background.



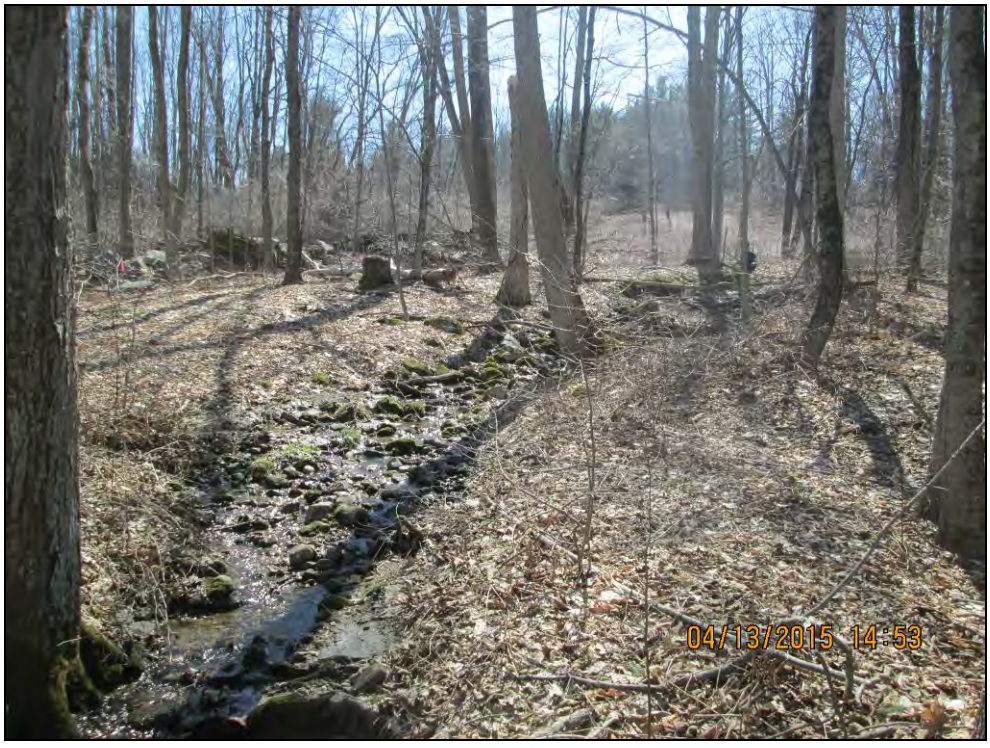
View north, Wetland F1-F2 on west side of ROW.



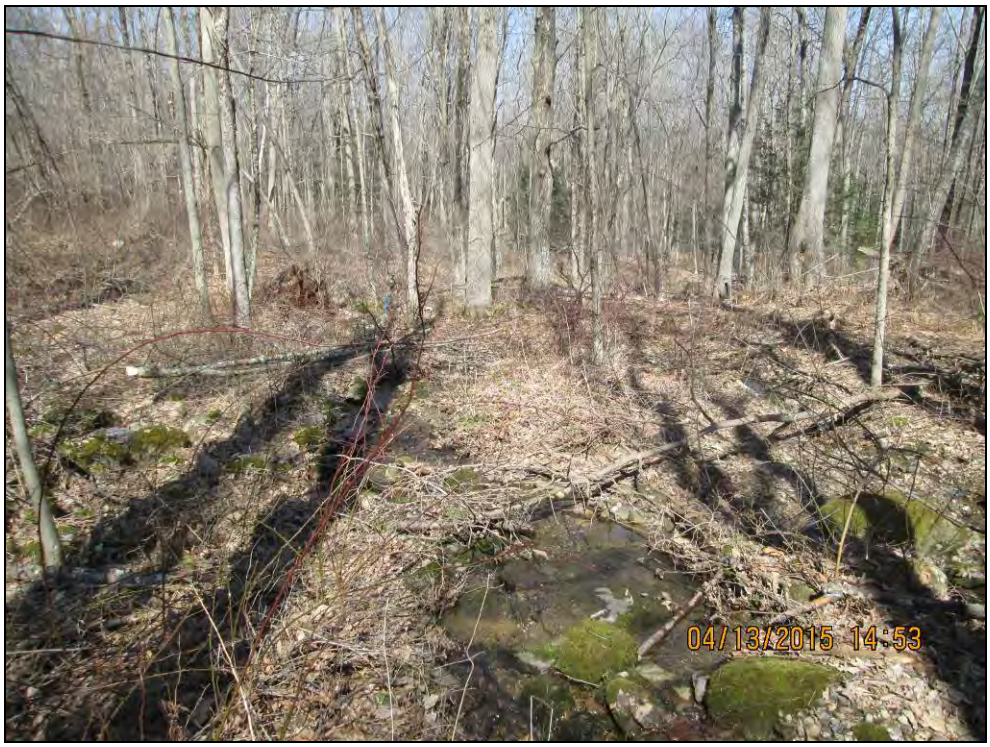
View west, Wetland F1-F2 on east side of ROW.



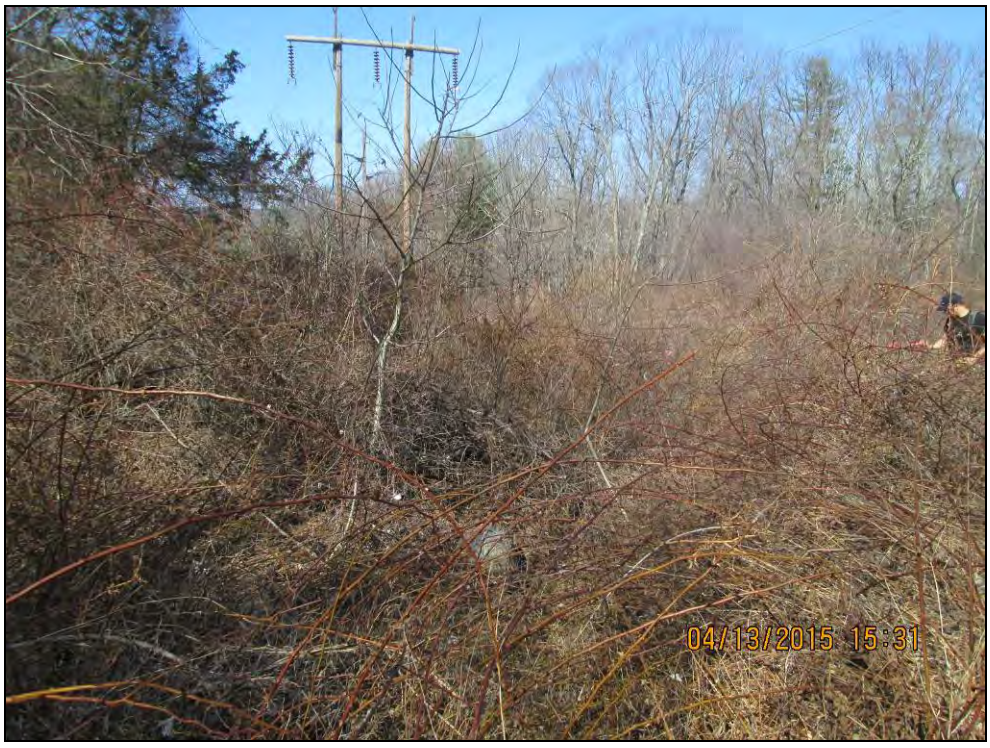
View west, Wetland F3 on east side of ROW.



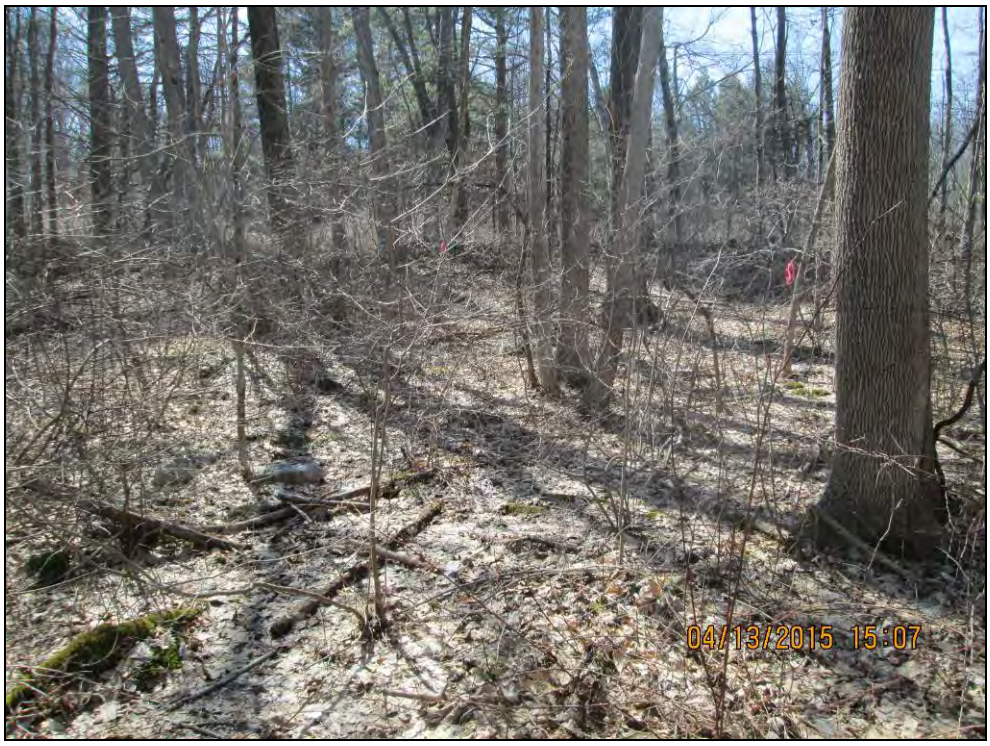
View southwest, Wetland F4 on east side of ROW.



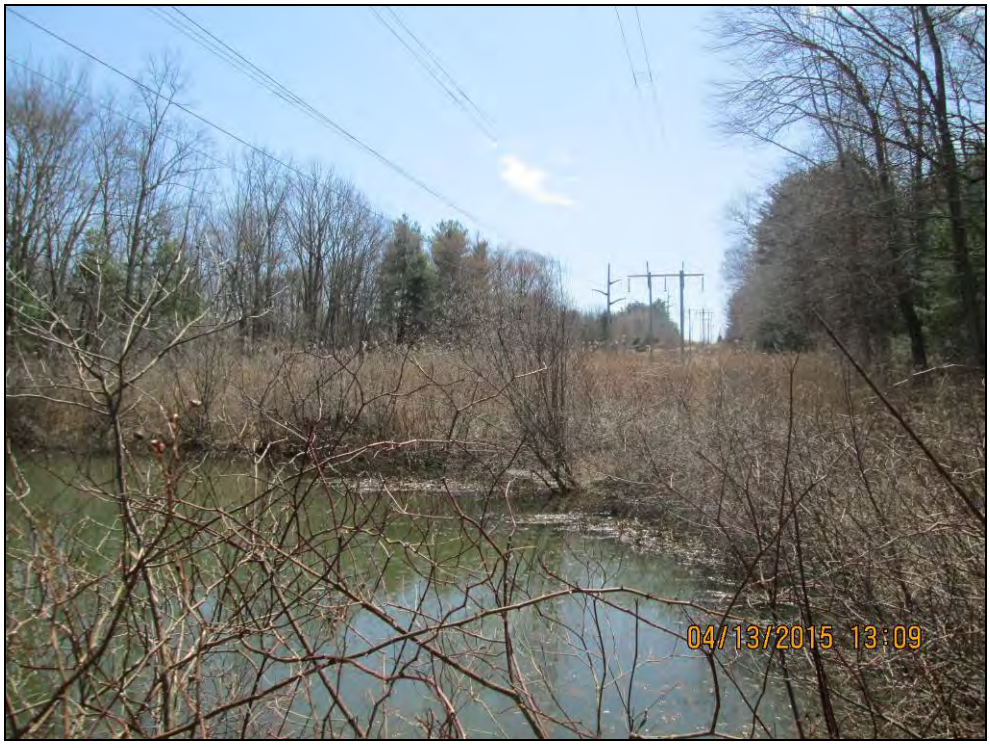
View northeast, Wetland F4 on east side of ROW.



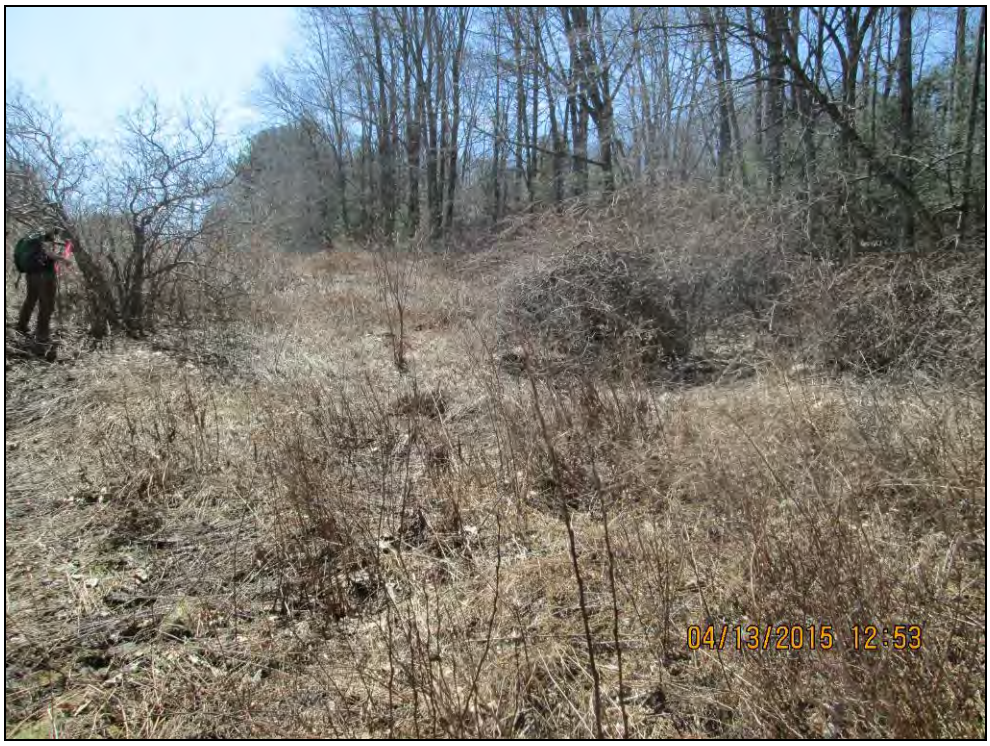
View northeast, Wetland F5 on west side of ROW.



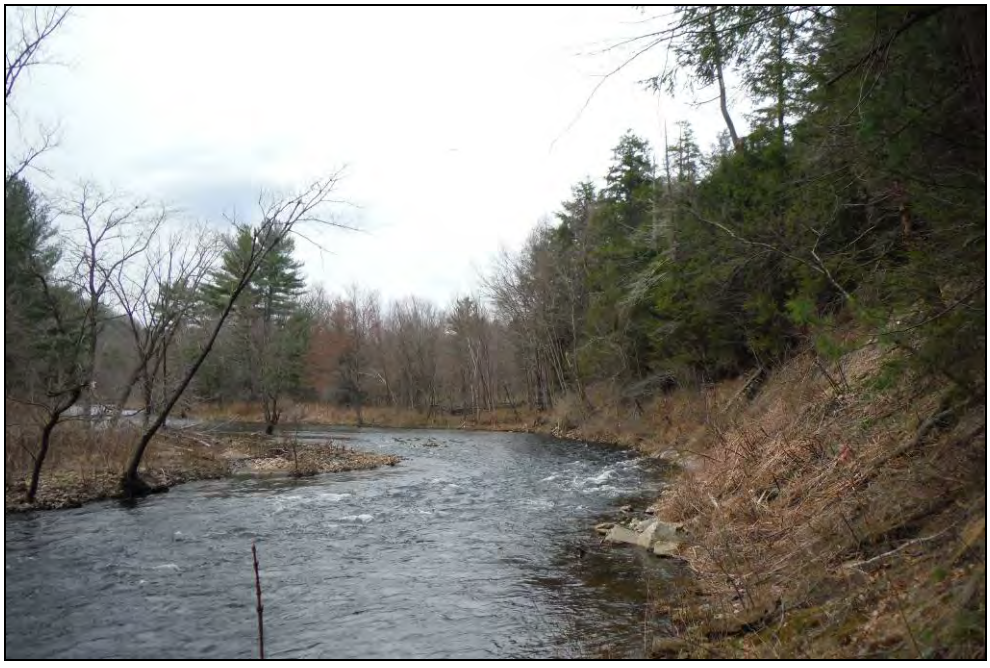
View east, Wetland F6 on east side of ROW.



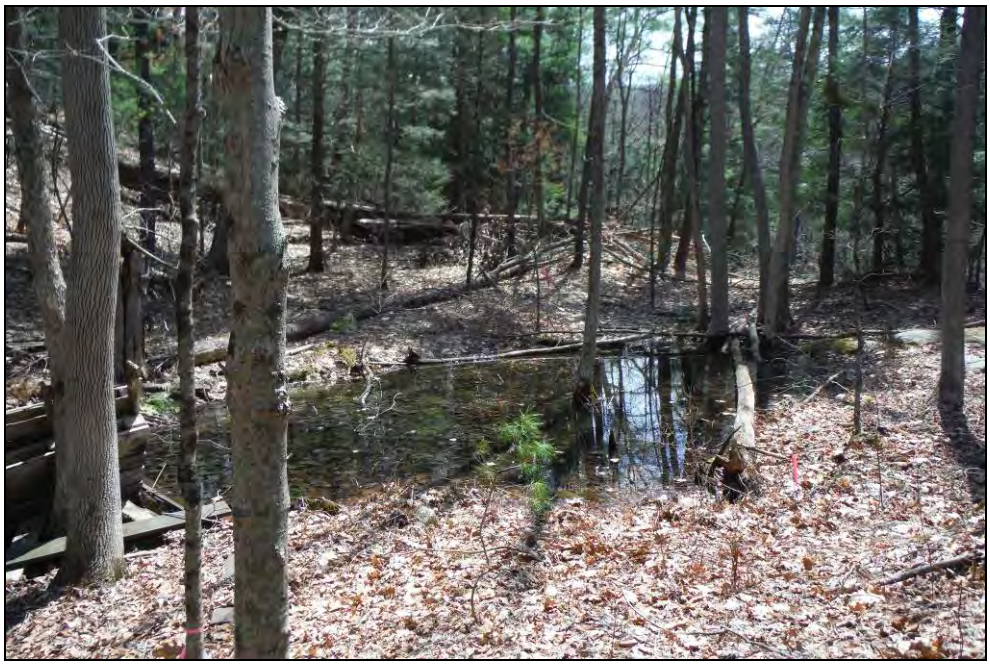
View southeast, Wetland F7 on west side of ROW.



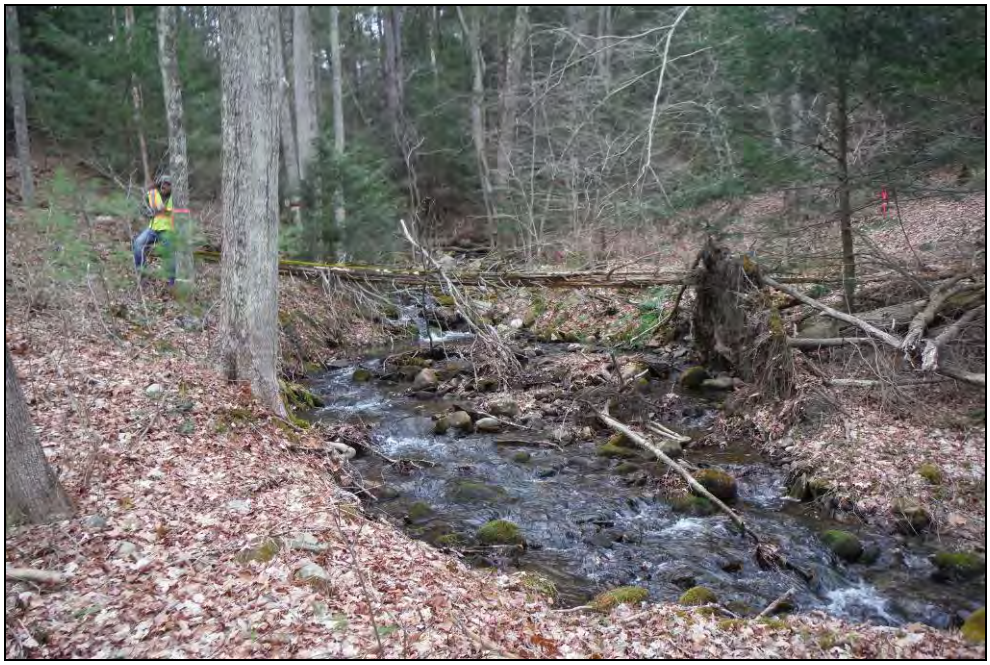
View southwest, Wetland F8 on west side of ROW.



View west, Wetland F9 and Stream SF7 on east side of ROW.

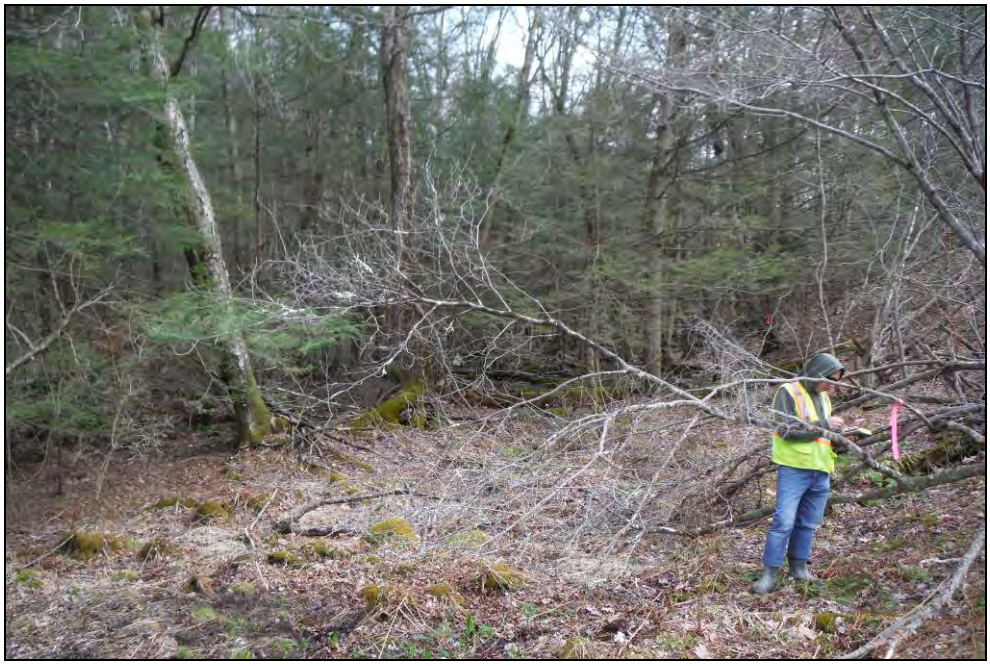


View southeast, Wetland F10 on east side of ROW.



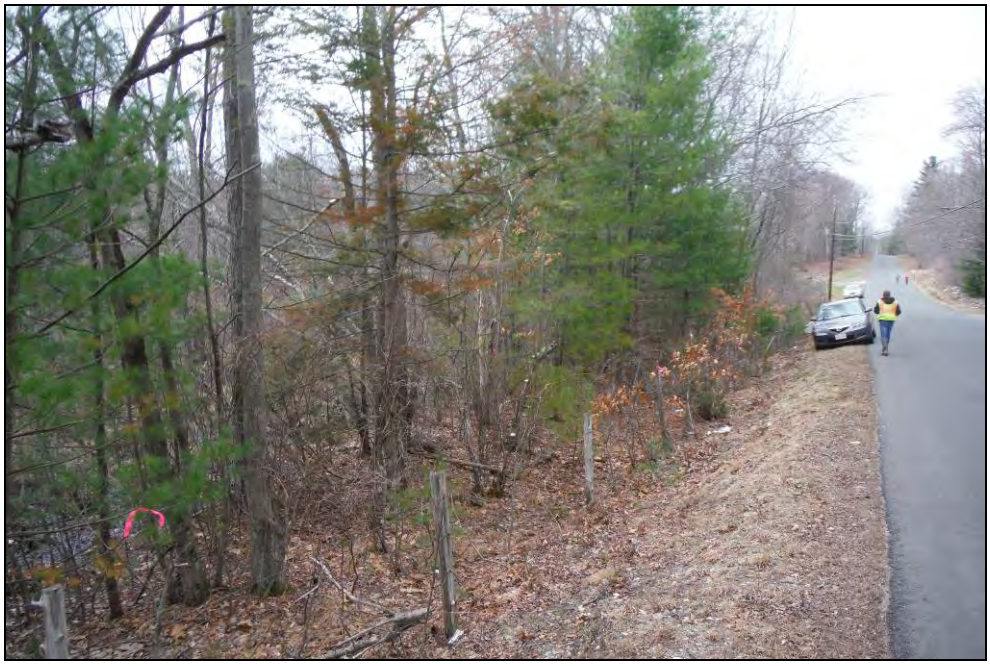
View northeast, Wetland F11 and Stream S01NR on east side of ROW.

View northwest, Wetland F12 on east side of existing access road.

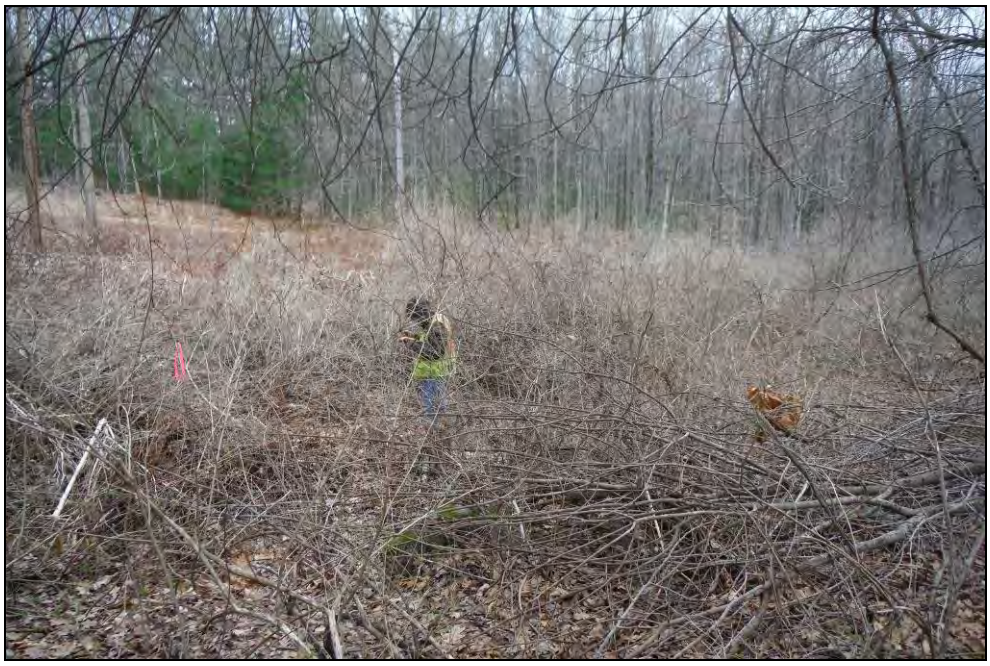


View east, southern portion of Wetland F13 on west side of existing access road.

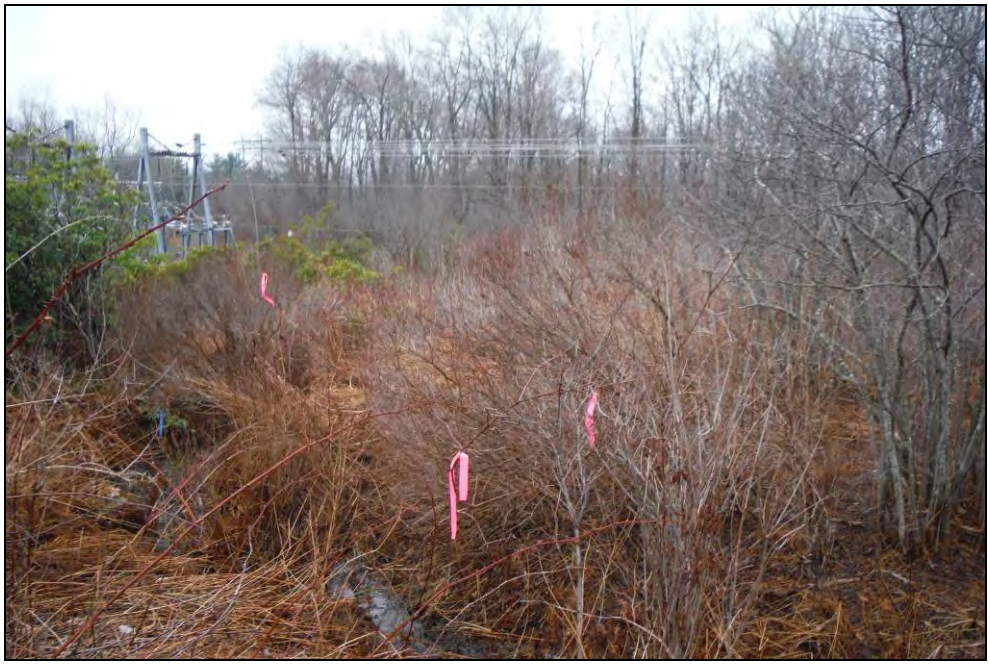
View north, Wetland F14 on west side (left) of existing access road.



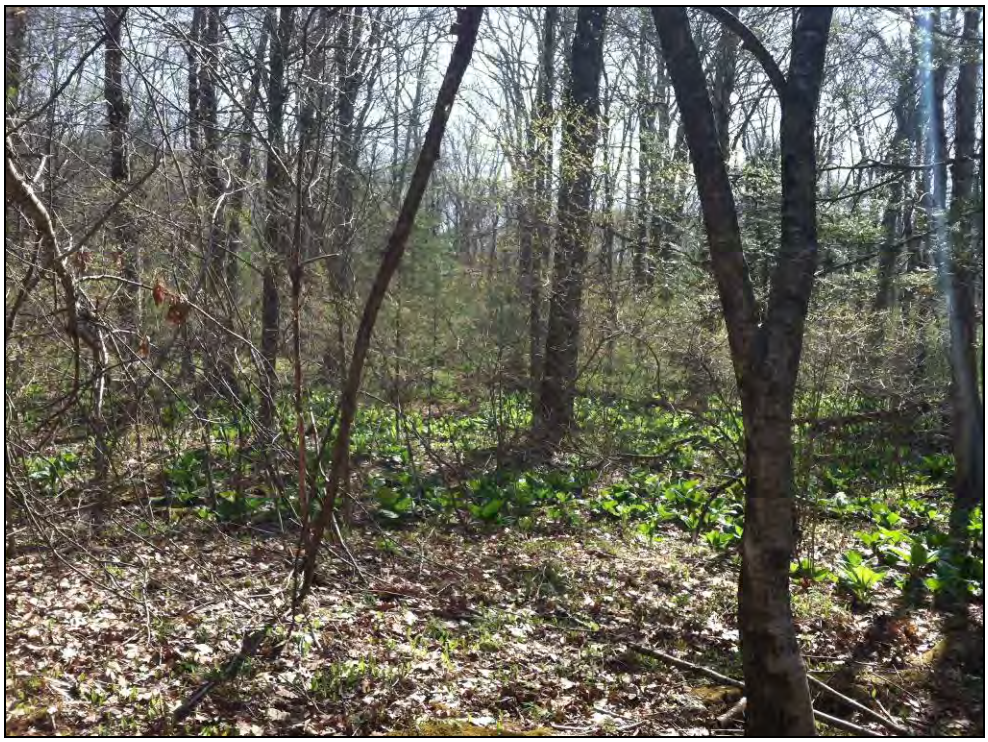
View northwest, Wetland F15 on east side of ROW.



View east, Wetland G1 on west side of ROW.



View east, Wetland G2 north of Campville Substation.



View northeast, Wetland G3.

APPENDIX D:

WETLAND DELINEATION FIELD FORMS

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: FB1**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF02NR FB1-01 to 27, FWF1-01 to 19 close

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Suncook loamy fine sand (100)	☒	☐	☒	☒
Udorthents – Urban land complex 306)	☐	☒	☒	☒
Rippowam fine sandy loam (103)	☒	☐	☐	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Frost Bridge Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Floodplain of Naugatuck River, utility line corridor, development (substation)

Surficial Geology: Till, outwash

Culverts present ☒ ☐

(Size & Type) 24" stone

Wildlife Observed:

NOTES:

Wetland FB1 is a portion of the historic floodplain for the Naugatuck River. This area is likely not subject to flooding as it has been cut off by railroad tracks. This wetland includes both CT and Federal/wetland boundaries. The delineated CT wetland boundary is characterized by an excessively drained alluvial soil type (Suncook). The federal wetland boundary includes a hydric alluvial soil type (Rippowam). Dominant vegetation includes black cherry, red maple, spicebush, skunk cabbage and jewelweed.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: FB2**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF02NR FB2-01 to 23

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Udorthents – Urban land complex (306)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hinckley gravelly sandy loam	☐	☒	☒	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S02NR FB1-01 to 08

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' Width __1-2'__ Depth at Center _< 6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _N/A___ Flow Rate ☒ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools (flows minimal at time of inspection)

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Stream FB1 flows from wetland FB2, infiltrates as it approaches wetland FB1.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Frost Bridge Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Utility line corridor, substation

Surficial Geology: Till, outwash

Culverts present ☐ ☒

(Size & Type) Wildlife Observed:

NOTES:

Wetland FB2 is a hillside seep draining east towards wetland FB1. An intermittent watercourse (SFB1) flows east from this wetland, infiltrating just before entering wetland FB1. Dominant vegetation includes white ash, spicebush, sensitive fern, *Rubus* and black cherry.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: FB3-FB4**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF02NR FB3-01 to 08, FB4-01 to 14

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Suncook (100)	☒	☐	☒	☒
Udorthents – Urban land complex (306)	☐	☒	☐	☒
Rippowam (103)	☒	☐	☐	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Frost Bridge Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Floodplain of Naugatuck River, railroad tracks, substation

Surficial Geology: Alluvium

Culverts present ☒ ☐

(Size & Type) stone – not visible Wildlife Observed:

NOTES:

Wetlands FB3 and FB4 are linear shaped depressional features located at the base of hill embankments associated with railroad tracks and the adjacent substation. These areas are a portion of the historic floodplain of the Naugatuck River. Dominant vegetation includes skunk cabbage, sensitive fern, jewelweed and *Rubus*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: FB5**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 50's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF02NR FB5-01 to 13

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN _____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Suncook loamy fine sand (100)	☒	☐	☒	☒
Udorthents –Urban land complex (306)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Frost Bridge Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Commercial development, early successional forest, railroad tracks, perennial watercourse, substation

Surficial Geology: Alluvium, outwash

Culverts present ☐ ☒

(Size & Type) Wildlife Observed:

NOTES:

Wetland FB5 is a CT wetland only, formed in historic alluvium associated with the Naugatuck River. There is no evidence that this area is currently subject to flooding. The southern boundary is a fill bank associated with the substation. Dominant vegetation includes sensitive fern, *Vitis*, black cherry and trout lilly.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: FB6**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 50's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF02NR FB6-01 to 06

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope/GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
Udorthent (306)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S02NR FB3-01 to 03

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' avg.__ Width _±1' avg._ Depth at Center _< 6" avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _N/A___ Flow Rate ☒ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Intermittent watercourse feature originates at an 18" RCP, but also receives flow from a 42" RCP (sources unknown).

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Roadway, commercial development

Surficial Geology: Unknown

Culverts present ☒ ☐

(Size & Type) 18" RCP, 42" RCP Wildlife Observed:

NOTES:

Wetland FB6 is a bordering wetland to intermittent watercourse SFB3. This wetland is associated with 2 culvert outlets that originate on the south side of Echo Lake Road. Dominant vegetation includes Japanese knotweed.

ROUTINE WETLAND DELINEATION-DATA FORM **Stream SFB2**

Project: 230915.43 Investigator: Davison

Date: 4/7/15 Weather: Rain, 40's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series N/A – Stream only

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG./MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S02NR FB2-01 to 23

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height __3-4' avg.__ Width __3-6' avg. Depth at Center _< 2' avg.

Est. Riffle/Pool Ratio: ___N/A_ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical (armored) ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☒ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: PSS/PFO/POW

Stream SFB2 is a perennial watercourse originating at multiple culverts (2/24" FES, 48" RCP). It flows within an armored channel before outletting at a 48" RCP with winged headwalls.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Frost Bridge Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Early successional forest, roadway, commercial development

Surficial Geology: Outwash

Culverts present ☒ ☐

(Size & Type) (2)24" FES, (2) 48" RCP

Wildlife Observed:

NOTES:

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: A1

Project: 23091543 Investigator: SAR

Date: 4/7/15 Weather: Rain, 48º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WA1/A1-01 to 04, A1-14 to 18

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN _____X___

FLATS (MINERAL) _____

Slope: _____

Depression: _____

Novitski Class: SW Slope/GW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hinckley (38)	☐	☒	☒	☒
Udorthents (306)	☐	☒	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA

Stream # and Flag series: SA1/A1-01 to 09

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 1-2‘ Width 3-4‘ avg. Depth at Center 6“

Est. Riffle/Pool Ratio: N/A (all riffles) Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical (within channel) ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): overhanging/dense shrub layer on stream banks.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, early successional forest

Surficial Geology: Outwash (Hinckley)

Culverts present

(Size & Type) 48" RCP at invert., 48" corrugated metal at outlet (SA1-09) Wildlife Observed:

NOTES:

Delineated area is the bordering wetland of an unnamed perennial watercourse (S-A1). The watercourse enters the wetland at an outlet (48" RCP) on the south side of Echo Lake Road and flows east within a narrow incised channel. This channel exists within a broader drainage channel. The watercourse enters a 48" corrugated metal pipe and flows beneath Route 8. Dominant vegetation includes silky dogwood, winterberry, *Rubus spp.*, reed canary grass, *Spiraea* sp., skunk cabbage. *Lonicera* sp., Japanese barberry, morrow's honeysuckle, arrowwood and sweet fern occupy the upland fringe.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A2**

Project: 23091543 Investigator: SAR

Date: 4/7/15 Weather: Rain 48º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WA2/A2-01 to 06, A2-16 to 21

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X_____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression:_____

Novitski Class: SW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☒ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Udorthents – Urban Land (306)	☒	☒	☒	☒
Hinckley gravelly sandy loam 3 –15% (38C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SA2/A2-01 to 12

☐ Intermittent ☒ Ephemeral

Bank Height __6"_____ Width _1-3'_____ Depth at Center 9"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __1:10_____ Flow Rate ☒ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☒ Glides ☐ Pools

Channel Geometry: man-made

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation 20% at ROW

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 1 cfs

Habitat Features (Describe): Developing riparian shrub corridor

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 8

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: alongside Route 8 immediately to east

Surficial Geology: outwash

Culverts present

(Size & Type) Flows to S-A1 Wildlife Observed: none

NOTES:

Wetland occurs at toe-of-slope & adjacent to Rte 8 embankment. This wetland is associated with a man-made drainage feature (i.e., the flagged watercourse is a roadside drainage swale).

Wetland vegetation includes soft rush, silky dogwood, *Carex* sp. (Sect. Latifolia), and hardhack (*Spiraea latifolia*)

Adjacent upland with bittersweet, ragweed, Morrow's honeysuckle, burning bush, red cedar and goldenrods.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A3**

Project: 23091543 Investigator: SAR

Date: 4/7/15 Weather: Rain, 48º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WA3/A3-01 to 09, A3-19 to 23

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X_____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

RPW mapped as USGS blueline.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hinckley gravelly sandy loam (38C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series SA3/A3-01 to 10

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height: 6-10" Width: 2-5' Depth at Center: 12" bankfull

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 2-5 cfs

Habitat Features (Describe):
Groundwater break out, seeps.

NOTES: Primarily originating from storm drain system at adjacent transfer station, with contribution from GW breakout.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road (East)

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 10+ West

Surrounding Habitat Types:

Surficial Geology: Till outwash contact (toe of slope).

Culverts present

(Size & Type) 4 ft diameter (est.) with conc headwall

Wildlife Observed: none

NOTES:

Culverts present under Echo Lake Road.

Forested wetlands is at toe of D slope with bedrock outcropping (GW breakout).

Transfer Station adjacent to south

Wetland vegetation includes red maple, yellow birch, green ash, spicebush and occasional winged euonymous (*Euonymous alatus*)

Herbaceous spp. include cinnamon fern, sensitive fern, skunk cabbage and wood reedgrass (*Cinna* sp.)

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A4**

Project: 23091543 Investigator: SAR

Date: 4/21/15 Weather: Rain Showers, 60°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WA4/A4-01 to 07

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) ____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: Headwaters
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Headwaters of NHD blue line.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75C)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):
N/A – headwaters of National Hydrography Dataset (NHD) blue line to North (see aerials).

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Upland old field = south; forested = north

Surficial Geology: Till, bedrock outcrops

Culverts present

(Size & Type) N/A

Wildlife Observed: White-tailed Deer (sign)

NOTES:

Diffuse flow from GW breakout (not a defined watercourse)

Some *Phragmites* sp. reed above the GW breakout zone.

Saturated zone w/ *Sphagnum*, *Symplocarpus foetidus, Carex stricta*.

Peripheral zone (seasonally saturated areas) with *Osmunda cinnamomea, Spiraea tomentosa*.

Woody spp. includes *Acer rubrum*, *Sambucus Canadensis, Fraxinus* sp., *Quercus rubra*, *Ilex verticillata*, *Lindera benzoin*.

Upland with *Kalmia latifolia*, *Betula* sp., *Prunus serotina*, *Acer rubrum*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: MSF1**

Project: 230915.43 Investigator: Davison

Date: 7/13/15 Weather: partly sunny, 80°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF MSF1-01 to 14

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __ ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock Outcrop (75)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): vernal pool

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest

Surficial Geology: Till

Wildlife Observed:

NOTES:

Wetland MSF1 is a vernal pool located adjacent to an existing access road. No surface water at the time of inspection. It is largely unvegetated, PSS/PFO around pool periphery. Broad upland wetland transition to the south.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: MSF2**

Project: 230915.43 Investigator: Davison

Date: 7/13/15 Weather: partly sunny, 80°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF MSF2-01 to 6

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __ ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☒ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock Outcrop (75)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): vernal pool

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest

Surficial Geology: Till

Wildlife Observed:

NOTES:

Wetland MSF2 is a small, oblong vernal pool located adjacent to an existing access road. It is largely unvegetated, PSS/PFO around pool periphery. Abrupt upland wetland transition.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: MSF3**

Project: 230915.43 Investigator: Davison

Date: 7/13/15 Weather: partly sunny, 80°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF MSF3-01 to 9

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☐	☒
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN __ ___

FLATS (MINERAL) _X__

Slope: _____

Depression: _____

Novitski Class: GW Depression/GW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock Outcrop (75)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest

Surficial Geology: Till

Wildlife Observed:

NOTES:

Forested wetland depression, groundwater seepage drains easterly. Red maple, highbush blueberry, sensitive fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A5-A6**

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59°

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA5/A5-01 to 18 & WA61 A6-01 to 03

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: See Note below
☒ Seasonally saturated	☐	☒	Depression: See Note below
☒ Saturated	☐	☒	
☒ Temporarily flooded	☒	☐	
☐ Intermittently flooded	☐	☐	Novitski Class GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Other NWI classes PEM (minor).

HGM Values: Elements of both Slope & Depression Wetland.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75C)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SA4/A4-01 to 04

☐ Intermittent ☒ Ephemeral

Bank Height _< 6"_____ Width 1-2'___ Depth at Center __< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation (not flagged)

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): wrack deposits (leaves & sticks)

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10+

Surrounding Habitat Types: Bedrock outcrop & old field (Juniper)

Surficial Geology: Till Ridge

Culverts present

(Size & Type) 16" CMP

Wildlife Observed:

NOTES:

Stream channel originates at the outfall of the 16-inch CMP culvert under the ROW access road.

Recent improvements/maintenance to access road associated with refurbishment work.

Wetland plants include winterberry, maleberry, hardhack, sensitive fern, steeplebush, silky dogwood, arrowwood, arrow leaved tearthumb, goldenrods and *Sphagnum* sp. moss

Associated upland with Hazel *Corylus americana*, red cedar, sweet fern, mountain laurel, haircap moss, and goldenrods.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A7**

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59 º

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA7/A7-01 to 06

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☒ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Likely significant nexus w/ RPWs (Hydro-connections)

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☒	☒	☒
Ridgebury Leicester Whitman fsl (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Old (Virginia rail) stonewall on west side of wetland to the SE of structure #1238.

Wetland vegetation includes red maple, spicebush, cinnamon fern, jewelweed, sensitive fern and *Sphagnum* sp. moss

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A8**

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59°

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA8/A8-01 to 30, A8-40 to 46, A8-56 to 65

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X__
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☒	
☐ Temporarily flooded	☒	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (Turkey Brook)
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SA5/A5-01 to 13

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial (observed @ S. side of ROW nr WF-A8-37)

Bank Height 6-10" Width 4-8' Depth at Center ~4"

Est. Riffle/Pool Ratio: 1:10 Flow Rate ☒ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 10 cfs

Habitat Features (Describe): Occas. boulders.

NOTES: Banks = vertical to slightly undercut

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Old Field w/ well developed

Surficial Geology: Till (Canton & Charlton)

Culverts present

(Size & Type) 2 - 16" CMP across ROW Road

Wildlife Observed: white-tailed deer (sign)

NOTES:

Wetland vegetation includes highbush blueberry, swamp dewberry, cinnamon fern, winterberry, red maple, swamp azalea, skunk cabbage, *Viburnum* sp. *Spiraea* spp., and occasional pussy willow.

Some shallow organic substrates (PEM w/ *Sphagnum* and *Scirpus cyperinus*)

Associated upland vegetation includes hornbeam (*Carpinus* sp.), red cedar, sweet fern, Allegheny blackberry, goldenrod, white birch, hazel, and red oak.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A9**

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59°

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA9/A9-01 to 23, A9-33 to 74, A9-84 to 97

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN Turkey Brook
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: GW discharge (W end)
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (S-A6, S-A7)
☐ NRPW
☐ UPLAND
☒ RPWWD (Wetland A-9)
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SA6/A6-01 to 15

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 3-12"_____ Width 3-7' typ. Depth at Center to 12" +

Est. Riffle/Pool Ratio: _____ Flow Rate ☒ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology: (some braided diversions @ flood)

☒ Undercut (slight) ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☒ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 5 cfs

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series __SA7/A7-01 to 14_

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height _____ Width __3-7'____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☒ Glides (lower) ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 1 cfs

Habitat Features (Describe): - lower channel = sand & mud substrate

- Joins SA6 at SA6-10.

NOTES:

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest & brush land. Recent mowing (brush cutting) & tree clearing

Surficial Geology: till, alluvium

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Improved access to structures

- Representative wetland vegetation includes alder, red maple, elderberry, winterberry, nannyberry, cinnamon fern, sensitive fern, silky dogwood, pussy willow and skunk cabbage.
- Invasive spp. (*Rosa multiflora, berberis thunbergii, Lonicera morrowii,* and *Euonymous alatus*) common to abundant in this area.
- Cattail marsh on B slope (+/-) west end. Impressive volume of GW discharge from slope below the dump at this location.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: A10

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59°

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA10/A10-01 to 06

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: SW
☒ Saturated	☐	☒	Adjacent to Brook (40 yds +/-)
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested (Mattatuck State Forest)

Surficial Geology

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Small (isolated) wetland approx. 40 yards east from the southern end of Wetland 9.

Wetland vegetation includes elderberry, maleberry, white meadowsweet, steeplebush, winterberry, arrowwood, boneset, woolgrass, witchhazel, goldenrods, and *Sphagnum* sp. moss.

adjacent uplands with Allegheny blackberry, grey birch, red cedar.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: A11**

Project: 23091543 Investigator: SAR

Date: 4/6/15 Weather: Partial Clouds, 59°

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: WA11/A11-01 to 14

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: EXAC.

Novitski Class: GW Slope

above (basin = ground water depression)

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Dominant NWI Class PSS = tall shrubs (*Alnus* dom.)

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (60C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Agricultural – hayfield (mowed)

Surficial Geology: till ridge

Culverts present

(Size & Type) 12" CMP flows to Wetland A9 at WF-A9 80/81 Wildlife Observed:

NOTES:

Historically disturbed area. This area may have been excavated in an attempt to alleviate imperfect drainage in the surrounding farm fields.

PSS = Tall shrub (*Alnus* sp.) dominant, and including *Salix discolor* and *Rosa multiflora*.

Some *Juncus effusus* in adjacent hayfields.

Wetland vegetation includes: purple leaved willow herb, jewelweed, speckled alder and pussy willow.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: B1-B2

Project: 23091543 Investigator: SAR

Date: 4/7/15 Weather: Rain, 48º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB1/B1-01 to 11, WB2/B2-01 to 06, B2-16 to 36

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (60, 61)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub and commercial development

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal beneath access road from B2 to B1, 24" (2) RCP outlets from B1

Wildlife Observed:

NOTES:

Wetlands B1 and B2 flow from the north ROW boundary to the south ROW boundary. Flows are culverted beneath an existing dirt access road from B2 to B1 within an 18" corrugated metal culvert. Outflow from this system is beneath a paved access road (off ROW, serving adjacent business) within 2, 24" RCPs. This wetland has been subject to historic disturbance activities associated with adjacent commercial developments. The north side of wetland B2 underwent some type of mitigation effort (monitoring wells, plantings, grading). Dominant vegetation within wetland B2 includes common reed, winterberry, highbush blueberry, silky dogwood, phragmites, swamp azalea, *Lonicera sp*., pussy willow, oriental bittersweet and multiflora rose. Dominant vegetation within wetland B1 includes pussy willow, reed canary grass, morrow's honeysuckle, arrowwood, highbush blueberry, wineberry, and white meadowsweet.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B3**

Project: 23091543 Investigator: SAR

Date: 4/7/15 Weather: Rain, 48º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB3/B3-01 to 04

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☒	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub/emergent (maintained lawn)

Surficial Geology till

Culverts present

(Size & Type) 24" RCP

Wildlife Observed:

NOTES:

Wetland B3 is a detention basin. Dominant vegetation includes pussy willow, cattails and common reed. Sweet fern is abundant on the basin banks.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B4**

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Rain, 42°

State/Town/County: Watertown, CT – Litchfield, CT

Wetland # & Flag Series: WB4/B4 -001 to 004, B4-01 to 10

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☐	☒	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: hardwood forest/scrub-shrub

Surficial Geology: till

Culverts present

(Size & Type) 12" corrugated metal (outlets beneath access road from B5) Wildlife Observed:
18" corrugated metal (conveys flow beneath access road to B6)

NOTES:

Wetland B4 is a red maple swamp adjacent to a dirt/gravel access road. A vigorous shrub layer is present, dominated by highbush blueberry, mountain laurel at the wetland edges. A portion of this system adjacent to the gravel access road is seasonally ponded (Vernal Pool B4-1), a result of impoundment against the access road and a collapsed culvert outlet on the opposite side of the road (Wetland B6).

Dominant vegetation in Wetland B4 includes red maple, smartweed and white meadowsweet.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B5**

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Rain, 42°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB5/B5-01 to 09

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☒ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub and forested wetlands, commercial development

Surficial Geology: till

Culverts present

(Size & Type) 12" corrugated metal (outlets to wetland B4 beneath access road)

Wildlife Observed:

NOTES:

Wetland B5 is a portion of a larger system that has been isolated by access roads and subject to disturbance as a result of its accessibility. It is impounded to south by a gravel/dirt access road (culverted to wetland B4) and to the NW by a dirt access road. Dominant vegetation includes highbush blueberry, mountain laurel, speckled alder, winterberry. Reed canary grass, soft rush and tussock sedge are present within emergent areas.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B6**

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Light Rain, 42°

State/Town/County: Watertown, CT – Litchfield, County

Wetland # & Flag Series: WB6/B6-01 to 25

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) _both___

Slope: _____

Depression: _____

Novitski Class: GW slope, depression

SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Walpole (13)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A___

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, forested wetland (off ROW)

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal, (inlets from wetland B4 beneath access road, culvert is collapsed).

Wildlife Observed: Deer, coyote scat observed

NOTES:

Wetland B6 is a large system draining from SW to NE. It includes gently sloping groundwater seeps and depressional features. Some emergent areas exist primarily in wetter depressional areas. Dominant vegetation includes highbush blueberry, winterberry, arrowwood, pussy willow, Morrow's honeysuckle- 20% cover, elderberry and white meadowsweet. Common reed, cattails, tussock sedge, and *Sphagnum* dominate seasonally inundated areas. Mountain laurel is abundant around upland fringes.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: B7

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Light Rain 42°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB7/B7-01 to 06, B7-16 to 24

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☒ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☒ Semi-permanently flooded	☐	☒
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) _both___

Slope: _____

Depression: _____

Novitski Class: GW, SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A___

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) 18" corrugated metal, (inlets from wetland B8 – clogged) Wildlife Observed: beaver activity

NOTES:

Wetland B7 drains from SW to NE, beginning at Jericho Brook Pond (off ROW). Beaver activity was noted at SW ROW edge and has clearly altered the hydrology of this system. Maps show a perennial watercourse Jericho Brook) draining from the pond through the wetland interior, however, this was not observed. This may be the result of the beaver activity. Dominant vegetation within scrub-shrub cover types includes highbush blueberry, winterberry, arrowwood, Morrow's honeysuckle- 3% cover and *Rubus* around the periphery. Seasonally inundated areas are dominated by tussock sedge, cattails, lily pads, reed canary grass and open water at the NE extent.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B8**

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Light Rain, 42°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB8/B8-01 to 06 closed

Dominant NWI Class ☐ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☒	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW, SW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub, emergent wetlands, open-water

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal (clogged-outlets to wetland B7) Wildlife Observed: coyote scat in vicinity, beaver activity

NOTES:

Wetland B8 is a small ponded area resulting from seepage from a fill embankment on adjacent Jericho Brook Pond. Seepage is then impounded against the gravel access road to the NE. A culvert within this wetland conveys flow to wetland B7, which is adjacent. The culvert inlet and outlet were obstructed from careful inspection. It was likely installed to try to prevent failure of the adjacent access road. Dominant vegetation includes reed canary grass. Some Glossy Buckthorn is also present- 3%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B9**

Project: 23091543 Investigator: SAR

Date: 4/8/15 Weather: Light Rain, 42°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB9/B9-01 to 11

Dominant NWI Class	☐ PFO	☐ PSS	☐ PEM	☒ POW
Other NWI Classes	☐ PFO	☒ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☒ Semi-permanently flooded	☒	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) both___

Slope: _____

Depression: _____

Novitski Class: GW depression

SW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types:

Surficial Geology Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland B9 is contiguous with wetland B7 (connecting off ROW). The northeast portion of this wetland is ponded with fringe areas dominated by common reed (phragmites 60%). Cranberry, highbush blueberry, cattails and tussock sedge grow as hummocks dominating the ponded area with some, arrowwood, red maple and willow less abundant on the fringes of the ponded area. *Lonicera* and Japanese knotweed were abundant on the adjacent upland slope.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: B11**

Project: 23091543 Investigator: SAR

Date: 4/9/15 Weather: Overcast, 37°

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WB11/B11-01 to 23, B11-33 to 51, B11-61 to 73

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW slope, GW slope
☐ Artificially flooded	☐	☐	SW depression, GW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☒ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Gloucester (57)	☐	☒	☒	☒
Aquent	☒	☐	☐	☒
Catden and Freetown (18)	☒	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SB1/B1-01 to 04, SB1/B4-01 to 07

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width _2-3'_____ Depth at Center _< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles_____ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): over-hanging/dense vegetation

NOTES:

RIVER/STREAM DATA Stream # and Flag series SB2/B2-01 to 05

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width ___2-3'_____ Depth at Center __< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): excavated drainage feature

NOTES: New culvert in newly excavated drainage ditch created to re-route SB2 along the toe of slope of Wetland B11 and on the edge of the newly expanded parking lot located southwest of Wetland W-B11.

RIVER/STREAM DATA Stream # and Flag series SB3/B3-01 to 03

☒ Intermittent ☐ Ephemeral

Bank Height ____1'_____ Width ___2-3'_____ Depth at Center _< 6"_____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Stream S3 starts at culvert outflow adjacent to Route 6. Appears to have base flow, but a source was not identified. Dominant vegetation includes Japanese knotweed - 100% cover.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road, Route 6

Wetland Topography (%slope): 0-10

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub, forest, open water

Surficial Geology: sandy till

Culverts present

(Size & Type) Wildlife Observed: large buck, abundant antler rubs within wetland interior

NOTES:

Wetland B11 is characterized as a hillside seep with multiple intermittent watercourses draining northwesterly towards a pond located within and off ROW. This wetland has been subject to historic disturbance activities including filling (road construction) related to maintenance activities. Common reed (phragmites- 10%), cattails, skunk cabbage, multiflora rose- 3%, Japanese knotweed- 3%, winterberry and pussy willow dominate the fringes of the open water located in the northern section of B11. The vegetated slope portion of B11 located to the south of the open water includes cinnamon fern, mountain laurel, *Solidago*, multiflora rose- 10% as well as upland species typically found on abandoned agricultural land such as Morrow's honeysuckle- 10% as well as emergent hydrophytes (skunk cabbage). Oxi-aquic soil conditions are present within portions of the delineated wetland. This wetland system is hydrologically connected to Purgatory Brook.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C1A**

Project: 230915.43 Investigator: Davison

Date: 7/13/15 Weather: partly sunny, 80°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF C1A-01 to 12; 22 to 35

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __ ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☒ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing High Meadow Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Residential, scrub-shrub

Surficial Geology: Till

Wildlife Observed:

NOTES:

Wetland C1A is a red maple swamp to the south of ROW access road and shrub swamp with emergent inclusions to the north. Representative species include winterberry, highbush blueberry, bush honeysuckle along the wetland/upland boundary.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C2A**

Project: 230915.43 Investigator: Davison

Date: 7/13/15 Weather: partly sunny, 80°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WF C2A-01/11; 21 to 31

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☒ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __ ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☒ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height._____ Width _____. Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing High Meadow Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Residential, scrub-shrub

Surficial Geology: Till

Wildlife Observed:

NOTES:

Wetland C2A is a seasonally flooded/saturated emergent marsh to the south of ROW access road and shrub swamp with emergent inclusions to the north.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C1-C2**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40º

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC1/C1-01 to 44 & WC2/C2-01 to 05

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Canton and Charlton (62)	☐	☒	☒	☒
Rock outcrop-Hollis complex (76)	☐	☒	☒	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SC1/C1-01 to 02, C1-12 to 21, C1-31 to 33, C1-43 to 46

☒ Intermittent ☐ Ephemeral

Bank Height _1-2' avg._ Width ___2-3' avg._ Depth at Center __< 6"___

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☒ Slow ☐ Defined bank and channel ☒ Moderate ☐ Sustained Flow ☐ Fast ☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided (small portion) ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation (in portions)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Overhanging vegetation, particularly dense within ROW.

NOTES: Channel is incised where flow rates are moderate. This watercourse is fragmented, with flows generally dissipating where topography levels. An access road bisects this watercourse SC1-02 & C1-12. A buried culvert has prevented conveyance beneath the access road, resulting in overland flows NW down the access road.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Mature oak-hardwood forest, scrub-shrub within ROW clearing

Surficial Geology: Till, Bedrock outcroppings

Culverts present

(Size & Type) Culvert conveying flow from west side of wetland under the access road to the east, the stream is also culverted to 2C wetland under an existing gravel road at the edge of the ROW.

NOTES:

Wetland C1 is a hillside seep that originates on the southwest side of ROW, and drains northerly towards an unnamed pond (impounded portion of Purgatory Brook, off ROW). This wetland includes an intermittent watercourse feature that flows through a culvert under the newly constructed road. Wetland C2 is contiguous with C1, but is bisected by an access road. The culvert has recently been replaced and water is being conveyed under the upgraded gravel roadway along the edge of the ROW. Dominant species within forested areas include red maple, red oak, yellow birch, mountain laurel and spicebush. Within the cleared ROW, highbush blueberry, mountain laurel, winterberry, cinnamon fern and *Rubus* spp. dominate.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C3**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC3/C3-01 to 05

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ____N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest (within cleared ROW), scrub-shrub; also, golf course, residential development to north & east

Surficial Geology: Till, bedrock outcroppings

Culverts present (Size & Type)

Wildlife Observed:

NOTES:

This wetland is a bedrock controlled depressional feature. The access road crosses this wetland. Scour was observed from the east tip of the wetland, continuing easterly until the slope drops steeply over ledge down towards the east. This scour did not meet the criteria for an intermittent watercourse (no defined bank and channel). Dominant vegetation includes blueberry, mountain laurel, winterberry and *Rubus*.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: C4

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Partly cloudy, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC4/C4-01 to 28

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression/GW slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA

Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW), residential development, golf course

Surficial Geology: Till, Bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C4 is a hillside seep, with depressional features. Access road crosses this wetland, surface water is draining down access road, with portions inundated. Vernal Pools C4-1 is located along the edge of the existing access route. Wetland drains from southwest (off ROW) to northeast towards a residence. Dominant vegetation includes red maple, mountain laurel, spicebush within forested portions. Highbush blueberry, *Rubus*, winterberry dominate areas within the ROW clearing. A newer gravel access road has been installed and hydrology flows over the roadway.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C6**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC6/C6-01 to 04

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW clearing), golf course

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C6 is a small bedrock controlled depressional feature directly abutting a fill slope associated with the adjacent golf course. Dominant vegetation includes high bush blueberry, mountain laurel, and *Rubus* spp.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C7**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC7/C7-01 to 08

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW clearing, development to the east, northeast (Hard Rock Road)

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland 7 is a hillside seep draining from southwest to northeast towards a residence on Hard Rock Road. The eastern portion of this system (off ROW) appears to be seasonally inundated (water stained leaves, standing water, and unvegetated). Dominant vegetation includes red maple, highbush blueberry, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C8**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC8/C8-01 to 10

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis Chatfield – Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, dense mountain laurel understory

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland is located along the northeastern portion of the ROW. The wetland is a forested seep draining from west to east towards a residence on Hard Rock Road, and may be connected to wetland C-7 off ROW. Dominant vegetation includes red maple, yellow birch, winterberry, spicebush, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: C10

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC10/C10-01 to 07

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, dense mountain laurel understory

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C10 is a vernal pool (Vernal Pool C10-1). It is an elongated bedrock controlled depressional feature, with outcroppings rising sharply to the east. Depth within the pool is generally 1' deep or less. The pool is generally unvegetated with dominant vegetation around the fringes including red oak, black birch, paper birch, white oak, spicebush, highbush blueberry, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C12**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/15 Weather: Cloudy, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC12/C12-01 to 34

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X___

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW depression/GW slope

SW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _SC3/C3-01 to 07_

☒ Intermittent ☐ Ephemeral

Bank Height ___1-2' avg.__ Width __3-4' avg. Depth at Center < 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual (rocky)

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, forested wetland, scrub-shrub habitat within cleared ROW

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C12 is a hillside seep with bedrock controlled depressional features. This wetland drains from Vernal Pool C-12 southwest to the northeast ROW boundaries, and includes scrub-shrub cover types within the cleared ROW and forested areas outside of the ROW clearing. The existing access road crosses this wetland and hydrology currently flows over the roadway. This wetland drains northeast towards an unnamed perennial watercourse off ROW. Dominant vegetation includes red maple, hemlock, highbush blueberry, mountain laurel, spicebush, *Sphagnum,* and tussock sedge.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C14**

Project: 23091543 Investigator: K. Wilkins

Date: 4/9/15 Weather: Cloudy, Rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC14/C14-1 to 13

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield-rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series:

☐ Intermittent ☐ Ephemeral

Bank Height_____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland hardwood forest, scrub shrub (ROW clearing)

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C14 is a bedrock controlled depressional feature along the edge of the existing access road. This wetland is seasonally inundated and currently contains a stone drainage swale. Dominant vegetation includes *Spirea,* mountain laurel, and tussock sedge.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C15**

Project: 23091543 Investigator: K. Wilkins

Date: 4/9/15 Weather: Cloudy, rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC15/C15-1 to 27

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☒ Semi-permanently flooded	☐	☒
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X__

FLATS (ORG/MINERAL) _X__

Slope: _____

Depression: _____

Novitski Class: GW Depression

SW Slope/SW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Hollis-Chatfield-rock outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SC4/C4-01 to 09

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height __2-4' avg._____Width __3-4' avg. Depth at Center _< 1' avg.

Est. Riffle/Pool Ratio: __5:1__ Flow Rate ☒ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Flows east to west over ROW from within upland-oak-hardwood forest, mountain laurel understory, channel well defined, rocky.

RIVER/STREAM DATA Stream # and Flag series SC5/C5-01 to 03

☒ Intermittent ☐ Ephemeral

Bank Height ± 1' avg. Width ± 1' avg. Depth at Center ± 6" avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: scrub-shrub (ROW clearing), large wetland complex (forested, shrub-hummock, emergent), upland hardwood forest

Surficial Geology: Bedrock outcroppings, till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C15 is a large, high quality wetland complex including perennial and intermittent watercourse features. The delineated wetland includes areas of scrub-shrub and emergent habitat. Portions of this wetland are characterized by shrub dominated hummocks and periodic inundation. This wetland drains from east to west. The wetland crosses the newly constructed access route (no culverts) in two locations. Vernal Pool C15-1 occurs on east side of wetland. Dominant vegetation includes red maple, *Spirea*, highbush blueberry, skunk cabbage, and *Sphagnum*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C16**

Project: 23091543 Investigator: K. Wilkins

Date: 4/8/09 Weather: Sunny, 40o's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC16/C16-01 to 06

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☒ PFO (off-ROW) ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X_
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☒ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub (ROW edge), upland oak-hardwood forest

Surficial Geology: Till, bedrock outcropping

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C16 is a bedrock controlled depressional feature. The existing access road confines it to the side of the road. There is a stone riprap swale within the resource. This wetland is seasonally inundated (obvious at time of delineation). Dominant vegetation includes winterberry, highbush blueberry, *Sphagnum*, tussock sedge, *Rubus* (on fringes).

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C18**

Project: 23091543 Investigator: K. Wilkins

Date: 4/9/15 Weather: Cloudy, rain, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: WC18/C18-01 to C18-05

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield-Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 – Route 109

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub (ROW clearing), upland oak-hardwood forest

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C18 is a bedrock controlled depressional feature. The existing access route defines the wetland to the west of the roadway. Bedrock outcroppings rise steeply to the east and west (high to the east). This wetland continues off ROW to the southwest. Dominant vegetation includes, red maple, paper birch, mountain laurel, highbush blueberry. Tussock sedge and soft rush are present along the edge of the roadway.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C20**

Project: 23091543 Investigator: K. Wilkins

Date: 4/9/15 Weather: Cloudy, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC20/C20-01 to 35

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X_
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	GW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield – Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SC6/C6-01 to 02

☒ Intermittent ☐ Ephemeral

Bank Height < 1' Width 2' avg. Depth at Center < 1'

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: SC6 is a short linear feature within wetland C20. It is characterized by groundwater breakout at a sloped portion of the wetland system.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 / Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland hardwood forest, scrub-shrub within ROW clearing

Surficial Geology: Rock outcrops

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C20 is primarily a seasonally saturated forested seep within the ROW. The wetland is characterized as a seasonally inundated depressional feature dominated by scrub-shrub habitat. The intermittent watercourse within this wetland (SC6) originates within the southern lobe of the wetland as a scoured channel, however no obvious source of flow (other than groundwater breakout) was observed. The wetland is seasonally inundated, Vernal Pool C20-1 the result of impoundment against access road. Dominant vegetation within this system includes highbush blueberry, mountain laurel, hemlock, red maple, speckled alder, witch hazel, *Sphagnum*, and winterberry.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: C21**

Project: 23091543 Investigator: K. Wilkins

Date: 4/10/09 Weather: Cloudy, 50°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC21/C21-01 to 15

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN _____
☒ Semi-permanently flooded	☒	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Rock outcrop – Hollis complex (76)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height ____Width _____Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 –Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland mixed hardwood / hemlock forest, scrub-shrub with ROW clearing

Surficial Geology: Rock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland C21 is a north to south oriented bedrock controlled depressional feature. This wetland is Vernal Pool C21-1. A bedrock outcropping rises steeply (nearly vertical) to the east. This wetland likely drains periodically to south towards a high quality wetland (off ROW) to the southeast. This wetland is unvegetated within the wetland interior. The banks are dominated by eastern hemlock. The access road defines the edge of the wetland to the north.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: C23

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny, 65º's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC23/C23-01 to 06

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	SW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES: * = removed narrow bordering wetland fringe of Branch Brook

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitmore (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA

Stream # and Flag series: SC8/C8-01 to 07

☐ Intermittent ☐ Ephemeral C8-17 to 24

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 3-5' avg. Width 20-30' avg. Depth at Center 6" – 2' avg.

Est. Riffle/Pool Ratio: N/A Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☒ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical (armored in places) ☐ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Branch Brook – originates at ACOE spillway. The spillway consists of concrete walls and base – was not flagged due to access constraints (safety). The banks of Branch Brook are armored in portions closer to the spillway. Branch Brook flows through Black Rock State Park and includes fisheries habitat.

RIVER/STREAM DATA Stream # and Flag series __SC9/C9-01 to 04

☒ Intermittent ☐ Ephemeral

Bank Height _2-3' avg.__ Width ___3' avg.____ Depth at Center _< 6" avg._

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio:_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: SC9 is a man-made conveyance feature with armored banks. This feature originates (source unknown) off ROW and flows beneath An existing access road via twin 30" RCP's.

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio:_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Development (ACOE office), ACOE dam, hemlock/ hardwood forest

Surficial Geology: Bedrock outcroppings, till

Culverts present

(Size & Type) (2) 30" RCP's Wildlife Observed:

NOTES:

Wetland C23 borders Branch Brook (SC8) and includes intermittent watercourse SC9 which flows through the interior. The portion depicted is an area north of Branch Brook, at the base of the ACOE dam. At the dam base, dominant vegetation includes mowed emergents, reed canary grass, and tussock sedge. Scrub-shrub portions of this wetland along the stream bank are dominated by smooth alder and autumn olive.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: D1

Project: 23091543 Investigator: SAR

Date: 4/13/15 Weather: Partially Cloudy, 64°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD1/D1-01 to 06

Dominant NWI Class ☐ PFO ☐ PSS ☐ PEM ☒ POW (PUB)

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☒ Seasonally flooded	☒	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: __X__
☐ Saturated	☐	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75E)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: N/A

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109: 1100' South

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Mattatuck State Forest

Surficial Geology: Till-bedrock ridge

Culverts present

(Size & Type) N/A

Wildlife Observed: Crow, chickadees

NOTES:

- No emergent vegetation
- Leaf litter substrate
- Perimeter vegetation includes *Kalmia latifolia* (dominant shrub) with woody overstory of *Acer rubrum, Quercus alba*, *Q. rubra*, *Pinus strobus*, and *Tsuga canadensis*.
- Hardwoods = 12 – 16 in (typ.) and to 70 feet height.
- Bedrock outcropping to the west.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D2**

Project: 23091543 Investigator: SAR

Date: 4/13/15 Weather: Partially Cloudy, 64°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD2/D2-01 to 08

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: X
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW (Wetland D2)
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
73E Charlton Chatfield complex	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD2/D2-01 to 11

☐ Intermittent ☒ Ephemeral

Bank Height _____ Width 2-3 ft. Depth at Center _____

☒ Defined bank and channel
☒ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual
☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel
☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: highly variable

Habitat Features (Describe):

NOTES: Bank Morphology Vertical = excavated
Substrate Sand = sedimented

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109 = 1500 feet South

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: forest land (Mattatuck State Forest)

Surficial Geology: Till Ridge with bedrock exposure

Culverts present

(Size & Type)

Wildlife Observed: chickadee

NOTES:

- The stream channel is a linear, excavated ditch.
- Old trench/excavation spoils are evident north side of wetland (spoil piles are colonized by hay-scented fern).
- Both the ditch and wetland may have been originally excavated to detain/receive runoff from the access road in the ROW. Both contain a substantial amount of recent sediments from recent roadway work.
- Ditch flows to a perennial watercourse near the edge of the ROW
- Wetland vegetation includes *Sphagnum* sp. moss, cinnamon fern, bracken, swamp dewberry. Shrubs include maleberry, highbush blueberry, and *Spiraea latifolia*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D3**

Project: 23091543 Investigator: SAR

Date: 4/13/15 Weather: Partially Cloudy, 64°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD3/D3-01 to 10, 20 to 32, 42 to 48, 58 to 72, 82 to 89.

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ___X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW (S-D3) ☐ NRPW

☐ UPLAND ☒ RPWWD (D3) ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES: Other NWI classes (PSS) = WF D3 flags 32-46

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton & Montauk (84C&D)	☐	☐	☒	☐
Woodbridge (47C)	☒	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD3/D3-01 to 10, 20 to 50

☒ Intermittent ☐ Ephemeral

Bank Height 12-16" Width 2-8' Depth at Center 4-12"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation (Sphagnum moss)

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☒ Undercut (occas.) ☐ Vertical (typ.) ☐ Gradual

☒ Presence of Overhanging Vegetation (moderate)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 5 cfs at lower end

Habitat Features (Describe): Upper perennial to intermittent watercourse flow

NOTES:

- Shrub stratum is moderate to sparse under the tree canopy

WETLAND LOCATION & CROSSING

Nearest Road Crossing: 1500 ft to south to Route 109

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested. Some mesic forest, mostly upland hardwoods.

Surficial Geology: Till/Bedrock outcrops.

Culverts present

(Size & Type)

Wildlife Observed: robin, white-tailed deer

NOTES:

- Stream channel varies from high gradient riffle complex with cobble boulder substrate to moderate gradient watercourse with runs and glides (cobble-sand-gravel). Much groundwater breakout.
- Wetlands are distributed at intervals along the length of the watercourse.
- Flags 16 – 22: red maple, spicebush, *Sphagnum* sp. moss and *Lycopodium obscurum*. Chroma <2 circa 18 inches depth.
- Flags 32 – 46: PSS with GW breakout. Winterberry, maleberry, highbush blueberry, *Sphagnum* sp. moss and abundant cinnamon fern. Common sensitive fern and spicebush, and occasional witch hazel.
- Flags 56 – 81: PFO with generalized GW breakout. Red maple, yellow birch, spicebush, berberis - 15%, cinnamon fern, skunk cabbage, and *Sphagnum* sp. moss.
- Brush and stumps pushed into a hillside seep area at flags 71 to 74.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D4**

Project: 23091543 Investigator: SAR

Date: 4/14/15 Weather: Rain, 62º Bank Height ____

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD4/D4-01 to 13

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☒ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: __X_____
☐ Saturated	☐	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109 to the south

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forestland – some recent timber stand improvement work.

Surficial Geology: Till/Bedrock Ridge

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Western side of wetland contains a vernal pool – seasonally flooded with leaf litter substrate and common emergent low shrubs and fallen tops. One egg mass observed on 4/14/15 – wood frog.
- Seasonally flooded area with red maple, highbush blueberry, *Sphagnum* sp. moss, cinnamon fern.
- Eastern side is temporarily flooded to seasonally saturated.
- Temporarily flooded area with red maple, red oak, highbush blueberry, cinnamon fern, and occasional white pine, winterberry a nd swamp dewberry.
- Area is an isolated shallow topographic depression.
- Hydrology due to episaturation, but likely groundwater discharge inputs from surrounding bedrock areas.
- Upland perimeter with a greater proportion of oaks (including *Quercus alba*) and including *Lycopodium obscurum*, black cherry, sugar maple, white pine and abundant mountain laurel.
- Location: NE from Structure 3135 (~ 100 yards)

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D5**

Project: 23091543 Investigator: SAR

Date: 4/14/15 Weather: Rain, 62°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD5/D5-01 to 04

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: ___X_____
☐ Saturated	☐	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forest and field

Surficial Geology: Till – common ledge outcrops

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Small, isolated, temporarily flooded topographic depression bounded by ROW access road and stone wall
- Haircap moss = dominant, and including winterberry, *Spiraea* spp., highbush blueberry, tussock sedge and other *Carex* sp.
- Depleted subsoil

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D6**

Project: 23091543 Investigator: SAR

Date: 4/14/15 Weather: Rain, 62º Bank Height _____

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD6/D6-01 to 12; D22 to 42

Dominant NWI Class ☐ PFO ☐ PSS ☐ PEM ☒ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) ___X___
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression (impounded)
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Morton Pond (OW)	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, rural residential (Gun club on west bank)

Surficial Geology: Bedrock/Ledge outcrop community

Culverts present

(Size & Type) N/A Wildlife Observed:

NOTES:

- South margin of pond with a relatively abrupt to vertical shoreline.
- Upland shrubs trending to pond margin (E.g., mountain laurel, highbush blueberry, arrowwood, tree clubmoss, and hay-scented fern)
- Some low topographic plateaus within 3 – 5 ft from water's edge with cinnamon fern, *Sphagnum* sp. moss, and skunk cabbage.
- Trees at edge of pond include red maple, red oak, and black birch (occasional winterberry shrubs)
- Morton Pond impounded on North end – flows through water control flume to watercourse S/D5.
- North margin of pond at ROW crossing is dominated by wet meadow plant species. Species include soft rush, tussock sedge, whoolgrass, cattails, boneset, arrow leaved tearthumb, smartweed, beggarsticks, solidago and white meadowsweet. Invasive plant species include purple loosestrife - 2% and *Phragmites australis* - 1%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D7**

Project: 23091543 Investigator: SAR

Date: 4/15/15 Weather: Mostly Sunny, 64º

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD7/D7-01 to 17; DD7-01 to 20

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (Watercourse S/D5)
☒ NRPW
☐ UPLAND
☒ RPWWD (Wetland D7)
☐ RPWWN
☒ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury Leicester Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD5/D5 1-16

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☒ Perennial

Bank Height 6-10" Width 3-8' Depth at Center ~3-6"

Est. Riffle/Pool Ratio: 5:1 Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel
☒ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☒ Undercut ☒ Vertical ☐ Gradual
☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel
☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Sparse riparian vegetation.

NOTES: Incised channel.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: ~1200 feet north to Walnut Hill Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, rural residential

Surficial Geology: Till

Culverts present

(Size & Type)

Wildlife Observed: Turkey vulture, red-bellied woodpecker, white-tailed deer

NOTES:

- Stream channel flows from Morton Pond. Incised channel w/ moderate gradient in V-shaped riparian wetland valley.
- Streambank vegetation includes sugar maple, black birch, red maple, spicebush, skunk cabbage, Joe pye weed, meadowsweet and Christmas fern.
- Invasive plants observed on streambank: Japanese *Berberis*- 60%, multiflora rose- 20%, Morrow's honeysuckle- 5% and oriental bittersweet- 3%.
- Primarily a surface water system but exhibiting some areas of GW discharge.
- Historical impoundment (stone dam ~15' height) creating a small emergent wetland (~ 1/2 acre) under existing transmission lines.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D8**

Project: 23091543 Investigator: SAR

Date: 4/15/15 Weather: Mostly Sunny, 64º Bank Height __< 6"___

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD8/D8-01 to 06; D8-16 to 19

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Udorthents, Smoothed (308)	☒	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD6/D6-01 to 03

☐ Intermittent ☒ Ephemeral

Width __1'____ Depth at Center _< 6"_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Dissipates into overland flow.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland

Surficial Geology: Till, shallow to bedrock

Culverts present

(Size & Type)

Wildlife Observed: Downy woodpecker

NOTES:

- Small groundwater breakout on hillside
- Some windthrow and darkened leaf litter
- Vegetation includes red maple, gray birch, paper birch, black birch, polar, highbush blueberry, winterberry, and Christmas fern.
- Invasive plant species observed: Japanese *berberis*- 15% and multiflora rose- 5%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D10**

Project: 23091543 Investigator: SAR

Date: 4/15/15 Weather: Mostly Sunny, 64º

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD10/D10-01 to 14, D10-24 to 37

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (SD7)
☐ UPLAND
☐ RPWWD
☒ RPWWN (Wetland D10)
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD7/D7-01 to 03

☐ Intermittent ☒ Ephemeral

Bank Height ___< 6”__ Width __< 1’__ Depth at Center _< 6”

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: < 1 cfs

Habitat Features (Describe): Likely excavated ditch. Flows into 18” I.D. conc. pipe near house on Walnut Hill Road.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road; 300 ft. north

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Residential, small woodlot

Surficial Geology: Till

Culverts present

(Size & Type) 6" CMP

Wildlife Observed: Goldfinch, tufted titmouse, crow, mourning dove

NOTES:

- Driveway to house crosses wetland (6" culvert under driveway)
- Vegetation observed: red maple, poplar, pussy willow, winterberry, spicebush and *solidago* sp.
- Invasive vegetation species observed: multiflora rose- 60%, Morrow's honeysuckle- 5%, *phragmites*- 8% and burning bush.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D11**

Project: 23091543 Investigator: SAR

Date: 4/15/15 Weather: Mostly Sunny, 64º

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD11/D11-01 to 11; D11-21 to 24; D11-34 to 45; D11-55 to 60

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: __X_____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☐	☒	Novitski Class: GW Slope/GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD8/D8 1-6, 16-18

☐ Intermittent ☒ Ephemeral

Bank Height __< 6”___ Width _< 1’___ Depth at Center _< 6”_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry: (Excavated)

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Excavated ditches – leading to culverts @ road.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Adjacent to Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Rural Residential

Surficial Geology: Till backslope

Culverts present

(Size & Type) 16" CMP

Wildlife Observed: Woodcock, tufted titmouse, starling, cardinal, song sparrow, blue jay, red bellied woodpecker.

NOTES:

- PFO = red maple dominant, and including spicebush, highbush blueberry, arrowwood.
- PSS (under powerline cut) with winterberry, blueberry, silky dogwood, speckled alder, *solidago*, *rubus*, hardhack, sensitive fern, and occasional *Carex stricta*.
- Invasive species observed: multiflora rose- 60% and autumn olive- 5%.
- Wetland is bisected by driveway at 455 Walnut Hill Road.
- 16" CMP under driveway.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D12**

Project: 23091543 Investigator: SAR

Date: 4/16/15 Weather: Mostly Sunny, 60°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD12/D12-01 to 08; D12-18 to 63; D12-73 to 81; D12-91 to 103; D12-113 to 126

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW (SD9) ☐ NRPW

☐ UPLAND ☒ RPWWD (Wetland D12) ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (46B)	☒	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD9/D9-01 to 12

☒ Intermittent ☐ Ephemeral

Bank Height _12-20"+_ Width _5-10'___ Depth at Center _>16"__

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height __ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☒ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: > 5 cfs

Habitat Features (Describe):

NOTES: 2 Sections of 24" CMP washed out near flags 9-10.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: 400 ft. south to Walnut Hill Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10+

Surrounding Habitat Types: Forestland, Rural residential

Surficial Geology: Till ridge

Culverts present

(Size & Type)

Wildlife Observed: Woodcock, wood frog (dead),

Spring peepers.

NOTES:

- Walnut Hill Junction
- Wetland hydrology from groundwater breakout (multiple locations)
- Abundant *Rosa multiflora* bushes in abandoned field
- Small, excavated OW near WFD12-10. Approx. 35 ft diameter pond (6-8" depth on 4/9/09), with estimated 30% cover of Lemna sp. Cattails dominant later in season (ergo: shallow marsh)
- Associated upland (abandoned hayland) with goldenrods (e.g., *Solidago rugosa*), honeysuckle (*L. morrowii*) - 30%, *Rubus allegheniensis*, fox grape and *Rosa multiflora* – 80%.
- Stream channel is incised with steep banks.
- Typical streambank vegetation including multiflora rose- 50%, shagbark hickory, ash, sugar maple, Joe pye weed with occasional red oak and black birch.
- Sparse shrub understory associated with watercourse in forested area supporting spicebush, pussy willow, autumn olive, silky dogwood, winterberry, with occasional witch hazel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D13**

Project: 23091543 Investigator: SAR

Date: 4/16/15 Weather: Mostly Sunny, 60

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WD13/D13-01 to 09; DD13-01 to 10; D13-20 to 32; D13-42 to 52; D13-62 to 65; D13-75 to 80

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __X__
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	☐ UPLAND
☐ TNW	☒ RPWWD (Wetland D13)
☐ TNWW	☐ RPWWN
☒ RPW (S11)	☐ NRPWW
☐ NRPW	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury Leicester Whitman (3)	☒	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD11/D11-01 to 20

☒ Intermittent ☐ Ephemeral

Bank Height _6" – 2'_ Width __2-8'___ Depth at Center 6-16"_

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width ____ Depth at Center_____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (upper section)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 3-5 cfs

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Two culverted crossings provided

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, some hay land and Christmas trees in power line cut

Surficial Geology: Till (D slopes)

Culverts present

(Size & Type) 18" CMP - 2

Wildlife Observed: Phoebe, junco, chickadee, song sparrow, crow, goldfinch

NOTES:

- The Ridgebury Leicester and Whitman soil mapping unit is not as extensive as indicated on available soils mapping.
- Wetland vegetation includes red maple, sugar maple, spicebush, silky dogwood, speckled alder, pussy willow, *Sphagnum* sp. Moss, burning bush- 3% and frequent *Rosa multiflora*- 75%, Morrow's honeysuckle- 60% and *Rubus allegheniensis*.
- Landowner has prepared various landscaping modifications in close association with portions of this watercourse.
- Substantial brush dump (with some metal debris) in watercourse near flag W-D13-09.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: D14

Project: 23091543 Investigator: SAR

Date: 4/16/09 Weather: Mostly Sunny, 60°

State/Town/County: Thomaston, CT –Litchfield County

Wetland # & Flag Series: WD14/D14-01 to 07

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: __GW Slope_____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis Chatfield Rock-outcrop complex (75#)	☐	☐	☒	☐
Whitman (#3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Spring flow from groundwater seeps coalescing into watercourse east of ROW

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 254 ~ 150 feet east

Wetland Topography (%slope): 10+

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Forestland

Surficial Geology: Till ridge

Culverts present

(Size & Type) Under Route 254, conc. headwall and 30" Pipe Wildlife Observed: Woodpecker, titmouse

NOTES:

- Stony groundwater seep flowing east to 30" culvert under Route 254
- Braided groundwater channels coalesce into a watercourse off of ROW
- Wetland with witch hazel, spicebush, winterberry, black oak, sugar maple, red maple, cinnamon fern and frequent Christmas fern.
- Adjacent forestland with mixed hardwoods to ~90 feet (70' to 80' canopy, typ.) at 18" – 24" D.B.H. Dominant trees include red oak, white ash, sugar maple, shagbark hickory, black birch and occasional hemlock.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: D15**

Project: 23091543 Investigator: SAR

Date: 4/14/15 Weather: Rain, 62° Bank Height __< 6"___

State/Town/County: Thomaston, CT –Litchfield County

Wetland # & Flag Series: WD15/D15-01 to 23

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☒ Semi-permanently flooded	☒	☐	FLATS (ORG/MINERAL) ___
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: Surface Water
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☒ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis Chatfield Rock-outcrop complex (76E)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SD12/D12-1 to 05

☐ Intermittent ☒ Ephemeral

Width __1-3 feet_ Depth at Center __< 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Ephemeral outflow channel. Leaf litter wrack deposits.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5 %

Surrounding Topography (%slope): 10 % +

Surrounding Habitat Types: Forestland

Surficial Geology: Bedrock outcrop ridge

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Vernal pool (VP-D15-1) in upland terrain located behind bedrock outcrop.
- Ephemeral outflow channel dissipating through overland swale toward NW.
- Wetland with highbush blueberry, swamp azalea, mountain laurel, winterberry, wild calla (*Calla palustris*), three-square (*Dulichium* sp.), *Sphagnum* sp. moss (and other mosses) and occasional *Nemopanthus mucronatus*.
- Adjacent forested upland with red oak, sassafras and poplar over mountain laurel (typ.) and *Lycopodium obscurum*.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: E1

Project: 23091543 Investigator: SAR

Date: 4/9/15 Weather: Overcast, 37°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series WE1/E1-01 to 06, E1-16 to 22

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X__
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X_
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62D)	☐	☒	☒	☐
Limerick and Lim (107)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA

Stream # and Flag series: SE2/E2-01 to 07, E2-17 to 24

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height ± 10' avg. Width 20-30' avg. Depth at Center 1-3- avg.

Est. Riffle/Pool Ratio: 4:1 Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (alder in ROW clearing, hemlock in forested areas)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): SE2 denotes Northfield Brook, the dominant feature of this wetland system.

NOTES: Overhanging vegetation including hemlock provides shading, riffles and pools – This watercourse appears to provide good fisheries habitat.

SE1 is a small intermittent watercourse located off ROW. Flows from a culvert outflow – bank height < 1' width 1-2' avg., depth at water < 6" avg. has defined bank and channel, evidence of scour, standing or flowing water longer than storm event.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 254/ Northfield Dam access road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland-mixed hardwood – hemlock forest

Surficial Geology: Till

Culverts present

(Size & Type) 24" RCP – outlets to SE1 Wildlife Observed:

NOTES:

Wetland E1 is characterized as a narrow bordering wetland to Northfield Brook (SE2). The soils within this narrow system consist primarily of poorly drained alluvium (Limerick and Lim). The dominant feature within this system is Northfield Brook. Dominant vegetation includes E. hemlock, red maple, yellow birch, and alder. Other species include black birch, witch hazel and cinnamon fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E2**

Project: 23091543 Investigator: SAR

Date: 4/9/15 Weather: Overcast, 37°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series WE21/E2-01 to 04, E2-14 to 25, E2-35 to 52, E2-62 to 71

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	GW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury-Leicester-Whitman (3)	☒	☐	☒	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SE3/E3-01 to 02, E3-12 to 22

☒ Intermittent ☐ Ephemeral

Bank Height ± 1' avg. Width 3-4' avg. Depth at Center 6"–1' avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Meandering intermittent watercourse feature through incised channel.

RIVER/STREAM DATA Stream # and Flag series SE4/E4-01 to 04

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' avg.__ Width ___2' avg._____ Depth at Center _<6" avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Stream E4 originates as groundwater breakout on a plateau above wetland E3 and drains into E3 at the base of a short, steep till slope.
Vegetation observed includes: American elm, red maple and spicebush.

RIVER/STREAM DATA Stream # and Flag series ___N/A__

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ___

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest, scrub-shrub (in ROW clearing) residential development.

Surficial Geology: till

Culverts present

(Size & Type) 12" CMP, 15" RCP Wildlife Observed:

NOTES:

Wetland E2 includes forested portions on the eastern side of the ROW and scrub-shrub dominated areas within the cleared portion of the ROW. This wetland includes intermittent watercourse E3 which flows through from west to east, and intermittent watercourse feature E4 which drains off of a short, steep till slope. Vernal Pools E2-1 and E2-2 are located in this system. A culvert within the gravel road conveys flows within the wetland, however its location may not be adequate to fully capture flows (road may be compromised over time). Where Stream E3 flows across the gravel access road the gravel has been removed and the channel re-defined. Dominant vegetation within forested areas includes red maple, yellow birch, green ash and spicebush. Within scrub-shrub dominated areas, vegetation includes winterberry, highbush blueberry, speckled alder (stream banks), Spirea, and Rubus, mountain laurel, multiflora rose on the wetland fringes.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E3**

Project: 23091543 Investigator: SAR

Date: 4/9/15 Weather: Overcast, 37°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE3/E3-01 to 04

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope, SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
Udorthent (306)	☐	☒	☐	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SE4/E4-01 to 03

☒ Intermittent ☐ Ephemeral (not flagged)

Bank Height ___1-2'____ Width ___1'_____ Depth at Center _< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☒ Slow ☒ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Man-made drainage feature recently created to convey flows.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Forest, scrub-shrub, disturbed

Surficial Geology: Till

Culverts present

(Size & Type) None observed, but appears that one exists (buried) Wildlife Observed:

NOTES:

Wetland is located at edge of recently constructed gravel access road. This area receives flows from an RCP located upslope and conveying road runoff. Hydric, poorly drained soils not clearly evident as profile has been disturbed. Redoximorphic features present throughout disturbed profile. Abundant water breakout was also apparent on March 25th.

Vegetation observed: silky dogwood, pussy willow, multiflora rose- 70% and sensitive fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E4**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51º

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE4/E4-01 to 13; E4-23 to 29

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope, SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Woodbridge (45)	☐	☒	☒	☐
Paxton and Montauk (84)	☐	☒	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SE5/E5-01 to 02

☒ Intermittent ☐ Ephemeral

Bank Height ___2-3'____ Width __2'_____ Depth at Center _< 6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation in portions

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation in portions.

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Historic man-made drainage ditches on agricultural land.
Vegetation observed: multiflora rose- 3% growing on banks.

RIVER/STREAM DATA Stream # and Flag series: SE6/E6-01 to 03

☒ Intermittent ☐ Ephemeral

Bank Height ___< 6”____ Width __±1’ avg.___ Depth at Center __< 6”__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: ___ Flow Rate ☒ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation in portions

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: IWC consists primarily of overland flow over maintained grass area. Source of flows was not detected (drains from 4” culvert). Flows diffuse as they approach wetland.

RIVER/STREAM DATA Stream # and Flag series ____N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Maintained agricultural (hay), scrub-shrub – forest patches

Surficial Geology: Till

Culverts present ☒ ☐

(Size & Type) 24" CMP

Wildlife Observed:

NOTES:

Hillside seep is part of active agricultural land. Portions are maintained hayfields – some forest. Wetland is impounded against gravel access road (recently constructed). Dominant species include: Speckled alder, pussy willow, silky dogwood, red maple, tussock sedge, spicebush, white meadowsweet and multiflora rose- 10%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E5**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE5/E5-01 to 07

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge (45)	☐	☒	☒	☐
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Active hay field

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland E5 is located in an actively maintained hay field. Vegetation is not indicative of hydrology. Soils clearly hydric/poorly drained.

Multiflora rose- 10% on edges of mowed hay field.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E6**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE6/E6-01 to 11

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge (45)	☐	☒	☐	☒
Ridgebury, Leicester, Whitham (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, forested wetland, scrub-shrub (ROW)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Forested wetland on till dominated gently sloping land form. Drains from east to west from eastern ROW boundary. Ends at recently constructed gravel access road. Dominant species include red maple, white ash and spicebush.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E7**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE7/E7-01 to 05

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk (86)	☐	☒	☒	☐
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A___

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Mason Hill/Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, scrub-shrub (ROW)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Hillside seep drains into a forested area to west. Dominant vegetation includes soft rush, *Spirea tomentosa*, sensitive fern, silky dogwood, wild raisin and winterberry.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E8**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51°

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: WE8/E8-01 to 27, E8-28 to 47

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk (86)	☐	☒	☒	☐
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, scrub-shrub (in ROW clearing)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland E8 is connected off ROW to wetland E7. This wetland is a hillside seep and has been subject to historic disturbance activities. Dominant vegetation includes red maple, white ash, spicebush in forested areas. *Spirea*. highbush blueberry, winterberry, *Rubus*, mountain laurel, sensitive fern and cinnamon fern abundant within cleared ROW.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: E9**

Project: 23091543 Investigator: SAR

Date: 4/10/15 Weather: Light Rain, 51º

State/Town/County: Litchfield CT – Litchfield County

Wetland # & Flag Series: WE9/E9-01 to 15

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	SW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
Paxton and Montauk (86)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SE7/E7-01 to 02

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width _1' avg.____ Depth at Center _< 6"_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Created feature – originates from culvert beneath driveway - Drains wetland E9.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested wetland, scrub-shrub, residential development

Surficial Geology: Till. Shallow to bedrock

Culverts present

(Size & Type) 12" CPP

Wildlife Observed: Heard wood frogs from Hopkins Rd

NOTES:

PSS in ROW clearing, dominant vegetation includes, blueberry, *Spirea*, sensitive fern, *Lonicera*, multiflora rose- 15%, *Rubus* and *Solidago*. Forested wetland includes red maple, white pine, highbush blueberry and *Cornus alternifolia*. Vernal Pool E9-1 located in this wetland (also potential vernal pool adjacent to yard area). Wetland E9 occurs on a hilltop, within shallow to bedrock surficial geology. Residence and driveway are adjacent. Stream E7 is a man-made drainage ditch conveying surface water from wetland E9 beneath driveway to off ROW.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: E10

Project: 23091543 Investigator: Davison & SAR

Date: 5/4/15 Weather: Scattered Clouds, 80°

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WE10/E10-01 to 10, E10 20 to 32

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
Woodbridge (45,47)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ____N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Hopkins/Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested wetland, scrub-shrub, residential development

Surficial Geology: Till

Culverts present

(Size & Type) 6" clay

Wildlife Observed: Wood frogs heard west of northern tip of wetland near pond – off ROW

NOTES:

Wetland E10 encompasses much of the ROW north of Hopkins Road. Historic road is present, but is wetland (overgrown grade). Wetland drains north to northeast down ROW, and ends abruptly at the northeast tip – no hydric soil, surface water connection to other wetlands (likely infiltrates at contact with outwash). Encroachments on east and west sides of the ROWDominant species include, highbush blueberry, winterberry, tussock sedge, soft rush, *Spirea*, red maple, black oak and black tupelo in forested area. Hummock – hollow microtopography.

Upland island/ old access route within cleared portion of ROW comprised of boulders, dead vegetation and debris often found in farm dumps.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F2**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny, 65°'s

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF2/F2-01 to 10

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☒ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk fine sandy loam (84B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF2/F2-01 to 02

☐ Intermittent ☒ Ephemeral

Bank Height __< 6"_____ Width __< 1'_____ Depth at Center _< 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☒ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: 200 feet west (Access Road) to Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Rural residential

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Wetland F2 historically and recently disturbed PEM in access, evidence of historic fill
- Wetland F2 flows through culvert (CMP) to Wetland F4.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F3**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny 65°'s

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF3/F3-01 to 06

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ___GW Breakout___
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF1/F1-01 to 18

☒ Intermittent ☐ Ephemeral

Bank Height __6-10"___ Width __4-6'___ Depth at Center _6-10"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Bank full width (upper) to 15 feet in some areas.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

	YES	NO	
Wetland Crossing Required	☐	☐ (unknown)	
Stream Crossing Required	☐	☒	
Swamp Mats Needed	☐	☐ (unknown)	
Culverts present	☒	☐	

(Size & Type) 30" cast iron

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Forestland, Rural Residential

Surficial Geology: Till

Wildlife Observed:

NOTES:

- Watercourse exhibits minor braided channels in a broader swale. This section of watercourse originates at 30" cast iron culvert (boiler pipe) which is washed out.
- Watercourse is "flashy" – consistent with observations of erosion upstream.
- Wetland F3 is adjacent to this riparian system to the south, forming the headwaters of an associated tributary watercourse.
- Spicebush and green ash are dominant vegetation within the wetland.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F4**

Project: 23091543 Investigator: K Wilkins

Date: 4/13/15 Weather: Sunny, 65°'s

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF4/F4-01 to 08

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ___GW Breakout___
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF1/F1-01 to 18

☒ Intermittent ☐ Ephemeral

Bank Height __6-10"___ Width __4-6'___ Depth at Center _6-10"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Bank full width (upper) to 15 feet in some areas.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Access from Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Forestland, Rural Residential

Surficial Geology: Till

Culverts present

(Size & Type) 30" cast iron

Wildlife Observed:

NOTES:

Watercourse exhibits minor braided channels in a broader swale. This section of watercourse originates at 30" cast iron culvert (boiler pipe) which is washed out. Watercourse is "flashy" – consistent with observations of erosion along the stream banks. The defined channel breaks out to a more braided configuration in the wetland. Dominant vegetation included red maple, green ash, alder, and multiflora rose.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F5**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny, 65º

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF5/F5-01 to 08

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (SF1)
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF1/F1-01 to 18; SF3/F3-01 to 04

☐ Intermittent ☒ Ephemeral

Bank Height __10-20+"_ Width ___3'__ Depth at Center _< 6"_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio:_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☒ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☒ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Dense shrub cover.

NOTES: Heavily eroded and deeply incised. This is the upper part of the watercourse in Wetland F3-F4. S-F3 is ephemeral.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Rural Residential

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

This part of the wetland/watercourse is historically heavily disturbed. Watercourse is deeply eroded. Wetland vegetation includes red maple, pussy willow, spicebush, multiflora rose, winterberry, and sensitive fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F6**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny, 65°

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF6/F6-01 to 06

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: GW depression
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: N/A

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 8 to the north (or) Campville Road to the south

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Small topographic depression with ash, spicebush, winterberry and moss covered stones. Wetland hydrology due to groundwater discharge from Wetland F7 to the west.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F7**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny, 65°

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF7/F7-01 to 30

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☒ PEM ☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☐	☒	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☐	☒	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (SF4)
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☒	☒	☐
Woodbridge fine sandy loam (47C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF4/F4-01 to 05

☐ Intermittent ☒ Ephemeral

Bank Height ___< 6"_ Width __1-2 feet Depth at Center _< 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual sparse (spicebush)

☐ Presence of Overhanging Vegetation sparse (spicebush)

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Flows from man-made pond easterly off of ROW.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Predominantly forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland complex with PSS dominant (ROW cut), POW (man-made pond) PFO (to east) and small areas of PEM. Representative vegetation (PSS) includes spicebush, winterberry, multiflora rose. Common sensitive fern and various goldenrods. Wetland drains easterly. There is a substantial population of *Phragmites* sp. reed south of pond within the ROW. Widespread groundwater seeps at wetland boundary, west side of ROW.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F8**

Project: 23091543 Investigator: K. Wilkins

Date: 4/13/15 Weather: Sunny 65°

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: WF8/F8-01 to 13

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: __GW Slope_____
☒ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (SF5)
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW (Wetland F8)
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF5/F5-01 to 09

☐ Intermittent ☒ Ephemeral

Bank Height __< 6”__ Width __< 1’___ Depth at Center __< 6”

☒ Defined bank and channel (see notes)

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Large winterberry shrubs

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):5-10

Surrounding Habitat Types: Forested (typ). Route 8 immediately to North

Surficial Geology: Till

Culverts present

(Size & Type) Crossings required to access structure 3169 Wildlife Observed:

NOTES:

Wetland is heavily disturbed. PSS/PEM with tall shrubs (e.g., *Ilex verticillata, Viburnum cassinoides*) dominant. Also goldenrods, dewberry, sensitive fern, and *Rubus spp*. Stream flows intermittently in a poorly defined channel to a created channel along crest of roadway cut for Route 8, no water was observed (other than saturation) at the time of delineation.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F9**

Project: 23091543 Investigator: SAR

Date: 4/22/15 Weather: Light Rain, 64°

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF9/F9-01 to 24; F9-34 to 44

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☐	☒	FRINGE (Lacust./Est) _____
☒ Intermittently exposed	☐	☒	RIVERINE R2UB
☒ Semi-permanently flooded	☐	☒	FLATS (ORG/MINERAL) ___
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☒	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☒ TNW	☐ UPLAND
☒ TNWW	☐ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Suncook loamy fine sand (100)	☒	☐	☒	☒
Charlton-Chatfield complex (73E)	☒	☒	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF7/F7-01 to 09; SF7/F7-19 to 26

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height ~13’ Width 50-100’ Depth at Center unk

Est. Riffle/Pool Ratio: 40:60 Flow Rate ☐ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): major riverine habitat

NOTES: Naugatuck River; Riverine, Lower Perennial, Unconsolidated bottom: cobble-gravel R2UB1, sand R2UB2

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Bridge to North/West

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Predominantly forestland, some light industry (M. Bart Sand & Gravel Corp.)

Surficial Geology: Alluvial – major floodplain

Culverts present

(Size & Type) culverted at Valley Road (SF8)

Wildlife Observed: Osprey, Common merganser

NOTES:

- Riverine R2UB1/2 system, major floodplain
- Stream flagging delineates ordinary high water mark (scour zone, typ.)
- Bank top & levee edge about 13 feet higher (gradual to nearly vertical embankment)
- Floodplain vegetation (south side) includes red maple, oaks, shagbark hickory, white pine, black cherry, bigtooth aspen, Morrow's honeysuckle 80% cover, white meadowsweet, spicebush, highbush blueberry, shadblow serviceberry.
- Edge of wetland = alluvium contact with colluvium from hill slope on south side – this hill with 30% - 45% slopes
- North side - some fill along bank near flag SF7-24.
- Upper scour zone vegetation (north side) including hardhack, grey birch, and *Polygonum cuspidatum* (the latter is common on sandy sediments)
- Watercourse F8 flows into River from a culvert under Valley Road. This is watercourse F10/F11/F12 associated with drainage as far northerly as wetland F15 and the Wildcat Hill Road crossing.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F10**

Project: 23091543 Investigator: SAR

Date: 4/22/15 Weather: Rain, 64º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF10/F10-01 to 08; F10-18 to 24

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: SW Depression
☐ Saturated	☐	☐	
☒ Temporarily flooded	☒	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (SF9)
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW (Wetland F10)
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: SF9/F9-01 to 06

☐ Intermittent ☒ Ephemeral

Bank Height __< 4”__ Width __~ 1’__ Depth at Center _<4”

☒ Defined bank and channel
☒ Evidence of scour or deposits of recent alluvium or detritus
☒ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (no)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel
☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: < 0.5 cfs (seasonal)

Habitat Features (Describe): Originates at small depression, flows to culvert under Valley Road.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Rural residential (east); Woodland

Surficial Geology: Ablation till, colluvium

Culverts present

(Size & Type) 18" square, stone box culvert at road

Wildlife Observed: 5/7/09 – Baltimore oriole, blue-winged warbler, black and white warbler, black-throated green warbler, white-breasted nuthatch, chestnut-sided warbler, American redstart, eastern towhee

NOTES:

- Approximately 20' x 40' surface water depression. leaf litter substrate with a few emergent ash (*Fraxinus [pensylvanicus]*), red maple, American elm and adjacent sugar maple trees.
- Shrub layer is sparse to non-existent in the immediate area. Trees bordering watercourse include white oak, elm, hemlock, shagbark hickory, and sugar maple.
- Seasonal hydrology from storm flowage channel from east. Runoff collects in this wetland then flows out through stream chann el F9.
- Wood frog eggs present in VPF 10-1

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F11**

Project: 23091543 Investigator: SAR

Date: 4/22/15 Weather: Rain, 64º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF11/F11-01 to 32; F11-42 to 59; F11-69 to 79; F11-89 to 111

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☒ RPWWD
☐ TNWW	☐ RPWWN
☒ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62D)	☐	☐	☒	☐
Udorthents, smoothed (308)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F11-01to15

☐ Intermittent ☐ Ephemeral

Bank Height ___ Width ____ Depth at Center: ____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 12-16” Width 6-9’ Depth at Center < 12”

Est. Riffle/Pool Ratio: 1:1 Flow Rate ☐ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☒ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):good diversity of stream substrates

NOTES:

ROUTINE WETLAND DELINEATION-DATA FORM **Watercourse: F10**

Project: 23091543 Investigator: SAR

Date: _____ Weather: _____

State/Town/County:_____

Wetland # & Flag Series: Watercourse F10 associated with Wetland F11

Dominant NWI Class ☐ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class:
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (ephemeral)
☐ UPLAND
☐ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F10-01 to 04

☐ Intermittent ☒ Ephemeral

Bank Height ___3"__ Width ___12"___ Depth at Center ____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☒ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: ~ 1/8 cfs

Habitat Features (Describe):

NOTES: Flows from wetland F12

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Forestland (hemlock); some residential

Surficial Geology: Bedrock controlled

Culverts present

(Size & Type) CMP 18" (washed out)

Wildlife Observed: bat (species unknown); deer & rabbit (sign), goldfinch, chickadee

NOTES:

- SF10 flows into SF11
- Spring seep hydrology from Wetland F12 upslope to north of structure at WF41/42 flowing over a ledge outcrop and forming a small stream (est. flow 0.1 – 0.3 cfs).
- Wetland plant community in seepage area with hemlock, maleberry, cinnamon fern, sensitive fern, steeplebush, spicebush, yellow birch, witch hazel, *Dryopteris intermedia*, Christmas fern, etc.
- Upper part of this wetland is a hemlock ravine community with co-dom white pine, yellow birch, ash. Occasionally with tall shrub to sapling hemlock under sugar maple.
- Watercourse (SF11) is upper perennial with moderate to steep gradient and boulder/cobble substrate.
- 18" culvert near WFF11-08 is washed out; debris or ice jam caused a diversion of the stream here that washed out the access road near flags WF F11 04 through 06.
- Invasive plant species % cover: Morrow's honeysuckle 20%, multiflora rose 10%, Japanese berberis 8%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F12**

Project: 23091543 Investigator: SAR

Date: 6/4/15 Weather: Partly Cloudy, 66°

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF12/F12-01 to 15

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: __X_____
☐ Saturated	☐	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☒ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series:

☐ Intermittent ☐ Ephemeral

Bank Height ____ __Width ____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road (south and west)

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland

Surficial Geology: Colluvium – steep slope to north

Culverts present

(Size & Type)

Wildlife Observed: chickadee

NOTES:

- Groundwater break out into two small depressions that flow southeast into Wetland F11.
- Historic access road crosses wetland at narrow point (WFF12 - 6/7 and 14/15) and crosses around wetland to north and west, leading toward Valley Road. Additional (other) access along ROW from Valley Road requires steam crossing at washed out culvert.
- Representative wetland vegetation includes spicebush, maleberry, red maple, yellow birch, cinnamon fern, woodfern (*Dryopteris* sp.), hardhack, and steeplebush. Various goldenrods (e.g, *Solidago* spp., *Euthamia* sp.) throughout.
- Lower portion of this wetland (PSS, saturated) is a shallow topographic basin with *Sphagnum* sp. moss, woodfern, cinnamon fern, winterberry, silky dogwood, and occasional spicebush.
- Upper portion of this wetland (flags 7 through 14) with a small area of emergent wetland (PEM, saturated to seasonally saturated) exhibiting *Sphagnum* sp. moss, sensitive fern, swamp dewberry. Perimeter shrubs in this area include maleberry, hardhack, and occasional shrub honeysuckle and multiflora rose.
- Area with sensitive fern to northwest of wetland flags 11 and 12 - Subsoil exhibits chroma 3 matrix.

ROUTINE WETLAND DELINEATION-DATA FORM Wetland: F13

Project: 23091543 Investigator: SAR

Date: 4/20/15 Weather: Rain Showers, 55°

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF13/F13-01 to 51; F13-61 to 84

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☒ PFO	☒ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X__

FLATS (ORG) __X__

Slope: _____

Depression: _____

Novitski Class: GW Depression

USACE WATERS TYPES:

- ☐ TNW
- ☐ TNWW
- ☒ RPW (SF12)
- ☒ NRPW (SF13)
- ☐ UPLAND
- ☒ RPWWD (Wetland F15)
- ☐ RPWWN
- ☐ NRPWW
- ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA

Stream # and Flag series: SF12/F12-01 to 17

☒ Intermittent ☐ Ephemeral

Bank Height _____ Width __4 – 8'__ Depth at Center _____

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 0.5 – 1 cfs

Habitat Features (Describe):

NOTES: Excavated (linear) above flag 18. USGS blue line illustrated near east side of ROW.

RIVER/STREAM DATA Stream # and Flag series: SF12/F12-01 to 05

☒ Intermittent ☐ Ephemeral

Bank Height ___6-10" Width __3-5 ft__ Depth at Center __~6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides (lower) ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

- flows from an 18-inch RCP at Wildcat Hill Road.
- ends in a tussock sedge/alder marsh with diffuse flow.

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Rural residential and small farm

Surficial Geology:

Culverts present

(Size & Type) 24" CMP; 30" Conc. Box Culvert

Wildlife Observed: phoebe, spring peeper, cottontail, cardinal

NOTES:

- PFO with A. rubrum and spicebush dom. Occas. winterberry to comm.. Sphagnum, skunk cabbage, irregular topography due to boulders (most moss covered)
  - = Seasonally flooded in part.
  - = PEM dom. = *Carex stricta,* skunk cabbage, arrow leaved tearthumb, sphagnum hummocks, hardhack, occas. cattail. Some OW area.
  - = PSS with winterberry, alder, fox grape, highbush blueberry, speckled alder, multiflora rose (30% cover).
  - = Flags 30-39 = Seasonally saturated PSS w/ winterberry and highbush blueberry dominant. Also maleberry, hardhack, cinnamon fern and occasional alder and pussy willow.
- Excellent structural diversity throughout wetland (FO/SS/EM/OW) and good interspersion.
- Stream channel F13 is intermittent from 18" culvert at Wildcat Hill Road, soon becomes diffuse in alder/tussock marsh.
- Flags 99-101 = upper side of man-made OW area (*Typha* dom.) w/ 6-in. PVC pipe outfall at conc. headwall in yard by house on Wildcat Hill Road.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F14**

Project: 23091543 Investigator: SAR

Date: 4/20/15 Weather: Light Rain, 55°

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF14/F14-01 to 12; F14-22-28

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: ___GW_____
☒ Saturated	☐	☒	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☐	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ___

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Wetland drains off ROW to southwest eventually forming a Stream (e.g., SF12 in Wetland 13).

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forestland (west); rural residential (east) and north

Surficial Geology: Till plain atop drumloidal ridge

Culverts present

(Size & Type)

Wildlife Observed: chickadee, blue jay, red bellied woodpecker, woodpecker, crow, Cardinal

NOTES:

- Access road across wetland separates out small PFO (WFs 9 to 13)
- Winterberry and *V. corymb.* = dominant shrubs – Meadowsweet, pussy willow, silky dogwood, pussy willow, steeple bush.
- Sphagnum moss, tussock sedge (occas.) cattail (few) and skunk cabbage.
- PFO with witch hazel, winterberry, highbush blueberry, *Lycopodium obscurum*, and cinnamon fern (*A. rubrum*/red oak dominant).

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: F15**

Project: 23091543 Investigator: SAR

Date: 4/21/15 Weather: Rain Showers, 60°

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF15/F15-01 to 13; F15-23 to 35; F15-45 to 61; F15-71 to 83; F15-93 to 102; F15-112 to 127

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☐	☒	Slope: _____~F20_____
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope/GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield (73E)	☐	☐	☒	☐
15-45% slopes	☐	☐	☐	☒
very rocky	☐	☐	☐	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _SF13-01 to 28_

☒ Intermittent ☐ Ephemeral

Bank Height __6-12"_____ Width _____4-8'__ Depth at Center __~8"__

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (minimal)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 3-5 cfs

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series __SF14-01 to 05_

☒ Intermittent ☐ Ephemeral

Bank Height ___6-10" Width __3-5 ft__ Depth at Center __~6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio:_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides (lower) ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

- flows from an 18-inch RCP at Wildcat Hill Road.
- ends in a tussock sedge/alder marsh with diffuse flow.

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio:_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Access from the north along ROW

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested

Surficial Geology: Till ridge with bedrock outcropping

Culverts present

(Size & Type) 24" CMP (collapsed) at ROW Wildlife Observed:

NOTES:

- PEM in power line cut. *Sparganium* and tussock sedge with a fringe of mountain laurel.
- Wetland flags 12 to 25 trend upslope to encompass an area of groundwater break out. Sphagnum moss under Mountain Laurel and (some) Witch Hazel.
- Existing ROW access road through wetland, culvert is +/- collapsed but conveys stream still.
- Flags 30 to 36 encompass temporary flooded PFO, hemlock swamp with occasional yellow birch and red maple.
-

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: G1**

Project: 23091543 Investigator: SAR

Date: 4/17/15 Weather: Rain, 64º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WG1/G1-01 to 06; G1-16 to 54; G1-64 to 69; G1-79 to 86

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Sutton (52)	☐	☒	☒	☒
Canton & Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-G1/S-G2/S-G3

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' avg.__ Width __2' avg.__ Depth at Center __< 6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Habitat Features (Describe):

NOTES:S-G1 originates from stormwater outfall, S-G2 is narrow intermittent surface-water connection, S-G3 is roadside swale

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest, abandoned agricultural, scrub-shrub

Surficial Geology: Till

Culverts present

(Size & Type) (2)6" clay

Wildlife Observed:

NOTES:

Hillside seep, originates within ROW clearing, where soil disturbance is evident. Wetland originally crossed ROW but historic fill materials obstruct connection. Drains southeast off ROW. Dominant vegetation includes white ash, red maple, sugar maple, yellow birch, slippery elm, spicebush, winterberry, cinnamon fern and trout lily.

Invasive vegetation species found within the cleared section of the ROW include: Japanese knotweed - 40%, autumn olive - 30% and *Lonicera* - 100%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: G2**

Project: 23091543 Investigator: SAR

Date: 4/17/15 Weather: Rain, 64º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WG2/G2-01 to 26, G2-36 to 54; G2-64 to 69

G2-79 to 103

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression, SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Udorthent (306)	☐	☒	☒	☒
Canton & Charlton (61)	☐	☒	☒	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: N/A_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs (slow flow rate) ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Man-made drainage – drains depressional area of WG2 to off ROW.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, upland hardwood forest

Surficial Geology: Till

Culverts present

(Size & Type) (2) 18" CMP

Wildlife Observed:

NOTES:

Wetland G2 includes a depressional feature draining through a culvert (18" CMP) to a man-made drainage ditch running parallel to the rear of Campville SS to off ROW. Wetland drains westerly towards Pudding Brook. Seasonally inundated in portions of depression. Dominant vegetation includes, winterberry, highbush blueberry, *Spirea*, cattails, sensitive fern, mountain laurel, *Rubus*, and fox grape. Small forested area at eastern extent with red maple and spicebush.

Invasive plant species observed: Morrow's honeysuckle- 80%, multiflora rose- 10%, *Phragmites*- 10%

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: G3**

Project: 23091543 Investigator: Davison

Date: 4/22/15 Weather: Rain, 64º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WG3/G3-01 to 10

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression/GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☒ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Canton & Charlton (60)	☐	☒	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height____ Width ____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, upland hardwood forest

Surficial Geology: Till

Culverts present

(Size & Type) (2) 24" CMP

Wildlife Observed:

NOTES:

Wetland G3 is a forested depressional feature. Poorly drained/hydric soils (flagged) extend upslope from surface-water indicators in broad transitional area. Dominant vegetation includes, red maple, spicebush, and skunk cabbage.